# Symposium 6: Ion channels in drug discovery: developing safer medications

## Dr Lachlan Rash, The University of Queensland



Lachlan completed his PhD in the Department of Pharmacology at Monash University where he studied the pharmacological activity of Australian spider venoms. After a brief period as an Associate Lecturer at Monash, he moved to France on an INSERM / NH&MRC Post-Doctoral Fellowship to work in the group of Prof. Michel Lazdunski, who discovered the family of acid-sensing ion channels (ASICs) and the first venom peptides that potently block them. There, he worked on understanding how these venom peptides modulate ASIC function. Lachlan is currently an NH&MRC funded-senior research officer working at the Institute for Molecular

Bioscience in Brisbane on the discovery and molecular pharmacology of venom peptides that modulate ion channels involved in pain and neurodegeneration.

#### Prof Peter McIntyre, The University of Melbourne



**Professor Peter McIntyre** is the deputy Head of the Health Innovations Research Institute at RMIT University. He obtained his Ph.D. in Biochemistry and Molecular Biology from LaTrobe University in 1985 and trained as a post doctoral fellow at the Walter and Eliza Hall Institute and at the Imperial Cancer Research Fund (now Cancer Research UK) laboratories in London. He is an authority on the regulation and function of transient receptor potential (TRP) ion channels that control pain transmission. He led a pre-clinical research team at the Novartis Institute for Medical Sciences (NIMS) at University College London, where his group discovered TRPA1, TRPM8 and TRPV3. He has extensive expertise in the molecular and pharmacological

characterization of ion channels, in drug discovery, validation of therapeutic targets, and drug development and was a drug discovery program leader between 1999 and 2004 and became Head of the Biology Section of NIMS.

He relocated to from Industry to Academia in 2005 when he became Chairman and Head of the Department of Pharmacology at the University of Melbourne during a period of great change. He runs a relatively young but vibrant research group and collaborates widely. He shares NHMRC grants with researchers at Monash University, The Murdoch Institute and Macquarie University. He joined RMIT University as Deputy Director of the Health Innovations Research Institute in 2012. His expertise in pain and channel function will facilitate examination of the mechanisms by which TRPV4 is activated in pain and his expertise in drug discovery and development will enable evaluation of the therapeutic potential of receptor agonists and antagonists to treat pain and inflammation.

# Prof Mary Chebib, The University of Sydney



Prof Mary Chebib obtained her PhD in 1994 from Griffith University. After a 6 year post-doc position, she commenced an academic position in the Faculty of Pharmacy the University of Sydney. She has a number of awards including Faculty of Pharmacy Higher Degree Supervision Award (2007), RACI'S BIOTA Holdings Award in Medicinal Chemistry and ASCEPT Johnson & Johnson New Investigator Award. She has over 80 international peer reviewed articles and 3 International patents. Her research focuses on the molecular pharmacology and chemistry of

GABA and nicotinic acetylcholine receptors and their involvement in anxiety, sleep disorders and learning and memory. Part of her interests is to develop subtype selective agents in order to minimize unwanted side effects when targeting these receptors.

### Dr Tamara Paravicini, The University of Queensland



Dr Paravicini received her PhD in pharmacology from the University of Melbourne in 2005 before undertaking postdoctoral training at the Ottawa Health Research Institute. Her research centres on identifying the molecular mechanisms underlying cardiovascular remodelling and dysfunction in hypertension and diabetes. More recently, her work has focused on understanding the role of the channel-enzymes TRPM6 and TRPM7 in cardiovascular disease. She is a past recipient of fellowships from the Foundation for High Blood Pressure Research and the National Heart

Foundation, and currently holds a position as a Lecturer in the School of Biomedical Sciences at the University of Queensland.