



SYMPOSIUM 1 - Novel GPCR targets for the treatment of CVD

Dr Nicola Smith, Victor Chang Cardiac Research Institute



Dr Nicola J. Smith is an Early Career Researcher at the Victor Chang Cardiac Research Institute, Sydney, and former NSW Young Tall Poppy. She trained at University of Melbourne & Baker Heart Research Institute (PhD in Pharmacology, 2007) before spending 4 years on a CJ Martin and National Heart Foundation Fellowship at the University of Glasgow, Scotland. Nicola and her small team are interested in understanding novel pathways in the pathogenesis of cardiovascular disease, with a focus on orphan G protein-coupled receptors. Her work has earned her numerous Young Investigator Awards and national and international invitations to present her research findings.

Dr Justin Hamilton, Australian Centre for Blood Diseases, Monash University



Dr Justin Hamilton is an ARC Future Fellow and Head of the *Platelet & Megakaryocyte Cell Biology Lab* at Monash University's Australian Centre for Blood Diseases, located at the Alfred Hospital, Melbourne, Australia. His group studies the role of platelets, platelet thrombin receptors, and their intracellular signaling effectors, in hemostasis, thrombosis, and inflammatory conditions. His work has been published in numerous journals, including *Nature*, *PNAS*, *Blood*, and *Circulation Research*, and is funded by the NHMRC, the ARC and the Heart Foundation.

Dr Jason Peart, Griffith University



Dr. Peart is currently an ARC Future Fellow and a renown expert in the mechanisms of ischaemic injury and cardioprotection, and in particular the impact of age and disease on ischaemic tolerance and 'conditioning' strategies. Dr. Peart's studies have a strong focus on endogenous cardioprotectants (in particular, adenosine and opioids) and alternate modes of GPCR-mediated cardioprotection, particularly sustained ligand preconditioning of the myocardium.

Assoc Prof Rebecca Ritchie, Baker IDI Heart and Diabetes Institute



Rebecca Ritchie is NHMRC Senior Research Fellow and Head of Heart Failure Pharmacology at the Baker IDI Heart and Diabetes Institute in Melbourne. She was awarded her Ph.D from the Dept of Medicine at The University of Adelaide in 1994. She now holds an Adjunct Associate Professor appointment in the Dept of Medicine at Monash University. A/Prof Ritchie has established a national and international reputation for her contributions to cardiac pharmacology. Her research is recognised for identifying new drug strategies for maintaining myocardial function in response to diabetes, myocardial infarction, and other causes of abnormal cardiac remodelling; many of these discoveries for preventing and/or reversing cardiac dysfunction occur secondary to local suppression of reactive oxygen species. In addition, she has made significant contributions to scientific discipline and policy through service to ASCEPT and to Science & Technology Australia.



SYMPOSIUM 2 - Prescribing for people with dementia

Dr Joseph A Nicolazzo PhD, Monash Institute of Pharmaceutical Sciences, Monash University



Joseph Nicolazzo is a Senior Lecturer at Monash Institute of Pharmaceutical Sciences, Monash University. His main research focus is on central nervous system (CNS) drug delivery and the role of drug transporters at the blood-brain barrier (BBB) in facilitating and limiting drug access into the CNS. Using *in vitro*, *in situ* and *in vivo* methods, Joseph's research group is also investigating how drug transport across the BBB alters in various disease states, including Alzheimer's disease and systemic inflammation, and furthermore, his group is exploring the involvement of dysfunctional BBB transport proteins in the brain parenchymal accumulation of β -amyloid.

Assoc Prof Sarah Hilmer, The University of Sydney



Sarah Hilmer (BScMed(Hons) MBBS(Hons) FRACP PhD) is a clinical pharmacologist and geriatrician at Royal North Shore Hospital and conjoint Associate Professor at Sydney Medical School, University of Sydney. She leads a program of basic and clinical research on optimising medicines for older people at the Kolling Institute of Medical Research, with a recent focus on quality use of medicines for older people with dementia and related functional decline through the NHMRC Cognitive Decline Partnership Centre.

Assoc Prof Simon Bell BPHARM (HONS), PHD, MPS, Monash University



Dr Simon Bell is a pharmacist and Associate Professor, Centre for Medicine Use and Safety, Monash University. He is also Adjunct Professor, University of Eastern Finland, and Adjunct Associate Professor, University of South Australia. His research is focused on medicines use among older people, particularly psychotropic medicines. He has published more than 130 articles in peer-reviewed scientific journals and is Associate Editor of the Journal of Pharmacy Practice and Research. Dr Bell is a lead investigator of the \$25 million National Health and Medical Research Council (NHMRC) Cognitive Decline Partnership Centre.

Dr Danijela Gnjdic, University of Sydney



Danijela is an NHMRC Early Career Fellow and Lecturer in Pharmacy Practice at the Faculty of Pharmacy, University of Sydney. Her research expertise is in clinical and geriatric pharmacology, pharmacoepidemiology, and the quality use of medicines. She was awarded her PhD in 2010 by the University of Sydney. Concurrently, to broaden her clinical research skills, she completed a Masters of Public Health. Following her doctoral training, Danijela conducted her post-doctoral training at the University of Eastern Finland, where she furthered her research in geriatric pharmacology and pharmacoepidemiology.

Assoc Prof Kristina Johnell, Karolinska Institute, Sweden



Kristina Johnell is the Division Head for the Aging Research Center at Karolinska Institutet/Stockholm University in Stockholm, Sweden. She is an Associate Professor and Senior Lecturer specialised in geriatric pharmacoepidemiology. She is also on the Steering board for the Center for Alzheimer Research and for the Academic Center for Geriodontics, both at Karolinska Institutet. Kristina Johnell's areas of research include inappropriate drug use and adverse drug reactions in older people, drug therapy in nursing homes and in people with dementia, inequalities in older people's drug use and register-based pharmacoepidemiology. She is on the editorial board for *Drugs & Aging* and a grant reviewer for national and international funding bodies in epidemiology and public health. She has given multiple invited presentations and is sought out as an expert in drug treatment in old age both nationally and internationally.

Adjunct Assoc Prof Susan Koch, Royal District Nursing Service



Susan Koch (PhD) is Director of the Royal District Nursing Service Institute (RDNS) and Adjunct Associate Professor at La Trobe University. She previously held the positions of Associate Professor of Gerontic Nursing at La Trobe University, Director (Collaboration) of the Australian Centre for Evidence Based Aged Care (ACEBAC) and President of Alzheimer's Australia (Vic). Susan has led and/or been a co investigator on numerous research projects and a number consultancy projects both at a State and National level. Her research has its focus on practice issues including restraint use; elder abuse; care for people living with dementia and medicine management.



SYMPOSIUM 3 - Education symposium: Micro to macro and back again

Prof Arthur Christopoulos, Professor of Pharmacology, Monash University



Arthur Christopoulos obtained his B. Pharm in 1990 and PhD in Pharmacology in 1997 from the Victorian College of Pharmacy, Monash University. He then spent two years as a Postdoctoral Fellow at the University of Minnesota prior to returning to Australia in 1999 as a Research Fellow in the Department of Pharmacology, The University of Melbourne. In 2006, he was recruited to the Department of Pharmacology, Monash University. Currently, he is Professor of Pharmacology and a National Health and Medical Research Council (NHMRC) Principal Research Fellow in the Drug Discovery Biology Theme of the Monash Institute of Pharmaceutical Sciences. He is a world leader in the development of techniques that facilitate the detection and quantification of drugs that act at allosteric receptor binding sites, distinct from the natural hormone-binding site, and of signal-pathway-biased agonists. His research crosses academic and industry boundaries, and incorporates computational and mathematical modelling, medicinal chemistry, structural biology, cellular biochemistry and signal transduction, and *in vivo* animal models of behaviour. He is an author of over 200 scientific articles, is the recipient of numerous prizes and awards for his research, serves/has served on the Editorial Board of 8 international journals and is/has been a chief investigator on numerous grants from various sources (federal, state, international, biotechnology and large pharmaceutical). He is a consultant for a number of large pharma and biotechnology companies, a former Councillor and SAC Chair of ASCEPT, and a member of the Nomenclature Committee of the International Union of Basic and Clinical Pharmacology (NC-IUPHAR).

Ms Anne Leversha, Monash University



Anne Leversha is a Senior Lecturer at Monash University in the Faculty of Medicine, Nursing and Health Sciences and the Faculty of Pharmacy and Pharmaceutical Sciences, and Director of Medication Education & Management Australia. Until 2013 she was Director of Pharmacy at Latrobe Regional Hospital, Traralgon, where she was also a practising clinical pharmacist. Anne was a member of the Victorian Medicines Advisory Committee, is a Fellow of The Society of Hospital Pharmacists of Australia (SHPA), a trained shpaclinCAT (clinical competency assessment) evaluator and the chair of the Australian Clinical Education Preparation Program Management Team. Anne has presented and conducted seminars and workshops at national and international conferences. She has recently published on topics including improving medication safety, clinical pharmacist interventions and pharmacists' contribution to medical education.

Prof Hamish Coates, Centre for the Study of Higher Education, The University of Melbourne



Hamish Coates is a professor of Higher Education at the Centre for the Study of Higher Education (CSHE), University of Melbourne. He was Founding Director of Higher Education Research at the Australian Council for Educational Research (ACER) from 2006 to 2013, and between 2010 and 2013 also Program Director at the LH Martin Institute for Tertiary Leadership and Management. Hamish completed his PhD in 2005 at the University of Melbourne, and executive training at INSEAD in 2012. Through research and development Hamish focuses on improving quality and productivity. Interests include large-scale evaluation, tertiary education policy, institutional strategy, outcomes assessment, learner engagement, academic work and leadership, quality assurance, tertiary admissions, and assessment methodology. He has initiated and led many successful projects, and was Founding International Director of OECD's Assessment of Higher Education Learning Outcomes Feasibility Study (AHELO) Feasibility Study.



SYMPOSIUM 4 - Partners in crime: Regulation of cell signalling beyond GPCRs

Prof Peter J. Little AM, School of Medical Sciences, RMIT University



Professor Peter J. Little AM completed a B. Pharm. at the Victorian College of Pharmacy (now Monash University) followed by an M. Sc. and Ph. D. in Drug Metabolism in Pharmacy at the University of Sydney and Post-Doctoral training at the National Institutes of Health in the USA. Peter initially worked on ion transport and hypertension and then later redirected his attention to the cardiovascular complications of diabetes with an emphasis of the role of proteoglycans in lipid deposition diseases such as atherosclerosis. After a 20 year career at the BakerIDI Heart and Diabetes Institute and Alfred Hospital, in November 2010 Peter took up the position as Foundation Head of

Pharmacy at RMIT University, in Melbourne, Australia where he continues his research on the identification of new therapeutic targets for the prevention of the cardiovascular complications of diabetes as well as pharmacy practice projects around expanding the role of pharmacists in community based health care. Peter holds current funding from the NH&MRC of Australia. Peter is a former national President of Diabetes Australia.

Prof Walter Thomas, The University of Queensland



Walter is the Chair of General Physiology and Head of the School of Biomedical Sciences at the University of Queensland. His research focuses on the molecular pharmacology and cellular physiology of G protein-coupled receptors (GPCRs) – the largest receptor superfamily in our genome. Walter's group has a strong international reputation for studying the processes that activate and deactivate the type 1 angiotensin receptor, with important contributions in the area of delineating multiple, functional receptor states and the capacity of GPCRs to transactivate growth factor receptors.

Prof Nigel Bunnett, MIPS, Monash University



Nigel Bunnett was educated at Cambridge University where he was awarded a Ph.D. degree in 1981. He spent the next thirty years of his career on the West Coast of the United States, as a post-doctoral fellow at the University of California, Los Angeles, and then an Assistant Professor at the University of Washington, Seattle. In 1987 he joined the University of California, San Francisco, and he remained there for almost twenty five years, becoming Professor of Surgery and Physiology, Vice Chair of Surgery, and Director of the UCSF Center for the Neurobiology of Digestive Diseases. Nigel relocated to Monash University, Melbourne in 2011, where holds appointments as NHMRC Australia Fellow, Professor of Pharmacology and Medicine, and Deputy Director of the Monash Institute of Pharmaceutical Science.

Nigel's research focuses on understanding the mechanisms of inflammation and pain, which underlie diseases of global relevance. He is particularly recognized for his work on defining the functions and regulation of G protein-coupled receptors and transient receptor potential ion channels, two major classes of cell-surface proteins that are essential for the transmission of inflammation and pain. Nigel's work has been reported in ~300 research papers, reviews and chapters, and is funded by the NHMRC, ARC and NIH. His contributions have been recognized by awards including an Australia Fellowship, an NIH MERIT Award, the Novartis Neurogastroenterology Award, the Jansen Award for Basic Research in Gastroenterology, and the Victor Mutt Award for Research in Regulatory Peptides. Throughout his career Nigel has been committed to medical education, and he has received numerous awards in recognition of his dedication to teaching.

Dr Meritxell Canals, MIPS, Monash University



I obtained my PhD from the University of Barcelona (Spain) in 2004. My thesis examined the interactions between adenosine and dopamine receptors and their relevance for Parkinson's Disease. After my PhD I completed post-doctoral training in leading GPCR pharmacology groups. In Prof Milligan's group at Glasgow University, I focused on the functional consequences of GPCR co-expression and oligomerisation for which she developed novel RET techniques. In Profs Leurs and Smit's group at the Free University in Amsterdam, The Netherlands, I focused on the regulation, pharmacology and medicinal chemistry of chemokine receptors. In 2010 I was awarded a Monash

Fellowship to start my independent research group within the Drug Discovery Biology Theme at the Monash Institute of Pharmaceutical Sciences. Since then my work has focused on the interactions between GPCRs and intracellular proteins, and their consequences for receptor signalling and trafficking.



Symposium 6 - Techniques to see into the world of GPCRs and beyond

Dr Rob Cooke, Heptares Therapeutics



Rob Cooke is Head of the Biomolecular Structure Department at Heptares Therapeutics, where he is leading research in structural biology and biophysics, computational chemistry and informatics, and protein expression. He is also responsible for the management of alliances with Pharma partners. Prior to this, Rob was at Glaxo, then GlaxoWellcome, then GlaxoSmithKline. Starting as a structural biologist, Rob eventually led Departments covering research in several disciplines including structural biology, computational chemistry and analytical sciences. Rob also initiated and led the proceedings that produced the Structural Genomics Consortium. Rob received his BSc. and PhD in Inorganic Chemistry from the University of Sydney, and was a post-doctoral researcher in the Department of

Biochemistry at the University of Oxford.

Assoc Prof Mark Hutchinson, University of Adelaide, ARC Centre of Excellence for Nanoscale Biophotonics



Associate Professor Mark Hutchinson is the head of the Neuroimmunopharmacology Laboratory in the School of Medical Sciences at the University of Adelaide. In 2013 led by Prof Tanya Monro in the Institute for Photonics and Advanced Sensing (IPAS) a team of researchers from the University of Adelaide, Macquarie and RMIT received Australian Research Council funding to establish the \$38M Centre of Excellence for Nanoscale BioPhotonics. As a Chief Investigator on the Centre, Assoc Prof Hutchinson and his team will apply the physics tools in vivo to quantify events that have never been measured before, in real time, in discrete microenvironments with high specificity and sensitivity. These tools promise to facilitate the medical science experimentation of tomorrow.

Assoc Prof Kevin Pflieger, Harry Perkins Institute of Medical Research



A/Prof Kevin Pflieger MA (Cambridge) PhD (Edinburgh) is an ARC Future Fellow and Head of Molecular Endocrinology and Pharmacology at the Harry Perkins Institute of Medical Research (formerly WAIMR) and The University of Western Australia. He is also Chief Scientific Advisor of Dimerix Bioscience Limited. A former NHMRC Peter Doherty Research Fellow, his awards include: WA Young Scientist of the Year 2009, NHMRC 10 of the Best Research Projects 2010, Australian Museum Eureka Prize for Emerging Leader in Science 2011, The Endocrine Society Early Investigators Award 2012, WA Young Tall Poppy Science Award 2012 and ESA Mid-Career Research Award 2014.

Mr Darren Riddy, Monash Institute of Pharmaceutical Sciences, Monash University



Darren was awarded his BSc (Hons) in applied biology from the University of Hertfordshire, UK, in 2004 where he had studied part-time. He subsequently obtained a diploma in advanced pharmacology from the British Pharmacological Society in 2011. In the past few months he has started a PhD, part time, under the supervision of Dr Chris Langmead. Darren has a strong career background in drug discovery and prior to joining Monash Institute of Pharmaceutical Sciences (MIPS) he worked in industry both in biotech, with Asterand UK, and Pharma at the Novartis Institutes for Biomedical Research, in both the gastrointestinal and respiratory disease groups under the guidance of Dr Mark Dowling and Professor Steven Charlton. He currently works for the Servier

collaboration at MIPS investigating novel GPCR targets for the treatment of metabolic disorders.



Symposium 7 - Novel targets for stroke and brain repair

Dr Carli Roulston, Department of Medicine, University of Melbourne



Dr Carli Roulston completed a PhD in Neuropharmacology at Monash University in 2001 and is currently team leader of Neurotrauma Research in the Department of Medicine, St Vincent's campus, University of Melbourne. After many years evaluating the effects of novel flavonoid compounds for neuroprotection after stroke, Roulston expanded her research to include mechanisms associated with brain repair, in particular angiogenesis and the use of human adult stem cells for transplant. Other research activities include collaborations with the bionics institute developing implantable devices for brain rescue and with the Florey institutes investigating treatments that reduce scar formation following brain injury. Dr Roulston's primary research focus is to identify and promote optimal conditions for improving functional recovery after stroke.

Siew Yeen Chai, NHMRC Senior Research Fellow and Associate Professor, Department of Physiology, Monash University



Siew Yeen Chai leads a research group that was the first to isolate and identify the angiotensin AT₄ receptor as the enzyme, insulin-regulated aminopeptidase (IRAP). This discovery has major implications because AT₄ ligands (later shown to be competitive inhibitors of IRAP) acting on the enzyme, elicited robust and dramatic effects on enhancing learning and improving memory in different behavioural tasks. The group recently demonstrated that the IRAP inhibitors have neuroprotective effects following ischemic damage.

Dr Nicole Jones, University of New South Wales



Nicole completed her PhD at Monash University (1998), and she is currently a Lecturer in the School of Medical Sciences, Department of Pharmacology at UNSW. Her research and teaching strengths are in the area of Neuropharmacology. Prior to her academic appointment in 2008, she held postdoctoral positions at Eli Lilly and Company (UK and USA) and the Howard Florey Institute. Her current research interests focus on the cellular and molecular consequences that occur in the brain in response to a low oxygen environment. Understanding these processes, will lead to improved drug targeting for conditions such as birth asphyxia and stroke.

Dr Alyson Miller, RMIT University



Dr Alyson Miller obtained her PhD in Cardiovascular Pharmacology from the University of Edinburgh. In 2003, she moved to Australia to conduct postdoctoral studies with A/Prof Christopher Sobey, initially at the University of Melbourne and then at Monash University. In 2007, she was awarded a Foundation for High Blood Pressure Research Fellowship followed by a NHMRC CD Fellowship in 2009. Under the mentorship of Christopher Sobey, her research has examined key mechanisms that regulate cerebrovascular function in health, and in disease states such as cardiovascular disease and stroke. Recently, Dr Miller was awarded a Vice-Chancellor's Senior Research Fellowship from RMIT University, where she has established the Cerebrovascular and Stroke Laboratory. Her current research aims to identify novel therapies for stroke-induced brain injury and vascular dysfunction, as well as post-stroke complications such as immunosuppression and weight loss. She has published a career total of 43 publications largely in this field of research. Her research is funded by the NHMRC and she has received a number of prestigious international and national young scientist awards in recognition of her research contributions.



SYMPOSIUM 8 - Cardiac Safety vs Efficacy: Focus on Heart Failure

Assoc Prof Rebecca Ritchie, Baker IDI Heart and Diabetes Institute



Rebecca Ritchie is NHMRC Senior Research Fellow and Head of Heart Failure Pharmacology at the Baker IDI Heart and Diabetes Institute in Melbourne. She was awarded her Ph.D from the Dept of Medicine at The University of Adelaide in 1994. She now holds an Adjunct Associate Professor appointment in the Dept of Medicine at Monash University. A/Prof Ritchie has established a national and international reputation for her contributions to cardiac pharmacology. Her research is recognised for identifying new drug strategies for maintaining myocardial function in response to diabetes, myocardial infarction, and other causes of abnormal cardiac remodelling; many of these discoveries for preventing and/or reversing cardiac dysfunction occur secondary to local suppression of reactive oxygen species. In addition, she has made significant contributions to scientific discipline and policy through service to ASCEPT and to Science & Technology Australia.

Dr Sian Ratcliffe, Global Head of Safety Pharmacology Center of Emphasis in Drug Safety R&D, Pfizer, Groton, Connecticut, US



Immediately before joining Drug Safety R&D in November 2011, Sian was a Global Clinical Lead in Pulmonary Vascular Disease in Specialty Care, where she was responsible for 3 Pulmonary Arterial Hypertension development programs in Phase 2-3b. Prior to joining Clinical Affairs, Sian held the position of Senior Director, Pain Portfolio Safety Risk Management Lead in which she was responsible for directing the development of risk management strategies and leading safety teams on a number of compounds in the Pfizer pain, neuroscience, women's health and allergy and respiratory portfolios throughout development stages from research to post-approval. Sian has a keen interest in translational and predictive safety projects and is actively engaged with FDA and the National Cancer Institute on PredicTox, a systems biology project to examine cardiotoxicity associated with tyrosine kinase inhibitors. Sian is an active member of the internal Neuropsychiatric and Abuse Potential Advisory Council, with a particular focus on detection of treatment emergent suicidal ideation and behavior as well as the use of novel data mining and statistical methodologies to assess abuse potential. In her 15 year tenure at Pfizer, Sian has also held other senior leadership roles in Clinical, Safety and Regulatory Affairs, including Global Clinical Submission Lead, Regulatory Project Lead and Global Safety Leader in the Neurology, Psychiatry and Pain therapeutic areas. Prior to joining Pfizer, Sian worked for Elsevier as an editor for a number of the Trends journals. Sian has a PhD in Pharmacology from the University of Cambridge (1996) where she also held post-doctoral research and academic posts, examining the molecular mechanisms of action of photodynamic agents for ablation of pancreatic carcinoma cells.

Prof Jamie Vandenberg, Victor Chang Cardiac Research Institute



Professor Jamie Vandenberg is head of the Mark Cowley Lidwill Research Program in Cardiac Electrophysiology and co-Deputy Director of the Victor Chang Cardiac Research Institute. He is a conjoint Professor at the University of New South Wales and an NHMRC Senior Research Fellow. His research is focussed on the electrical signals that control the rhythm of the heartbeat and understanding the molecular basis of disorders of heart rhythm and sudden cardiac death. His team uses a range of molecular, biophysical and computer modelling techniques to analyse arrhythmia substrates. His team has a particular interest in inherited arrhythmia syndromes and drug-induced arrhythmias.