

## Monday

<b>2.00pm</b>	<b>Registration</b>
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2.00pm *Peppers Foyer*

<b>5.00pm</b>	<b>Opening Ceremony</b>
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*Macquarie Centre, Peppers*

Chair: Paul Alewood

5.00pm Opening Address

5.15pm Opening Plenary  
Professor Brian Chait

Method for Determining the Mass, Composition and Stoichiometry of  
Macromolecular Assemblies

<b>6.30pm</b>	<b>Welcome Function</b>
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*Peppers*

## Tuesday

<b>8.30am</b>	<b>Session 1: Ca and Na Channels</b>	
	<i>Macquarie Centre, Peppers</i>	Chair: David Adams
8.30am	Professor Gerald Zamponi	Post Translational Modification of T-Type Channels: A Novel Target for Pain Relief
9.00am	Dr Kenton Swartz	Structure and temperature-sensing mechanism in the capsaicin receptor TRPV1
9.30am	Professor Angela Dulhunty	The Ryanodine Receptor: A Therapeutic Target in Heart, Skeletal Muscle and Brain
10.00am	Professor Frank Bosmans	Investigating the sodium channel complex with animal toxins
10.30am	Morning Tea/Coffee	
<b>11.00am</b>	<b>Session 2: Physiology and Pharmacology</b>	
	<i>Macquarie Centre, Peppers</i>	Chair: Angela Dulhunty
11.00am	Associate Professor Stuart Brierley	Characterization of Nav Channels in Colonic Innervating Dorsal Root Ganglion visceral pain
11.30am	Dr Fernanda Cardoso	Nav Modulators In Spider Venoms And Applications In The Development Of Novel Therapies For Neurological Disorders
11.50am	Dr Jeff McArthur	Reduce, Reuse, Recycle: Cone Snail Venom Peptides Modulators Of T-Type Calcium Channels
12.10pm	Dr Cho Yeow Koh	Development Of A Thrombin-Inhibiting Peptide As Peri-Procedural Anticoagulant
12.30pm	Dr Irina Vetter	The When, Where And How Of Nav1.7-Mediated Analgesia: Insights From Subtype-Selective Venom Peptides
<b>1.00pm</b>	<b>Lunch</b>	
	<i>Peppers</i>	

**4.30pm Session 3: Development**

4.30pm	Afternoon Tea/Coffee	
5.00pm	<i>Macquarie Centre, Peppers</i> Prof John McCafferty	Chair: Irina Vetter Generation Of Ion Channel Blocking Antibodies By Fusing Venom-Derived "Knottins" Into Antibody CDR Loops
5.30pm	Dr Christina Schroeder	The Importance Of Peptide-Membrane Interactions In Toxin Inhibition Of Sodium Channels
6.00pm	Dr Christian Gruber	Nature-Derived Circular Peptides as Novel Therapeutics for Multiple Sclerosis
6.30pm	Dr Renaud Vincentelli	The Venomics Project: High-Throughput Purification of Oxidized Toxins in <i>E. coli</i> for the Development of Novel Therapeutics

**7.00pm Dinner**

*Own Arrangements*

## Wednesday

8.30am Session 4: Pain Toxins		
	<i>Macquarie Centre, Peppers</i>	Chair: Richard Lewis and Raymond Norton
8.30am	Professor J. Michael McIntosh	$\alpha$ -Conotoxin RgIA: a template for drugs to treat neuropathic pain
9.00am	Dr Luke Grundy	Bladder Afferent Mechanosensitivity Is Mediated By TTX-Sensitive Nav Channels
9:15am	Dr Jen Deus	Bias In Fluorescence-Based Voltage-Gated Sodium Channel Assays
9.30am	Dr Richard Clark	Structure/Activity Relationships Of Alpha-Conotoxins Targeting The Gaba(B) Receptor
10.00am	Professor David Adams	Mechanisms of Action of Analgesic $\alpha$ -Conotoxins. Why the GABAB Receptor and Not the $\alpha$ 9 $\alpha$ 10 Nicotinic Acetylcholine Receptor is the Neuropathic Pain Target
10.30am	Morning Tea/Coffee	
11.00am Session 5: Rapid Fire		
	<i>Macquarie Centre, Peppers</i>	Chairman: Glenn King and Bryan Fry
11.00am	Adam Stephenson	Hepcidin Mimetic Ptg-300 For Treatment Of Ineffective Erythropoiesis And Iron Overload Diseases
11.10am	Rachael Ryan	Exploring The Immunosuppressive Potential Of Venom-Derived Molecules
11.20am	Sabah Ul-Hasan	Host Venom-Microbe Interactions: A New Nexus?
11.30am	Ernesto Lopes Pinheiro-Junior	PEGylation of native and recombinant forms of a serine protease from <i>Crotalus durissus collilineatus</i> venom: A step forward to therapeutic applications
11.40am	Dan Wang	High-throughput Cell-based Assays for Screening Cav3.2 Modulators from Venoms
11.50pm	Samantha Nixon	A Tarantula Polyamine Is The First Spider-Venom Anthelmintic Against Parasitic Nematodes

12.00pm	Himaya SWA	Accelerated proteomic visualization of individual predatory venoms of <i>Conus purpurascens</i> reveals separately evolved predation-evoked venom cabals
12.10pm	Bruno Madio	An Holistic Investigation of the Venom from Australian Sea Anemones
12.20pm	Rebekah Ziegman	Investigation of the Estuarine Stonefish ( <i>Synanceia horrida</i> ) Venom Composition
12.30pm	Sarasa A. Mohammadi	$\alpha$ 9-nAChRs in Pain, Stress and Affective Behaviour
12.40pm	Mr Daniel Dashevsky	Using sequence-based bioinformatics to guide toxin biodiscovery

**1.00pm Lunch**

*Peppers*

**Dinner**

*Own Arrangements*

**8.30pm Poster Session**

*The Terrace, Peppers*

Chair: Paul Alewood

Prof Eliane Candiani Arantes  
 Chun Yuen Chow  
 Mr Sean B. Christiansen  
 Mr Zoltan Dekan  
 Ms Mriga Dutt  
 Mr Andelain Erikson  
 Dr Johara Boldrini-França  
 Dr Peta Harvey  
 Mr Md. Mahadhi Hasan  
 Dr Nicole Lawrence  
 Mr Alexander Mueller  
 Rahini Ragavan  
 Dr Suely V. Sampaio  
 Dr Han-Shen Tae

## Thursday

<b>8.30am</b>	<b>Session 6: GPCRs and Other Receptors</b>	
	<i>Macquarie Centre, Peppers</i>	Chair: Richard Lewis
8.30am	Professor MacDonald Christie	Agonist Residence Time At Opioid Receptors Determines Biased Signalling
9.00am	Professor Gyorgy Panyi	Reduced Conformational Flexibility Characterizes A Novel Kv1.3 Selective Blocker Scorpion Toxin Analogue
9.20am	Dr Lachlan Rash	Inhibition of acid-sensing ion channels by diminazene and APETx2 evoke partial and highly variable antihyperalgesia in a rat model of inflammatory pain
9.40am	Dr Annette Nicke	Structure Function Analysis of <i>E. coli</i> -Expressed Ribbon Isomers of $\alpha$ -Conotoxin Txia
10.00am	Professor Norelle Daly	Development of novel wound healing peptides: The link between conotoxins and worm proteins
10.30am	Morning Tea/Coffee	
<b>11.00am</b>	<b>Session 7: More Ion Channels</b>	
	<i>Macquarie Centre, Peppers</i>	Chair: MacDonald Christie
11.00am	Professor Robert J French	Sodium Channel Conduction, Gating And Structure Probed By Natural Small Organic Molecules And Peptides
11.30am	Professor Ray Norton	Kv1.3-blocking peptides: opportunities and challenges en route to the clinic
12.00pm	Professor Igor Kasheverov	Peptide Ligands Of Nicotinic Receptors: From Research Tools To Practical Application
12.30pm	Professor James Whisstock	The structure and evolution of venom-associated membrane attack complex / perforin-like proteins
<b>1.00pm</b>	<b>Lunch</b>	
	<i>Peppers</i>	

**4.30pm**      **Session 8: Discovery**

4.40pm      Afternoon Tea/Coffee

5.00pm      *Macquarie Centre, Peppers*  
Dr Peter Prentis      Chair: Norelle Daly  
Amplification and Functional Specialisation of Toxin and Toxin-Like Genes in Cnidarians

5.30pm      Dr Samuel Robinson      The Venom Composition Of An Australian Bull Ant (Genus: *Myrmecia*)

5.50pm      Dr Samira Aili      An integrated proteomic and transcriptomic analysis of venom gland toxins from the bullet ant *Paraponera clavata*

6.10pm      Ms Gisele Wiezel      Unveiling The Venome Of The Rattlesnake *Crotalus Durissus Terrificus*: An Integrative Approach Combining Its Venom Gland Transcriptome And Venom Proteome

6.30pm      Dr Camila Cologna      An Integrative Strategy To Untangle The Venom Composition Of *Neoponera Villosa*: Transcriptomic, Proteomics And Peptidomics

**6.50pm**      **Dinner**

*Own Arrangements*

## Friday

<b>8.30am</b>	<b>Session 9: Design</b>	
	<i>Macquarie Centre, Peppers</i>	Chair: Les Miranda
8.30am	A/Prof Toby Passioura	Fit Shrinking: Rapid Transformation Of Venom Peptides Into Drug-Like Molecules
9.00am	Dr Volker Herzig	Arachnid Venoms As A Source Of Drug Leads
9.20am	Dr Patrick Wilhelm	Disulfide Rich Peptide With A Twist
9.40am	Dr Ai-Hua Jin	Conotoxin $\Phi$ -MiXXVIIA from the new superfamily G2 employs a novel cysteine framework that mimics granulin and displays anti-apoptotic activity
10.00am	A/Prof Bryan Fry	Endless Forms Most Beautiful: The Dynamic Diversification of Reptile Venoms
10.30am	Morning Tea/Coffee	
<b>11.00am</b>	<b>Session 10: Towards the Clinic</b>	
	<i>Macquarie Centre, Peppers</i>	Chair: Paul Alewood
11.00am	Dr Les Miranda	Engineering Antibody Reactivity for Efficient Derivatization of Tarantula Venom Peptides to Generate NaV1.7 Inhibitory Peptide-Antibody Conjugates
11.30am	Professor Kini R Manjunatha	Natriuretic peptide analogs with vasodilatory or renal activities: personalized care of heart failure patients
12.00pm	Professor Glenn King	Venoms To Drugs: Spider-Venom Peptides for the Treatment of Epilepsy and Stroke
12.30pm	Dr James Olson	Tumor Paint and Optides: Building on 3.6 billion years of drug discovery
<b>1.00pm</b>	<b>Lunch</b>	
	<i>Peppers</i>	



**7.00pm**

**Conference Dinner**

*Peppers*