

Sunday

2.00pm	Registration
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2.00pm	<i>Mantra on Salt Foyer</i>
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5.00pm	Opening Ceremony
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	<i>Plantation Room, Mantra</i>
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	Chairman: Paul Alewood
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5.00pm	Opening Address
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5.10pm	Opening Plenary
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	Prof Brian Chait
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	Rapid production of versatile nanobody repertoires
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6.00pm	Welcome Function
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	<i>Peppers</i>
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Monday

8.30am	Session 1: Pain	
	<i>Plantation Room</i>	Chair: Prof Richard Lewis
8.30am	Prof Emmanuel Bourinet	Low-voltage-gated calcium channels in pain pathways: from mechanisms to toxin identification
9.00am	Dr Irina Vetter	Peripheral mechanisms of pain—insights from venom peptide ion channel modulators
10.00am	Dr Katharina Zimmerman	Botulinum toxin-A treatment reduces cold responsiveness of cutaneous C-fiber nociceptors in vitro
10.30am	Prof Maree Smith	Discovery and development of new pain medicines: towards improving translational research outcomes
10.30am	Morning Tea/Coffee	
11.00am	Session 2: Structure	
	<i>Plantation Room</i>	Chair: Prof Glenn King
11.00am	Dr Andrew Ellisdon	The structural basis of stonefish toxicity—high resolution insight into a pore-forming venom
11.30am	Prof Victor Tsetlin	From α -conotoxins, three-finger α -neurotoxins and LY6 brain proteins to binding sites in nicotinic receptors
11.50am	Prof Norelle Daly	When structure leads to activity—analysis of a novel conotoxin
12.10pm	Dr Quentin Kaas	Conotoxins as molecular probes of the structures and dynamics of nAChR subtypes
12.30pm	Prof Michael Parker	Cholesterol-dependent cytolysins: from water-soluble state to membrane pore
01.00pm	Lunch <i>Mantra – Surge Restaurant</i>	

4.30pm Session 3: Rapid Fire Topics		
4.30pm	Afternoon Tea	
5.00pm	<i>Plantation Room</i>	Co-Chairs: Dr Reto Stöcklin and Prof Glenn King
5.00pm	Mr Prashanth Jutty Rajan	Unique evolution of α D-conotoxins for defence
5.10pm	Dr Aaron JL Villaraza	Synthesis and neuroactivity of nobilamide b and analogues
5.20pm	Mr Nehan Munasinghe	Effect of voltage-gated sodium channel toxins as therapeutic agents for chronic pain
5.30pm	Ms Jen Deuis	Structure activity relationships of MfV1a: a μ O-conotoxin with selectivity for Na _v 1.4 and Na _v 1.8
5.40pm	Mr Bruno Madio	Structural characterization of potassium channel block by AcaTx1, a novel sea anemone toxin
5.50pm	Ms Neda Barghi	Comparison of the venom peptides and their expression in closely related <i>Conus</i> species via analysis of transcriptomes
6.00pm	Mr Ben Cristofori-Armstrong	Toxin promiscuity: the analgesic sea anemone peptide APETX2 moonlights as a hERG blocker
6.10pm	Dr Mahdokht Jouiaei	Firing the sting: chemical stimulation of nematocysts reveals novel composition of box jellyfish (<i>Chironex fleckeri</i>) venom
6.20pm	Dr Lotten Ragnarsson	Venomics-based discovery of natural vasopressin analogs: chemical synthesis and pharmacological characterization on human receptors
6.30pm	Mr Samuel Robinson	Discovery by proteogenomics and characterization of an RF-amide neuropeptide from cone snail venom
6.40pm	Dr David Wilson	To kill a cancer cell—the potential therapeutic web of spider toxins
6:50pm	Ms Mriga Dutt	Investigation of <i>Conus tulipa</i> venom peptides using integrated venomics
7.00pm	Dr Ivan Koludarov	Taming the dragon: the biodiscovery potential of lizard venoms
7.10pm	Ms Jingjing Wan	MRIA dendrimers: a novel norepinephrine transporter inhibitor for pain
7.20pm	Dr Wendy Imlach	Targeting synaptic adaptations in chronic pain

Dinner: *Own Arrangements*

8.00pm	Poster Session	
	<i>Mantra Tennis Pavilion</i>	Chair: Prof Paul Alewood

Tuesday

8.30am Session 4: GPCRs

Plantation Room

Chair: Prof MacDonald Christie

- 8.30am Prof Stuart Brierley α -Conotoxin VC1.1 targets GABA_B receptors modulating Ca_v2.2 and Ca_v2.3 calcium channels in sensory pathways mediating chronic visceral pain
- 9.00am Dr Sarasa Mohammadi Limited clinical scope of specific α 9-nicotinic acetylcholine receptor blocking analgesics
- 9.20am Prof David Adams Alanine scan of α -conotoxin RegIIa reveals a selective α 3 β 4 nicotinic acetylcholine receptor antagonist
- 9.40am Prof Richard Clark A new target for the alpha-conotoxins: the GABA_B receptor
- 10.00am Prof Arthur Christopoulos Allosteric targeting of G-protein-coupled receptors

10.30am Morning Tea/Coffee

11.00am Session 5: Voltage Gated Channels

Plantation Room

Chair: Prof David Adams

- 11.00am Prof Annette Dolphin Regulation of voltage-gated calcium channel trafficking and function by α 2 δ subunits
- 11.30am Prof MacDonald Christie Improving the therapeutic index of omega conotoxins for management of chronic pain
- 12.00pm Prof Robert French An archetypal channel blocker with a split personality. μ -Conotoxin actions show new complexities when inhibiting a "simple" prokaryotic sodium channel
- 12.30am Prof Raymond Norton New potassium channel blockers as treatments for autoimmune diseases: design, synthesis, stability & delivery
- 12.30pm Lunch
Mantra – Surge Restaurant

Wednesday

8.30am		
	Session 6: Toxin Synthesis	
	<i>Plantation Room</i>	Chair: Dr Christopher Armishaw
8.30am	Dr Thomas Durek	Divide and conquer: efficient chemical synthesis of complex bioactive peptides by native chemical ligation
8.50am	Dr Christina Schroeder	Semi-enzymatic cyclisation of kappa-conotoxin PVIIa, a peptide containing the inhibitory cystine knot motif
9.10am	Dr Andreas Brust	Selective folding and stabilization of a cysteine rich conotoxin, MrIA as a 1,2,3-triazole-disulfide bond hybrid
9.30am	Dr Aline Dantas de Araujo	Love drug to treat abdominal pain
9.50am	Mr Bobo Dang	Reinvestigation of the biological activity of D-allo-ShK toxin
10.10am	Dr Changlin Tian	Structure and functional studies of mambalgin-1 binding to acid sensing ion channels using NMR and two-photon fluorescence microscopy
10.30am	Morning Tea/Coffee	
11.00am		
	Session 7: Omics Approaches	
	<i>Plantation Room</i>	Chair: Prof Brian Chait
11.00am	Dr Sebastián Dutertre	Revision of prey capture and defence strategies in cone snails
11.30am	Dr Bryan Fry	Seeing the woods for the trees: understanding venom evolution as a guide for biodiscovery
12.00pm	Dr Vincent Lavergne	The hidden toxin repertoire of the predatory marine snail <i>Conus episcopatus</i> .
12.15pm	Dr Ai-hua Jin	Transcriptome and proteome of <i>Conus imperialis</i> venom: insights into intraspecific variations and correlation between mRNA and peptide levels
12.30pm	Prof Anthony Purcell	Concerted actions and regiospecific expression of <i>Conus</i> foldases underpins toxin biosynthesis
1.00pm	Lunch <i>Mantra – Surge Restaurant</i>	

4.30pm	Session 8: New Drugs: Challenges	
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4.30pm Afternoon Tea

Plantation Room

Chair: Prof Mark Smythe

4.30pm Dr Michael Pennington Kv1.3 channel-blocking immunomodulatory peptides from parasitic worms: implications for autoimmune diseases

5.00pm Dr Reto Stöcklin Reverse-Discovery: natural, virtual and synthetic venoms for peptide drug discovery, target deorphanization and lead optimization

5.30pm Prof Alan Harvey From toxins to medicines: what are we doing wrong?

6.00pm Dr Michael Caine Natural product inventions: collateral damage in the war on gene patents

7.00pm Dinner

Own Arrangements

Thursday

8.30am Session 9: Discovery and Engineering

Plantation Room

Chair: Dr Christina Schroeder

8.30am	Prof Jennifer Cochran	Engineered cystine knot peptides: a new class of tumor targeting agents
9.00am	Dr Jeroen Kool	Venom analytics for rapid identification and structural elucidation of bioactive peptides
9.20am	Mr Tim Jackson	The “silent” majority: investigating the venoms of hitherto neglected species of Australian elapid snake
9.35am	Mr Eivind Undheim	Centipede venom evolution: casting light on a neglected group of venomous animals
9.50am	Dr Fernanda C Cardoso	Discovery of voltage-gated sodium channel inhibitors from tarantula venoms
10.10am	Dr Jennifer Stockdill	Chemically twisted: strategies for the controlled folding of disulfide-rich mini-proteins
10.30am	Morning Tea/Coffee	

11.00am Session 10: Peptide Drug Development

Plantation Room

Chair: Prof Alan Harvey

11.00am	Dr Jefferson Revell	Engineering huwentoxin-IV
11.30am	Dr Christopher Armishaw	Synthetic conotoxin combinatorial libraries: discovery of novel nicotinic receptor ligands for studying tobacco addiction and pain
12.00pm	Prof Glenn King	Molecular basis of voltage sensor trapping by spider-venom peptides
12.30pm	Prof Mark Smythe	Pursuing injectable and oral equivalents of marketed antibodies: development of potent, efficacious and selective IL-6 antagonists
01.00pm	Lunch	
	<i>Mantra – Surge Restaurant</i>	

4.30pm Session 11: Discovery Pharmacology

4.30pm	Afternoon Tea <i>Plantation Room</i>	Chair: Prof Paul Alewood
5.00pm	Prof Mary Chebib	Multiple binding interfaces on nACh receptors allude to stoichiometric dependent actions of antagonists
5.30pm	Dr Lachlan Rash	ASIC1a-selective spider-venom peptides for treatment of ischemic stroke
6.00pm	Dr Jennifer Smith	High-throughput venoms-based screen reveals novel modulators of the analgesic target Na _v 1.7
6.20pm	Prof Baldermero Olivera	<i>Conus</i> peptides, constellation pharmacology and heteromeric ion channel complexes

7:00pm Conference Dinner

Saltbar

Davies Collison Cave Student Poster Prize

Davies Collison Cave Business Card Draw