



ASCEPT-BPS JOINT SCIENTIFIC MEETING

Tomorrow's medicines: pharmacology,
patients and populations

19-21 May 2015
University of Hong Kong

Symposium 1: Frontiers in neuropharmacology: Molecular targets and translational opportunities

Symposium sponsor:  **MONASH University**
Institute of Pharmaceutical Sciences

Prof Daniel Hoyer, Department of Pharmacology & Therapeutics, The University of Melbourne; Honorary Professorial Fellow, Florey Institute of Neuroscience and Mental Health, Melbourne; The Scripps Research Institute, La Jolla, CA



Hoyer obtained his PhD in 1981 in Strasbourg and a DSc in 1986 (Pharmacology), on the discovery and development of two of the most widely used adrenoceptor radioligands, cyanopindolol and HEAT, in collaboration with G. Engel. Hoyer joined Cardiovascular Research at Sandoz in Basel in 1983 and contributed to the discovery and characterization of new 5-HT (serotonin) receptors. He moved to CNS in 1989, and switched to peptide receptors (1992), largely somatostatin. Hoyer was involved in more basic aspects, such as the genomics of depression and schizophrenia with MPRC (Baltimore) and Scripps & GNF, (La Jolla), and peptide receptor chemistry within a European Consortium. His more recent interests are in Epilepsy, Sleep disorders, RNAi and Epigenetics. He is currently executive editor of Psychopharmacology, Naunyn Schmiedeberg's Archives of Pharmacology, the Encyclopedia of Psychopharmacology and Pharmacology & Therapy. Hoyer was elected Fellow of the British Pharmacological Society in 2005 and nominated Senior Editor of the British Journal of Pharmacology in 2012. In December 2012, Hoyer joined the University of Melbourne.



Kindly supported by

Prof Laura Bohn, Scripps Research Institute, USA



Laura Bohn, Ph.D. is a professor of Molecular Therapeutics and Neuroscience at The Scripps Research Institute in Jupiter, FL, USA. There her team studies the function of G protein-coupled receptors, particularly opioid receptors, to develop and improve therapeutics for pain and addiction. Dr. Bohn received her Ph.D. in Biochemistry and Molecular Biology from St. Louis School of Medicine and post-doctoral training at the Duke University in the laboratory of Dr. Marc Caron and in

collaboration with Dr. Robert J. Lefkowitz. She has received young investigator awards including the John J. Abel Award in Pharmacology from ASPET.

Prof Arthur Christopoulos, Monash Institute of Pharmaceutical Sciences, Australia



Arthur Christopoulos is Professor of Pharmacology, Monash Institute of Pharmaceutical Sciences, and a Principal Research Fellow of the NHMRC. His research focuses on allosteric mechanisms of drug action at G protein-coupled receptors. He has authored over 200 publications, is a member of the NCIUPHAR and numerous international editorial boards, and consults for a number of pharmaceutical companies. He has also received numerous awards for his research, including the ASPET John J. Abel Award, the ASCEPT Rand Medal and the IUPHAR Analytical Pharmacology Lecturer. In 2014, Thomson Reuters named him a Highly Cited Researcher in Pharmacology and Toxicology.



MONASH University
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Prof Andrew Lawrence, Florey Institute of Neuroscience and Mental Health, Australia



Professor Andrew Lawrence is an NHMRC Principal Research Fellow & Associate Director at the Florey Institute of Neuroscience & Mental Health where he is Head of the Division of Behavioural Neuroscience and runs the Addiction Neuroscience laboratory. Andrew has published over 200 original articles & reviews, and been cited ~5400 times. Andrew was Treasurer of the Australian Neuroscience Society (2002-2008) and is a Fellow of the British Pharmacological Society. He is currently Senior Editor of The British Journal of Pharmacology. He is also Associate Editor of Neurochemical Research and the Journal of Pharmacological Sciences. He sits on the editorial board of Addiction Biology. In his spare time, Andrew is a keen cyclist and a surf life guard.



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Symposium 2: Phenotyping vs genotyping – choosing the right tool for dose individualisation

Prof Munir Pirmohamed, University of Liverpool, UK



Professor Munir Pirmohamed is currently David Weatherall Chair in Medicine at the University of Liverpool, and a Consultant Physician at the Royal Liverpool University Hospital. He also holds the only NHS Chair of Pharmacogenetics in the UK, and is Deputy Director of the M.R.C. Centre for Drug Safety Sciences, and Director of the Wolfson Centre for Personalised Medicine. He is also an inaugural NIHR Senior Investigator, and Fellow of the Academy of Medical Sciences in the UK. He has authored over 300 peer-reviewed publications. Professor Pirmohamed's research focuses on individual variability in drug response, both safety and efficacy, with a view to evaluating the mechanisms, and identifying strategies to personalise healthcare in order to optimise drug efficacy and minimise toxicity. Professor Pirmohamed has received a number of honours including most recently, the William Withering Medal from the Royal College of Physicians and the IPIT award for Public Service from the University of North Carolina in the US.

Prof Gerd Mikus, Deputy Head, Department of Clinical Pharmacology and Pharmacoepidemiology, University of Heidelberg, Germany



Gerd received his degrees in Physics (MSc) and Medicine (MD) from the University of Bonn, Germany. He has worked as a clinical pharmacology researcher in institutes (IKP, Stuttgart), universities (Adelaide, Basel) and university hospitals (Heidelberg, Basel). In 1999, Gerd moved to the University of Heidelberg to become the head of the Department's Clinical Research Unit (CRU). Since then he has conducted more than 70 clinical trials as principle investigator and more than ten first-in-human studies have been successfully carried out in patients and volunteers since 2007. He is a member of the Executive Editorial Board of the British Journal of Clinical Pharmacology.

Emeritus Professor Geoff Tucker, University of Sheffield; Simcyp Ltd, UK



Emeritus Professor of Clinical Pharmacology (University of Sheffield, UK). Graduated in pharmacy (1964) with a Ph.D (1967) from the University of London (Chelsea College); honorary D.Sc from the University of Uppsala (2006). Over 350 publications in the areas of clinical and theoretical pharmacokinetics, pharmacogenetics, drug metabolism, drug-drug interactions, bioequivalence and the pharmacology of drugs used in anaesthesia ('Highly Cited Author – Pharmacology': ISI)). Professional activities include Chair of the Board of Pharmaceutical Sciences of FIP and President-elect of ISSX. Co-founder (2001) of Simcyp Ltd, a university spin-out company involved in the prediction of pharmacokinetics based on *in vitro-in vivo* extrapolation and physiologically-based modelling.

Prof Andrew Somogyi, University of Adelaide, Australia



Andrew Somogyi is Professor in Clinical and Experimental Pharmacology, Faculty of Health Sciences at the University of Adelaide. His major research interests are in examining interindividual variation in drug response through clinical pharmacokinetic, pharmacodynamic and clinical outcomes studies underpinned by pharmacogenomics through the therapeutic areas of pain management, addiction, transplantation and cancer. He has NHMRC funding for pharmacogenetic studies involving drugs for various conditions; he serves on several international Pharmacogenetic and Clinical Pharmacology journal editorial boards and has established a pharmacogenetics service at the Royal Adelaide Hospital. He is an honorary fellow of the Faculty of Pain Medicine, Australian and New Zealand College of Anaesthetists.



Symposium 3: Education luncheon: Pharmacology education in the 21st Century - to cyberspace and beyond

Prof David Dewhurst, University of Edinburgh, UK



David Dewhurst has a BSc and PhD in physiology and over 25 years teaching experience in the university sector in the UK. He is Professor of e-Learning, and Director of Educational Information Services in Medicine and Veterinary Medicine at the University of Edinburgh. He has senior management experience as Assistant Principal and is currently the academic lead for a university-wide distance learning initiative. He has developed over 50 multimedia learning resources to support physiology and pharmacology teaching (www.sheffbp.co.uk) and led the team that won a prestigious Queen's Anniversary Prize for Higher and Further Education in 2005 for 'The Virtual Hospital Online – transforming medical and veterinary education'. His research in technology-enhanced learning is internationally renowned and he directs a major educational project in Malawi, Africa (<http://malawi.mvm.ed.ac.uk>). Most recently he has established an open access repository of free educational resources to support pharmacology practical teaching (www.virtualpharmacologylab.com).

Prof Kathie Knights, Flinders University, Australia



Kathie obtained her PhD from Flinders University in 1984 and a Graduate Certificate in Tertiary Education in 1997. She has held the position of Professor in Clinical Pharmacology since 2008 and is a member of the College of Distinguished Educators at Flinders. In 2007 she was awarded an Australian Carrick Citation for outstanding contribution to student learning and in 2010 the ASCEPT Teaching Excellence Award. She is co-author of the highly successful text *Pharmacology for Health Professionals*. A member of ASCEPT since 1980 she served as ASCEPT President (2008-2009). Currently she is a member of the BPS, ISSX and the Drug Metabolism Section of IUPHAR.

Prof Simon Maxwell, University of Edinburgh, UK



Simon Maxwell is Professor of Student Learning (Clinical Pharmacology and Prescribing) and is Director of the Clinical Pharmacology & Therapeutics theme in the University of Edinburgh MB ChB curriculum. He has been active in developing new approaches to help students cope with the challenges of learning to become prescribers of medicines in an increasingly demanding NHS environment. He is also the Programme Director of the online distance learning MSc in Internal Medicine, a collaboration between the University of Edinburgh and the Royal College of Physicians of Edinburgh, which currently educates about a hundred physicians in training from around the world. He is Medical Director of the UK *Prescribing Safety Assessment*; the lead author of the British Pharmacological Society (BPS) *Core Curriculum for CPT Teaching* in UK medical schools; is Clinical lead for the *Prescribe* project, a joint collaboration between the Department of Health, Medical Schools Council (MSC) and BPS and is Clinical Lead for *Prescribing Simulator*, a collaboration with Healthcare Education England. Internationally, Simon is Chair of the European Association of CPT (EACPT) Education Committee and Secretary of the International Union of Pharmacology and Clinical Pharmacology (IUPHAR) Education Section. In this latter role he has become co-Lead of an IUPHAR Pharmacology Education Project to deliver free online learning materials to resource poor countries.

Assoc Prof Shane Bullock, Monash University, Australia



Shane Bullock has been involved in the education of student health professionals and scientists for more than 25 years. Shane is the co-author of three Australian textbooks, *Fundamentals of Pharmacology* (now in its seventh edition), *Psychopharmacology for Health Professionals* and *Principles of Pathophysiology*. He has also published a number of journal articles on health professional education, in particular with respect to pharmacology knowledge. He is currently the Director of the School of Rural Health (Churchill) unit at Monash University.



Symposium 4: Dimerization and biased signalling of GPCRs

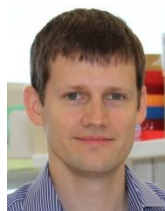
Dr Meritxell Canals, Monash Institute of Pharmaceutical Sciences, Australia



Dr Canals obtained her PhD from the University of Barcelona (Spain) in 2004. Her thesis examined the interactions between adenosine and dopamine receptors and their relevance for Parkinson's Disease.

After her PhD, Meritxell completed post-doctoral training in leading GPCR pharmacology groups. In Prof Graeme Milligan's group at Glasgow University, she focused on the functional consequences of GPCR co-expression and oligomerisation and developed novel Resonance Energy Transfer techniques. In Profs Rob Leurs & Martine Smit's group at the Vrije Universiteit in Amsterdam, The Netherlands, Meritxell focused on the regulation, pharmacology and medicinal chemistry of chemokine receptors. In 2010 she was awarded a Monash Fellowship to start her independent research group within the Drug Discovery Biology Theme at the Monash Institute of Pharmaceutical Sciences, Melbourne, Australia. Since then Meritxell's work has focused on the interactions between GPCRs and intracellular proteins, and their consequences for receptor signalling and trafficking.

Assoc Prof Kevin Pflieger, Harry Perkins Institute of Medical Research, Australia



Associate Professor Kevin Pflieger is a National Health and Medical Research Council (NHMRC) RD Wright Biomedical Research Fellow (Level 2), Head of Molecular Endocrinology and Pharmacology at the Harry Perkins Institute of Medical Research and

Chief Scientific Advisor of Dimerix Bioscience, a spin-out company from the Perkins and The University of Western Australia. He was awarded his MA and PhD from Cambridge and Edinburgh Universities respectively, and relocated to Western Australia in October 2002. He was a NHMRC Peter Doherty Research Fellow from 2005 to 2008 and an Australian Research Council (ARC) Future Fellow from 2011 to 2014. He was named Western Australian Young Scientist of the Year 2009 and his work featured as one of the NHMRC 10 of the Best Research Projects 2010. In 2011, he was awarded the Australian Museum 3M Eureka Prize for Emerging Leader in Science and in 2012 he won The Endocrine Society Early Investigators Award supported by Amgen and the WA Young Tall Poppy Science Award. Most recently, Associate Professor Pflieger has been honoured with the Endocrine Society of Australia's Mid-Career Research Award for 2014.

Prof Stephen Hill, University of Nottingham, UK



Professor Hill studied Pharmacology in Bristol (BSc, 1976) and then undertook PhD studies in the Department of Pharmacology in Cambridge (PhD 1979). After postdoctoral studies in Cambridge, he was appointed to a

lecturer position in the Department of Pharmacy at the University of Nottingham. He joined the Department of Physiology and Pharmacology (now the School of Life Sciences) in 1984 and was subsequently promoted to Reader (1989) and Professor of Molecular Pharmacology (1995). In 1997 he became Director of the Institute of Cell Signalling and then Head of the School of Biomedical Sciences in 2008. His research has concentrated mainly on the molecular pharmacology of G protein-coupled receptors and cross-talk between intracellular signaling cascades. Currently, the emphasis of his work is on the study of single ligand-receptor interactions in membrane microdomains using fluorescence correlation spectroscopy. He has served on the Editorial Boards of the British Journal of Pharmacology and Current Opinion on Pharmacology, was Vice-President (Meetings) of the BPS (2004-2006) and was the BPS Sandoz (Novartis) Prize winner in 1987 and the BPS Australasian Lecturer in 2006. He was elected a Fellow of the BPS in 2004. He was Chair of the MRC Molecular & Cellular Medicine Research Board (2012-2014) and has previously served as Deputy Chair on both the Wellcome Trust Physiology & Pharmacology Panel and the Wellcome Trust Career Development Interview Panel.

Assoc Prof Ross Bathgate, Florey Institute of Neuroscience and Mental Health, Australia



A/Prof Ross Bathgate is the leader of the Neuropeptides division at the Florey Institute of Neuroscience and Mental Health. He is an NHMRC Senior Research Fellow (Level B), Florey Senior Principle Research Fellow and an Honorary Associate Professor in the

Department of Biochemistry and Molecular Biology at the University of Melbourne. His lab focusses on understanding the interactions of peptide ligands with their G protein-coupled receptor (GPCR) targets for the development of peptide-based drugs and utilizing structure based drug design to develop novel therapeutics. He works closely with a number of pharmaceutical companies interested in drugs targeting peptide GPCRs.



Symposium 5: Efficacy and safety: The yin and yang of Chinese and herbal medicines

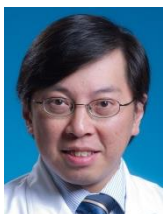
Prof Ge Lin, The Chinese University of Hong Kong, Hong Kong



Ge Lin is currently working as a full professor at School of Biomedical Sciences, The Chinese University of Hong Kong (CUHK). She also serves as Director of Joint Research Laboratory for Promoting Globalization of Traditional Chinese Medicines

between Shanghai Institute of Materia Medica, Chinese Academy of Sciences and CUHK. Prof. Lin has been working on both orthodox drugs and traditional Chinese medicinal (TCM) herbs for more than twenty years. Prof. Lin and her PK/PD research group have a long-standing interest in pharmaceutical research including: 1) drug metabolism (DM) and PK; 2) pharmacology and mechanisms of drug actions; 3) idiosyncratic adverse effect/toxicity; 4) herb-drug and herb-herb interactions; and 5) globalization of TCM herbs. Having been trained in various disciplines, including B.Sc. in Pharmacy at China Pharmaceutical University; M.Sc. in Natural Product Chemistry at University of Alberta, Canada; and Ph.D. in DMPK at University of Saskatchewan, Canada, Prof. Lin is an expert in applying multidisciplinary studies for investigating TCM herbs. Her research in TCM herbs integrates chemical analysis, DMPK, PD, and toxicology for the identification of bioactive ingredients with confirmed bioavailability and verified PK fates, the assessment of adverse effect/toxicity, and the investigation of the beneficial interactions with orthodox drugs.

Dr Joshua Ko, Hong Kong Baptist University, Hong Kong



The current research interest of my group focus on the carcinogenesis and pharmacotherapy of gastrointestinal cancers using active herbal medicinal compounds, with special interest in the actions of herbal terpenoids and flavonoids in treating colon cancer. Over the past

few years, we have investigated the anti-carcinogenic potential of total Astragalus saponins (AST) and its major constituents in a panel of human cancer cells, as well as to identify key molecular drug targets. Recently, we have also explored the anti-nociceptive and anti-inflammatory activities of traditional herbal formulations/the associated single herbal drugs in the treatment of cancer pain and inflammation pain.

Dr Ian Musgrave, The University of Adelaide, Australia



Dr Musgrave is a molecular pharmacologist/toxicologist who works at the University of Adelaide, Australia. He has a broad interest in neurodegeneration, natural product pharmacology and drug design and is convenor of the Toxicology Special

Interest Group of the Australasian Society for Pharmacology and Toxicology. Postdoctoral work at the Institute of Pharmacology at the Free University of Berlin in 1991-1994 was followed by a return to Australia, where he collaborated with Professor John Carver, Dr. Scot Smid and Professor Colin Barrow on using natural products to attack neurodegeneration. He is currently collaborating with Professors Roger Byard and Michael Bunce on an NHMRC funded project on adulteration and contamination of herbal medicines.

Assoc Prof Chun Guang Li, National Institute of Complementary Medicine (NICM), University of Western Sydney, Australia



Assoc Prof Chun Guang Li is the leader of Pharmacology Research Laboratory at the National Institute of Complementary Medicine, University of Western Sydney. He obtained PhD from University of Melbourne in 1991, and has held positions at University of Melbourne

and RMIT University, as a researcher and group leader of Herbal Pharmacology and Toxicology. His current research interest is focused on traditional and natural medicines, from basic research to clinical studies. He is currently the Vice Chairperson of the Specialty Committee of Cardiovascular Disease of World Federation of Chinese Medicine Societies.



Symposium 6: Toll-like receptor 4: Breaking down the barriers

Prof Helen Wise, The Chinese University of Hong Kong, Hong Kong



Helen's career in Pharmacology started at Glaxo Group Research in the UK and has continued in the Chinese University of Hong Kong since 1991. Her research interests fall into two categories: the molecular pharmacology of GPCRs (prostanoid receptors and ghrelin receptors) and the role of prostanoid receptors and Toll-like receptor-4 in dorsal root ganglion cells in relation to neuroinflammation and pain. Helen is a long standing member of the British Pharmacological Society and an active member of the Hong Kong Pharmacology Society, promoting pharmacology in the Asia-Pacific region.

Prof Aimin Xu, University of Hong Kong, Hong Kong



Dr. Aimin Xu is currently a professor at Department of Medicine and Department of Pharmacology & Pharmacy, also the director of state key laboratory of pharmaceutical biotechnology at the University of Hong Kong. His major research interest is on discovery and functional characterization of novel adipokines, hepatokines and other inflammatory biomarkers involved in the pathogenesis of obesity-related cardio-metabolic complications. His work contributed significantly to the understanding of the molecular basis of adipose tissue inflammation, cross-talk between adipose tissue and blood vessels in the pathogenesis of vascular dysfunctions in obesity and diabetes. His team has developed a series of immunoassay products that have now been widely used for clinical diagnostics, high throughput drug screening, clinical and basic research related to obesity and its associated medical complications.

Prof Mark Hutchinson, University of Adelaide, Australia



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.

Prof John Rudd, The Chinese University of Hong Kong, Hong Kong



Prof. John A. Rudd began working on the mechanisms of emesis control as part of PhD studies in 1988. Research investigated emetic responses resistant to 5-HT₃ receptor antagonists, the discovery of broad inhibitory anti-emetic drugs, and the mechanism of anti-emetic action of dexamethasone. Prof. Rudd subsequently developed the ferret model of cisplatin-induced acute and delayed emesis and revealed the potential of NK₁ receptor antagonists to reduce chemotherapy-induced delayed emesis. He is currently at the Chinese University of Hong Kong and has an Emesis Research Group that has strong links with the international pharmaceutical industry.



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Symposium 7: Improve ethnic bridging to foster clinical development in China/Asia

Dr Jun Shi, Roche Pharma Research and Early Development, China



Jun Shi, MD, is Head of Clinical Pharmacology and Early Development for Roche Innovation Center Shanghai, China. He was educated in Medicine and Clinical Pharmacology at Shanghai Medical University, and later at University of California, San Francisco. Prior to joining Roche, he had 20 year experience in global pharma in the US in Clinical Pharmacology, M&S and Translational Medicine. His research interests include PK/PD in special populations, population PKPD and disease modelling, and strategic M&S for decision making. He has first-hand experience in implementing model based drug development strategies in multiple therapeutic areas. He is a Fellow of American College of Clinical Pharmacology and a member of American Society for Clinical Pharmacology and Therapeutics. Since 2006, he has been involved actively in promoting clinical development science in China, serving as a standing member of Editorial Board for Chinese Journal of Clinical Pharmacology and Therapeutics and Chinese Society of Quantitative Pharmacology, an editor for a book entitled *Quantitative Pharmacology and New Drug Evaluation*, and a former international chairperson for the International Symposium of Quantitative Pharmacology in Drug Development and Regulation. Currently, he is co-director of Clinical Pharmacology Fellowship programs of Roche-Peking Union Medical College and Roche-Shanghai Huashan Hospital, respectively.

Prof Pei Hu, Clinical Pharmacology Research Center, Peking Union Medical College Hospital, China



Dr. Pei Hu is the director of Phase I unit of Clinical Pharmacology Research Center, Peking Union Medical College Hospital. She graduated from Peking Union Medical College as a medical doctor in 1989. From 1991 to 1994, she was trained in drug metabolism and biotransformation as a postdoctoral fellow in University of Washington at Seattle, U.S.A. Her Research interests include: 1. early clinical evaluation of new drugs, especially first-in-human studies, data-intensive pharmacokinetic and pharmacodynamic studies; 2. biotransformation studies in human; 3. pharmacometrics and its application in clinical drug development.

Dr Rene Bruno, Pharsight, France



René Bruno obtained a Ph.D. at the University of Marseilles in 1981. In 1985 he joined the pharmaceutical industry to develop applications of population pharmacokinetics/pharmacodynamics to support drug development. He spent 18 years with Rhône-Poulenc and Genentech.

Model-based drug development approaches were implemented in several therapeutic domains and particularly oncology. René Bruno joined Pharsight in 2003 as Managing Director, Consulting Services. He interacts with client development teams to define modeling and simulation strategies to support development decisions. René Bruno has published over 60 peer-reviewed papers, 11 invited book chapters, reviews and commentaries and he has given over 50 invited lectures.

Prof Amin Rostami-Hodjegan, University of Manchester, Simcyp Ltd; Blades Enterprise Centre, UK



Amin, a Professor of Systems Pharmacology at the Centre for Applied Pharmacokinetic Research in the University of Manchester, has an active program of training PhD students in Systems Pharmacology and Pharmacokinetics. As the Vice

President of Research & Development at Simcyp Limited, Amin leads a team of over 30 scientists working on extrapolation of *in vitro* data on drug metabolism to predict *in vivo* pharmacokinetics and pharmacodynamics in virtual patient populations. Professor Rostami has authored/co-authored over 160 peer-reviewed full articles, serves on the Editorial Boards of several journals and has been an invited speaker at 150 national and international meetings.



Symposium 8: Novel targets harnessing the therapeutic potential of NO: Nitroxyl, soluble guanylate cyclase and beyond

Dr Barbara Kemp-Harper, Monash University, Australia



Dr Barbara Kemp-Harper is a Senior Lecturer in the Department of Pharmacology, Monash University, Australia. She is a cardiovascular pharmacologist whose research aims to identify novel strategies for the prevention and treatment of vascular disease with a focus on the nitric oxide/cGMP signalling pathway. Barbara is internationally recognised for her work on the vasoprotective properties of nitroxyl (HNO), a novel redox form of nitric oxide. Barbara has received numerous invitations to speak at national and international conferences and been awarded several prizes. She is an active participant in several scientific societies, most recently serving as a council member of ASCEPT.

Assoc Prof Rebecca Ritchie, Baker IDI Heart and Diabetes Institute, Australia



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. Assoc 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 Nazareno Paolucci, Johns Hopkins University, USA

Nazareno Paolucci is Assistant Professor of Medicine in the Division of Cardiology, at the Johns Hopkins Medical Institutions in Baltimore (USA). He joined the Division of Cardiology at Johns Hopkins to work with Dr. David A. Kass at the end of 1997. During this

fellowship, he mastered pressure-volume relationships approaches to measure load-independent indexes of myocardial contractility *in vivo* and *in vitro* and other techniques to evaluate cardiac mechanics and pathological remodeling, and keeping his research focus on the role of reactive oxygen and nitrogen species. Dr. Paolucci's recent interest is on integrative cardiovascular physiology and pathophysiology, focusing on mechanisms of heart failure and hypertrophy and developing new treatments for these diseases. In particular, his laboratory has pioneered studies concerning the *in vivo* and *in vitro* pharmacological properties of nitroxyl (HNO), the one-electron reduction product of NO. More recently, his research team started investigations on the impact of brain-derived neurotrophic factor (BDNF) on normal and disease cardiac function. A recent paper from his groups has shown that BDNF directly enhances myocyte function, increasing contraction and accelerating relaxation, both *in vivo* and *in vitro*, via a CaMKII-mediated signaling.

Dr Johannes-Peter Stasch, Bayer AG, Germany



Johannes-Peter Stasch is a Chief Scientist in Cardiovascular Research at Bayer Pharma in Wuppertal, and Honorary Professor of Drug Discovery at the University Halle-Wittenberg. He studied chemistry and pharmaceutical sciences, earned a doctorate from the University of Würzburg, and received his Habilitation for Pharmacology at the University Halle-Wittenberg. He has more than 30 years' experience in the areas of biochemistry, pharmacology and drug discovery. He has played the leading role in the discovery and development of the sGC stimulators and the sGC activators. Very recently, the most advanced drug, Riociguat has been approved under the trade name Adempas® by FDA for the treatment of chronic thromboembolic pulmonary hypertension (CTEPH) and pulmonary arterial hypertension. His research has led to more than 200 patent applications, several development compounds, and finally Riociguat. Stasch is a scientific organizer of the International cGMP Conferences, has published more than 160 original publications, and 25 book chapters. He has been selected as a member of the National Academia of Science, Leopoldina.



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Symposium 9: Understanding and optimising the effects of multiple medicines in old age

Prof Gary Ford, Oxford University and Oxford Academic Health Science Network, UK



Professor Ford is Chief Executive of the Oxford Academic Health Science Network and Visiting Professor of Clinical Pharmacology at Oxford University. He graduated from Cambridge University and held a Clinical Pharmacology Fellowship at Stanford University and was a recipient of an American Federation of Aging Research Fellowship in Geriatric Clinical Pharmacology. He returned to the UK and established a comprehensive stroke service in Newcastle in 1992. His research addresses ageing changes in cardiovascular and cerebrovascular pharmacodynamics. In 2005 he was appointed Director of the National Institute for Health Research Stroke Research Network and awarded a CBE in the 2013 New Year Honours List for services to research in stroke medicine.

her post-doctoral training at the University of Eastern Finland, where she furthered her research in geriatric pharmacology and pharmacoepidemiology.

Prof Simon Maxwell, University of Edinburgh, UK



Simon Maxwell is Professor of Student Learning (Clinical Pharmacology and Prescribing) and is Director of the Clinical Pharmacology & Therapeutics theme in the University of Edinburgh MB ChB curriculum. He has been active in developing new approaches to help students cope with the challenges of learning to become prescribers of medicines in an increasingly demanding NHS environment. He is also the Programme Director of the online distance learning MSc in Internal Medicine, a collaboration between the University of Edinburgh and the Royal College of Physicians of Edinburgh, which currently educates about a hundred physicians in training from around the world. Nationally, he has made various contributions to education in clinical pharmacology and prescribing. He is Medical Director of the UK *Prescribing Safety Assessment*; the lead author of the British Pharmacological Society (BPS) *Core Curriculum for CPT Teaching* in UK medical schools; is Clinical lead for the *Prescribe* project, a joint collaboration between the Department of Health, Medical Schools Council (MSC) and BPS to deliver a national eLearning solution to develop safe and effective prescribing amongst UK medical students and is Clinical Lead for *Prescribing Simulator*, a collaboration with Healthcare Education England to build an online simulation programme that allows students to practice prescribing without the need to put any patients at risk. Internationally, Simon is Chair of the European Association of CPT (EACPT) Education Committee and Secretary of the International Union of Pharmacology and Clinical Pharmacology (IUPHAR) Education Section. In this latter role he has become co-Lead of an IUPHAR Pharmacology Education Project to deliver free online learning materials to resource poor countries.

Assoc Prof Simon Bell, Monash University, Australia



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 Gnjidic, The University of Sydney, Australia



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



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Symposium 9: Understanding and optimising the effects of multiple medicines in old age

Assoc Prof Sarah Hilmer, Royal North Shore Hospital; The University of Sydney, Australia



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.

Prof David Le Couteur, The University of Sydney; Concord Hospital, Australia



David Le Couteur is Professor of Geriatric Medicine at the University of Sydney and Director of the Centre for Education and Research on Ageing (CERA) at Concord Hospital. He is immediate past president of ASCEPT and has been a member of the Australian Drug Evaluation Committee, Pharmaceutical Benefits Advisory Committee and the Advisory Committee on the Safety of Medicines. He is secretary of the Clinical Division of the International Union for Basic and Clinical Pharmacology (IUPHAR) and was recipient of the American Society for Clinical Pharmacology and Therapeutics 2013 William B Abrams award for contribution to geriatric clinical pharmacology

Prof Darrell Abernethy, FDA; John Hopkins University, Associate Director for Drug Safety, Office of Clinical Pharmacology, USA



Dr. Darrell R. Abernethy is the lead for the biosimilars program in the Office of Clinical Pharmacology. In addition he is responsible for leading the development of a pharmacological mechanism based safety program in the Office of Clinical Pharmacology to work in synergy with efforts in the Office of Surveillance and Epidemiology and other Offices and Centers at FDA. He is also a professor of medicine (geriatrics) and of pharmacology and molecular science (part-time) at the Johns Hopkins University School of Medicine. Dr. Abernethy brings more than 25 years of experience in medicine and pharmacology, including positions in academia, practice and research. His studies of mechanisms of peripheral distribution of drugs and drug disposition and effect in obesity and pharmacokinetic/pharmacodynamic relationships of cardiovascular drugs in aging have been well received and led to his being named to the ISI Most Highly Cited Researchers in Pharmacology. Dr Abernethy is on the editorial boards of Clinical Pharmacology and Therapeutics, the Journal of Clinical Psychopharmacology, Drugs, Drugs and Therapy Perspectives, is Associate Editor of the Journal of Pharmacology and Experimental Therapeutics, and is Deputy Editor of Pharmacology Research & Perspectives.



Symposium 10: Immunopathogenesis and therapeutics of atherosclerosis

Prof Alexander Bobik, Baker IDI Heart and Diabetes Institute, Australia



Alex Bobik is an Associate Director (Alfred Baker Medical Unit) and Head of the Vascular Biology and Atherosclerosis Laboratory at BakerIDI Heart and Diabetes Institute and a Professor in the Departments of Medicine and Immunology, Monash University. He is a Fellow of the American Heart Association and member of the editorial boards of twelve cardiovascular journals including *Arteriosclerosis Thrombosis and Vascular Biology* and *Cardiovascular Research*. He has published more than 230 original research papers on hypertension, vascular remodelling and atherosclerosis and the immune system. His current research is on immune cells, cytokines and atherosclerosis.

Dr Pasquale Maffia, University of Glasgow, UK



Pasquale Maffia received his BSc (HONS) in Pharmacy in 1994, the MPhil in Pharmacology in 1996 and the PhD in Pharmacology in 2000 all from the University of Naples Federico II (Italy), where he became Aggregate Professor of Pharmacology in 2006. He then joined the University of Strathclyde in 2007 as a Lecturer in Integrative Mammalian Biology, before moving to the University of Glasgow where he is currently a Senior Lecturer at the Institute of Infection, Immunity and Inflammation. Dr Maffia long-term research interest is the role of the immune-inflammatory response in cardiovascular diseases. Current research activities address the imaging and study of the immune cellular and molecular mechanisms involved in atherosclerosis, neointimal formation and stroke. He has authored around 50 peer-reviewed publications including manuscripts on *Circulation*, *PNAS*, *Blood* and *Pharmacology & Therapeutics*. He is member of the British Pharmacological Society meetings committee and of the British Society for Cardiovascular Research committee.

Prof Brian Tomlinson, The Chinese University of Hong Kong, Hong Kong SAR



Brian Tomlinson completed his medical training at the Middlesex Hospital Medical School and University College Hospital, London. He is currently Chair Professor of Medicine & Therapeutics and Head of the Division of Clinical Pharmacology at the Chinese University of Hong Kong. His clinical and research interests include pharmacogenetics, particularly related to cardiovascular drugs, and the pathogenesis and treatment of hyperlipidaemia, hypertension, the metabolic syndrome and diabetes. He has trained over 30 postgraduate students and is an author of over 300 publications and over 500 conference abstracts and has given numerous invited lectures. He is a reviewer for many journals and serves on several Editorial Boards and is President of the Asian-Pacific Society of Atherosclerosis and Vascular Diseases.

Paul Welsh, BHF Glasgow Cardiovascular Research Centre, University of Glasgow



After completing a BSc (Hons) in Immunology, Dr Welsh completed his PhD on Inflammatory markers of Cardiovascular disease at Glasgow Royal Infirmary in 2008. He has since held two British Heart Foundation Research Fellowships at the BHF Glasgow Cardiovascular Research Centre, University of Glasgow, and completed an MSc in Epidemiology at London School of Hygiene and Tropical Medicine. His research encompasses a wide range of biomarker, genetic, and clinical research in the fields of cardiovascular disease, diabetes, rheumatoid arthritis, and healthy ageing, including data from clinical trials (including WOSCOPS, PROSPER, ASCOT, and ADVANCE), large observational studies (such as British Regional Heart Study and MIDSPAN,) and meta-analyses.



ASCEPT-BPS JOINT SCIENTIFIC MEETING

Tomorrow's medicines: pharmacology,
patients and populations

19-21 May 2015
University of Hong Kong

Symposium 11: Ion channels as therapeutic targets

Prof Xiaoqiang Yao, The Chinese University of Hong Kong, Hong Kong



Assistant Professor: 1996-1999,
Associate Professor: 1999-2002,
Department of Physiology, Chinese
University of Hong Kong.
Professor: 2002-now, School of
Biomedical Sciences, Chinese
University of Hong Kong

B.S. in Biology. 1978- 1981. Hangzhou University, PR. China.

M.Phil. 1982- 1984. Chinese Academy of Sciences.,

Ph.D. 1986-1991. Department of Biological Sciences,
The State University of New York at Buffalo, Buffalo,
New York, USA.

Postdoctoral Associate: 1992-1996, Department of
Internal Medicine, Yale University School of Medicine,
Connecticut, USA.

Prof Yao's research interest is mostly on ion channels in cardiovascular system, nervous system, and cancer cells. These include TRP channels and K⁺ channels. I published more than 170 original articles including those in Proc Natl Acad Sci USA, Journal of Clinical Investigation, Circulation Research, and Trends in Pharmacological Sciences.

Prof Nigel Bunnett, Monash University, Australia



Nigel Bunnett obtained a Ph.D. degree from the University of Cambridge. He then spent the next 30 years of his career on the West Coast of the United States, as a post-doctoral fellow at UCLA, and then an Assistant Professor at the University

of Washington. In 1987 he joined UCSF, and remained there for 25 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 the mechanisms of inflammation and pain. 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.

Dr Irina Vetter, The University of Queensland, Australia



Dr Vetter obtained her PhD in 2007 from the School of Pharmacy, The University of Queensland. She conducted studies as an NHMRC postdoctoral fellow under Prof Richard J Lewis at the Institute for Molecular Bioscience in the area of

venom peptide pharmacology. She is a recipient of an ASCEPT Young Investigator Award and a UQ Foundation Research Excellence Award. In 2014 she was awarded an ARC Future Fellowship to study the peripheral neuropharmacology of pain. Her current main research interests lie in the fields of peripheral pain mechanisms, target identification, high-throughput screening, biodiscovery of venom peptide ion channel modulators and analgesic drug discovery.

Prof Greg Monteith, The University of Queensland, Australia



Greg uses a variety of approaches to identify calcium channels and pumps that may be targets for cancer drug development. A particular focus of his research group is the identification of new drug targets for breast cancer subtypes for which

there are few effective therapies and the prognosis is poor. His work has been published in the journals Cell, Oncogene, Nature Reviews Cancer, Journal of Biology Chemistry, Molecular Cancer Therapeutics and Trends in Pharmacological Sciences. His laboratory is currently supported by the National Health and Medical Research Council of Australia.