



# ASCEPT-MPGPCR

JOINT SCIENTIFIC MEETING **27-30 NOVEMBER 2016**

MELBOURNE CONVENTION & EXHIBITION CENTRE

Therapeutic targeting: right place, right time, right effect

[www.ascept-mpgpcr2016.com](http://www.ascept-mpgpcr2016.com)



Download the  
meeting app



Meeting Program

Sunday 27 November 2016

09:30 – 19:30	<b>Registration desk open</b> Clarendon Auditorium Foyer, Melbourne Convention and Exhibition Centre		
10:00 – 12:00	<b>ASCEPT Board meeting</b> Room: Trust Room	<b>Pharmacogenomics workshop</b> Room: Clarendon Room D Chair: Prof Andrew Somogyi <b>Characterisation of signalling and regulation of common calcitonin receptor splice variants and polymorphisms</b> Ms Emma Dal Maso <b>A new collaboration between pharmacists and doctors through delivering a clinical pharmacogenomics testing service in Australia</b> Mr Sam Mostafa <b>Commercial pharmacogenetic-based decision-support tools in psychiatry</b> Dr Chad Bousman <b>AGRF services to support pharmacogenomics research</b> Mr Matthew Tinning <b>Pharmacogenomics SIG AGM</b>	
12:30 – 15:00	<b>Education forum</b> Room: Clarendon Room C Chair: Dr Lynette Fernandes	<b>Clinical Pharmacology workshop: Misconceptions no longer lost in translation</b> Room: Clarendon Room D Chair: Assoc Prof Darren Roberts	<b>Careers workshop</b> Room: Clarendon Auditorium Chairs: Mr Alex Gillis and Mr Bala Umashankar
	12:30 – 13:30 <b>Pharmacogenomics</b> Dr Janet Collier, University of Adelaide	<b>Reality bites from bench to bedside – the latest scoop on snake bite and anti-venom research</b> Dr Anjana Silva, Monash University and Dr Christopher Johnston, University of Newcastle	<b>Paths to teaching-focused positions in academia</b> Dr Tina Hinton, The University of Sydney
	13:30 – 14:30 <b>Concept inventory, learning outcomes and MCQs</b>	<b>Safe as Houses? Paracetamol poisoning and treatment</b> Prof Nicholas Buckley, The University of Sydney and Dr Xin Liu, The University of Queensland Translational Research Institute	<b>Starting your own business in medical sciences</b> Prof Steven Charlton, University of Nottingham, UK
	14:30 – 15:00 <b>Education Forum AGM</b>	<b>Uses, misuses and abuses – policy and public health perspectives on alcohol and medicines misuse</b> Dr Rose Cairns and Dr Kate Chitty, The University of Sydney	<b>Switching fields to pursue the career that inspires you</b> Dr Wendy Imlach, The University of Sydney <b>Drug discovery research in the world of pharma</b> Dr Chris Langmead, Monash University <b>Getting started in the pharmaceutical industry</b> Mrs Brenda Pote, Roche <b>Careers in clinical pharmacology</b> Prof Sarah Hillmer, Royal North Shore Hospital
15:00 – 15:25	<b>Comfort break</b>		
15:30 – 16:30	<b>Conference opening and acknowledgement of country</b> Room: Clarendon Auditorium Prof Dom Geraghty, ASCEPT President		
	<b>Keynote address</b> Chair: Prof Arthur Christopoulos <b>Allosteric mechanisms of receptor function and modulation: Towards a new pharmacology</b> Prof Jean-Pierre Changeux, Pasteur Institute, Paris, France - 100		
	Sponsored by  		
16:30 – 16:35	<b>Comfort break</b>		
16:35 – 18:35	<b>ASCEPT Denis Wade New Investigators symposium</b> Room: Clarendon Auditorium Chair: Prof Dom Geraghty		
	16:35 – 17:05	<b>Exploring Class B GPCR signalling in sensory neurons - 101</b> Dr Christopher Walker, University of Auckland, New Zealand	
17:05 – 17:35	<b>Plasma membrane calcium channels in the regulation of hypoxia events in breast cancer cells - 102</b> Dr Iman Azimi, The University of Queensland		
17:35 – 18:05	<b>Integrating quantitative clinical pharmacology to expedite pediatric drug development - 103</b> Dr Kashyap Patel, Monash University; d3 Medicine Ltd		
18:05 – 18:35	<b>Using animal models to identify novel targets in respiratory disease - 104</b> Dr Chantal Donovan, Hunter Medical Research Institute; University of Newcastle		
18:35 – 19:30	<b>Welcome reception</b> Clarendon Auditorium Foyer, Melbourne Convention and Exhibition Centre		

## Social Media

Please use the hashtag #ASCEPT\_MPGPCR to communicate about the conference, network and share ideas. Follow the ASCEPT-MPGPCR conference @ASCEPTanz and @DDB\_MPGPCR.

In today's world it is important to understand, as we are sure you all do, information on social media is readily available for the world to see and potentially be interpreted out of the context it was given in. We recommend that you avoid posting anything online that you would not be happy for your employer or professional body to view. If you have your own individual presence on social media it is a good idea to have a disclaimer on your profile eg: 'All views expressed on this site are my own and do not necessarily reflect those of my employer or professional body'.

Due to the sensitive nature of data and preliminary, unpublished research findings, filming, photography and recording of presentations and poster sessions is prohibited without prior consent.

## Monday 28 November 2016

07:30 – 18:00	<b>Registration desk open</b>			
	Clarendon Auditorium Foyer, Melbourne Convention and Exhibition Centre			
08:30 – 09:30	<b>British Pharmacological Society keynote address</b>			
	<b>Room:</b> Clarendon Auditorium			
	<b>Chair:</b> Dr David Webb			
	<b>Pharmacology and functions of the long chain fatty acid receptors FFA1/GPR40 and FFA4/GPR120</b> Prof Graeme Milligan, University of Glasgow, UK - 200			
09:30 – 10:25	<b>Morning tea with exhibitors</b>			Sponsored by
	Clarendon Auditorium Foyer			
	ASCEPT poster presentations: Cardiovascular; Clinical Pharmacology; Drug Discovery; Drug Disposition and Response			
10:30 – 12:30	<b>Symposium 1:</b> Airway inflammation and remodeling	<b>Symposium 2:</b> Therapeutic targeting of exposure and effect in oncology	<b>Symposium 3:</b> Calcium permeable ion channels: links to GPCRs, drug toxicity pathways and disease	<b>Symposium 4:</b> ISN Symposium on translational neuroscience of GPCRs
	Sponsored by  THE UNIVERSITY OF MELBOURNE		Sponsored by 	Sponsored by 
	<b>Room:</b> Clarendon Room D	<b>Room:</b> Clarendon Room A	<b>Room:</b> Clarendon Room B	<b>Room:</b> Clarendon Auditorium
	<b>Chair:</b> Prof Alistair Stewart	<b>Chairs:</b> Dr Andrew Rowland and Dr David Foster	<b>Chair:</b> Prof Greg Monteith	<b>Chair:</b> Dr Karen Gregory
10:30 – 11:00	<b>Airway epithelial steroid insensitivity - 201</b> Dr Christine Keenan, The University of Melbourne	<b>Complexities of CYP mediated kinase inhibitors metabolism and interactions - 205</b> Prof Gerd Mikus, University Hospital, Heidelberg, Germany	<b>Astrocytic calcium signalling in health and disease - 209</b> Prof Masamitsu Iino, The University of Tokyo, Japan	<b>Positive allosteric modulators of muscarinic acetylcholine receptors for treatment of CNS disorders - 213</b> Prof P. Jeffrey Conn, Vanderbilt Medical Center, USA
11:00 – 11:30	<b>Mast cells at the centre - 202</b> Dr Graham Mackay, The University of Melbourne	<b>Genetics of imatinib disposition - 206</b> Dr Daniel Barratt, University of Adelaide	<b>Physiologically relevant opening of TRPV4 by signalling from G protein-coupled receptors - 210</b> Prof Peter McIntyre, RMIT University	<b>Dopamine in schizophrenia: Where does it stand in the cascade of pathological events? - 214</b> Prof Anissa Abi-Dargham, Stony Brook University, USA
11:30 – 12:00	<b>Targeting oxidant-dependent mechanisms for the treatment of COPD and its co-morbidities - 203</b> Assoc Prof Ross Vlahos, RMIT University; The University of Melbourne	<b>Predictors of therapeutic and adverse outcomes with targeted anticancer drugs - 207</b> Assoc Prof Michael Soric, Flinders University	<b>TRPM2 channels as mediators of oxidative stress-induced liver damage - 211</b> Assoc Prof Grigori Rychkov, The University of Adelaide; South Australian Health and Medical Research Institute	<b>mGluR5 and its potential role in ASD - 215</b> Prof Stan Skafidas, The University of Melbourne
12:00 – 12:30	<b>RGS protein dysfunction in Asthma - 204</b> Prof Reynold Panettieri, Rutgers University, USA	<b>Bayesian forecasting to predict drug exposure - 208</b> Assoc Prof Richard Upton, University of South Australia	<b>TRPC1 in the regulation of pathways involved in breast cancer metastasis - 212</b> Dr Iman Azimi, The University of Queensland Translational Research Institute	<b>M1-muscarinic allosteric modulators slow prion neurodegeneration and restore memory loss - 216</b> Dr Sophie Bradley, University of Glasgow, UK  <b>Extrapyramidal side effects of antipsychotic drugs are linked to their association kinetics at the dopamine D2 receptor - 217</b> Prof Steven Charlton, University of Nottingham, UK
12:30 – 13:25	<b>Lunch with exhibitors</b>			<b>SIG meeting: Inflammation/Respiratory</b>
	Clarendon Auditorium Foyer			<b>Room:</b> Clarendon Room E
	ASCEPT poster presentations: Cardiovascular; Clinical Pharmacology; Drug Discovery; Drug Disposition and Response			<b>SIG meeting: Toxicology</b>
				<b>Room:</b> Clarendon Room B

Meeting attendees must gain approval from a speaker or poster presenter prior to quoting or publishing that individual's scientific results. This policy includes any use of social media or information sharing related to the conference. We respectfully ask that if you attend a presentation where a speaker has communicated that they do not wish to have their presentation commented on in the social media environment that you adhere to this request. If you are presenting preliminary data, etc. and do not wish the results to be broadcast, please use the following logo with your presentation ask the audience not to refrain from posting your material. It should appear on the title slide or poster, as well as all the slides you do not want posted, so that your audience recognizes your request.

"I request that my presentation is not commented or posted about on social media "

Thank you.



13:30 – 15:30	<b>Oral presentations 1: Inflammation/Respiratory and Neuro- and Behavioural Pharmacology</b>	<b>Oral presentations 2: ASCEPT Garth McQueen Oral Prize</b>	<b>Oral presentations 3: Drug Discovery</b>	<b>Oral presentations 4: Clinical Pharmacology and Drug Disposition and Response</b>
	<b>Room:</b> Clarendon Room D	<b>Room:</b> Clarendon Room A	<b>Room:</b> Clarendon Room B	<b>Room:</b> Clarendon Auditorium
	<b>Chairs:</b> Dr Stavros Selemidis and Dr Nicole Jones	<b>Chair:</b> Dr Tina Hinton	<b>Chairs:</b> Dr Laura Kilpatrick and Assoc Prof Kevin Pflieger	<b>Chair:</b> Assoc Prof Darren Roberts
13:30 – 13:45	<b>The use of three-dimensional cell culture models in the study of idiopathic pulmonary fibrosis - 218</b> Mr Asres Mitke, The University of Melbourne	<b>Cortisol inhibits selected actions of inhaled corticosteroids (ICS) in human airway epithelium - 226</b> Miss Danica Radojicic, The University of Melbourne	<b>The potential role of a novel endogenous allosteric modulator of muscarinic acetylcholine receptors - 234</b> Ms Ee Von Moo, Monash University	<b>Metabolism of the Australian medicinal plant compound polyandric acid A: In silico and in vitro approaches - 242</b> Mr Matthew Bendikov, University of South Australia
13:45 – 14:00	<b>HTR2A mediates 5-HT-induced oedema in the mouse trachea, oesophagus and bladder - 219</b> Ms Larissa Dill, RMIT University	<b>Assessment of cytosolic free calcium levels in MDA-MB-231 breast cancer cells undergoing cell death following treatment with ceramide and staurosporine - 227</b> Mr John Bassett, The University of Queensland	<b>Tacrine is a novel allosteric modulator of the <math>\beta_2</math>-adrenoceptor - 235</b> Mr Brendan Wilkins, University of New South Wales	<b>Preclinical model to identify adverse geriatric outcomes from polypharmacy and Drug Burden Index - 243</b> Dr John Mach, Kolling Institute; The University of Sydney; Royal North Shore Hospital
14:00 – 14:15	<b>FGD2: A new modulator of mast cell activation - 220</b> Mr Jeremy Metha, The University of Melbourne	<b>CCL18 and reactive oxygen species are potential mediators of the pro-fibrotic actions of M2 macrophages - 228</b> Ms Caitlin Lewis, Monash University	<b>Functional analysis of novel allosteric modulators at the M1 muscarinic acetylcholine receptor - 236</b> Dr Emma Van Der Westhuizen, Monash University	<b>Therapeutic Drug Monitoring (TDM) of Vancomycin - 244</b> Miss Crystal Li, University of New South Wales
14:15 – 14:30	<b>Respiratory syncytial virus-induced glucocorticoid insensitivity in bronchial epithelial cells: Role of pathogen-associated molecular patterns (PAMPs) - 221</b> Ms Asmaa Radwan, University of Melbourne	<b>Pannexin-1 channels and P2X7 receptors in a human colonic mucosa model of colitis: Potential roles in inflammatory bowel disease - 229</b> Miss Erica Diezmos, University of New South Wales	<b>Structure-function analysis of orthosteric and allosteric ligand binding at the adenosine A1 receptor - 237</b> Mrs Anh TN Nguyen, Monash University	<b>Potential drug interactions with novel oral anticoagulants in elderly hospital inpatients - 245</b> Ms Heather Forbes, Repatriation General Hospital
14:30 – 14:45	<b>GPR52 – A fine-tuner of striatal signalling in schizophrenia? - 222</b> Miss Daisy Spark, Monash University	<b>Proteome profiling reveals phosphocofilin1 as a candidate mediator of TGF-<math>\beta</math>1-induced glucocorticoid resistance - 230</b> Ms Meina Li, The University of Melbourne	<b>Characterising cellular uptake and distribution of a membrane-anchored neurokinin 1 receptor antagonist - 238</b> Dr Nicholas Veldhuis, Monash University	<b>The pharmacokinetics and pharmacodynamics of feboxostat - 246</b> Mr Bishoy Kamel, University of New South Wales
14:45 – 15:00	<b>Do human amnion stem cell-derived exosomes improve stroke outcome? - 223</b> Mr Andrew Ghaly, Monash University	<b>The gut hormone INSL5 activates multiple signalling pathways in the human enterocyte cell line NCI-H716 - 231</b> Mr Sheng Yu Ang, Monash University	<b>Molecular Determinants of Amylin Receptor Agonism - 239</b> Ms Rebekah Bower, University of Auckland, New Zealand	<b>Extraction of Metformin During Haemodiafiltration - 247</b> Miss Felicity Smith, University of New South Wales; St Vincent's Hospital
15:00 – 15:15	<b>Magnesium acetyltaurate provides retinal neuroprotection against NMDA-induced excitotoxicity - 224</b> Assoc Prof Igor Iezhitsa, Universiti Teknologi MARA, Malaysia	<b>GPR37L1: An orphan G protein-coupled receptor contributing to sex differences in blood pressure regulation - 232</b> Mr James Coleman, Victor Chang Cardiac Research Institute	<b>Ethanol-oxytocin interactions at homomeric glycine receptors expressed in <i>Xenopus laevis</i> oocytes - 240</b> Miss Dominique Taylor, The University of Sydney	<b>Cannabinoid interactions with gabapentin in an animal neuropathic pain model - 248</b> Mr Nicholas Atwal, The University of Sydney
15:15 – 15:30	<b>Deferoxamine can reduce brain injury and enhance functional recovery in a rat model of endothelin-1 induced focal stroke - 225</b> Dr Nicole Jones, University of New South Wales	<b>Pickpocketing pharmacological neighbours reveals ligands for orphan receptors - 233</b> Mr Tony Ngo, Victor Chang Cardiac Research Institute	<b>Elucidating the mammary stem cell hierarchy: Insights into breast cancer heterogeneity - 241</b> Dr Felicity Davis, The University of Queensland	<b>Mechanism-based PK/PD modelling approach to optimise synergistic combinations against multidrug-resistant <i>Pseudomonas aeruginosa</i> (Pa) and in-vivo evaluation in a murine thigh infection model - 249</b> Mr Rajbharan Yadav, Monash University
15:30 – 15:55	<b>Afternoon tea with exhibitors</b>			
	Clarendon Auditorium Foyer			



16:00 – 18:00	<b>Symposium 5:</b> Inflammation: The key to much pathology	<b>Symposium 6:</b> The Legacy of Henry Krum – making clinical trials fit practice	<b>Symposium 7:</b> Using visualisation in pharmacology education: Right task, right response, better learning	<b>Symposium 8:</b> MPGPCR beyond the bench
	<b>Room:</b> Clarendon Room D	<b>Room:</b> Clarendon Room A	<b>Room:</b> Clarendon Room B	<b>Room:</b> Clarendon Auditorium
	<b>Chairs:</b> Assoc Prof Ross Vlahos and Dr Joanne Hart	<b>Chair:</b> Dr Catherine Lucas	<b>Chair:</b> Dr Lynette Fernandes	<b>Chair:</b> Prof Andrew Tobin
16:00 – 16:30	<b>FPR2 regulates chronic inflammation in Chronic Obstructive Pulmonary Disease (COPD) - 250</b> Assoc Prof Steven Bozinovski, RMIT University	<b>Specific issues for geriatric patients in clinical trials - 254</b> Dr Ingrid Hopper, Monash University	<b>Demonstration of knowledge and understanding using visualization - 258</b> Dr Russell Anderson, Monash University	<b>Therapeutic targeting of cardiac fibrosis - 262</b> Prof Burns Blaxall, Cincinnati Children's Hospital Medical Center, USA
16:30 – 17:00	<b>Do anti-viral neutrophil responses exacerbate lung inflammation in asthma? - 251</b> Assoc Prof Brian Oliver, University of Technology Sydney	<b>Clinical trials for the real world - 255</b> Prof Danny Liew, Monash University	<b>Comparison of visual modalities to enhance student learning - 259</b> Dr Anna-Marie Babey, University of New England	
17:00 – 17:30	<b>Adenosine receptor biased agonism to treat ischaemic heart disease - 252</b> Dr Lauren May, Monash University	<b>The Legacy of Henry Krum –making clinical trials fit practice: Where are the children? - 256</b> Assoc Prof Noel Cranswick, The University of Melbourne	<b>Linking drug-target interaction to response: Filling the gap - 260</b> Dr Janet Collier, The University of Adelaide	<b>GPCRs beyond the bench: Lessons from the CaSR signalling pathway - 263</b> Prof Rajesh Thakker, University of Oxford, UK
17:30 – 18:00	<b>Anti-oxidant effects of hydrogen sulphide in the cardiovascular system - 253</b> Dr Joanne Hart, RMIT University	<b>Fitting the evidence to drug practice - 257</b> Prof Jennifer Martin, The University of Newcastle	<b>Panel discussion</b>	
18:00 – 19:00	<b>ASCEPT AGM</b>			
	<b>Room:</b> Clarendon Auditorium			
19:00 – 20:00	<b>President's reception (by invitation)</b>			
	Clarendon Room, Level 5			

**MEDICAL BREAKTHROUGHS MAY COME OUT OF THE LAB.  
BUT THEY BEGIN IN THE HEART.**

For more than a century, a very special passion has driven the people of MSD. Our goal is to develop medicines, vaccines, and animal health innovations that will improve the lives of millions. Still, we know there is much more to be done. And we're doing it, with a long-standing commitment to research and development. We're just as committed to expanding access to healthcare and working with others who share our passion to create a healthier world. Together, we'll meet that challenge. With all our heart.

 **MSD**  
*Be well*

**125**  
YEARS  
SINCE 1891

Copyright © 2016 Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA. All Rights Reserved.

Tuesday 29 November 2016

Level 2 – Clarendon Auditorium, Clarendon Rooms C, D and E  
Level 5 – Clarendon Rooms A and B

08:00 – 17:00	<b>Registration desk open</b> Clarendon Auditorium Foyer, Melbourne Convention and Exhibition Centre		
08:30 – 09:30	<b>British Toxicological Society keynote address</b>		<b>MPGPCR student oral prize</b>
	Room: Clarendon Auditorium		Room: Clarendon Room A
	Chair: Prof Dom Geraghty		Chair: Dr Lauren May
		08:30 – 08:45	<b>The inner workings of a GPCR: Molecular basis for biased G protein activation and beta-arrestin recruitment - 301</b> Ms Franziska Heydenreich, Paul Scherrer Institut, Switzerland
		08:45 – 09:00	<b>VCP746, a biased adenosine A1/A2B receptor agonist, promotes divergent cardioprotective signalling from that of NECA, a prototypical adenosine receptor agonist - 302</b> Miss Jo-Anne Baltos, Monash University
	09:00 – 09:15	<b>Receptor residence time determines bias towards internalisation of the <math>\mu</math> opioid receptor - 303</b> Mr Alexander Gillis, The University of Sydney	
	09:15 – 09:30	<b>Functional consequences of different conformational states of GPCR-<math>\beta</math>-arrestin complexes - 304</b> Mr Thomas Cahill, Duke University, USA	
09:30 – 10:25	<b>Morning tea with exhibitors</b>	Sponsored by <b>ACS Chemical Neuroscience</b>	09:30 – 09:45
	Clarendon Auditorium Foyer		<b><math>\beta</math>-Arrestin-biased agonists of the GLP-1 receptor from backbone-modification of GLP-1 - 305</b> Ms Marlies Hager, University of Wisconsin-Madison, USA
ASCEPT Poster presentations: Education; Inflammation/respiratory; Neuro- and Behavioural Pharmacology; Pharmacoepidemiology; Pharmacogenomics; Toxicology; Urogenital and Gastrointestinal			
10:30 – 12:30	<b>Symposium 9: Pharmacology of brain neurotransmission</b>	<b>Symposium 10: Role of fibrosis as a driver of, and a treatment target of, impaired cardiovascular and respiratory function</b>	<b>Symposium 11: Evaluation and management of polypharmacy in older adults with multimorbidity and geriatric syndromes</b>
		Sponsored by <b>Department of Pharmacology and Cardiovascular Disease Program, Biomedicine Discovery Institute</b> 	Sponsored by 
	Room: Clarendon Room A	Room: Clarendon Room D	Room: Clarendon Room B
	Chair: Prof Andrew Lawrence	Chairs: Assoc Prof Rebecca Ritchie and Dr Barb Kemp-Harper	Chairs: Prof Sarah Hilmer and Prof Darrell Abernethy
10:30 – 11:00	<b>Is the differential reversal of opioid tolerance by ethanol a consequence of ligand bias? - 306</b> Prof Graeme Henderson, University of Bristol, UK	<b>Macrophage mineralocorticoid receptor signalling regulates cardiovascular remodelling - 310</b> Dr Morag Young, Hudson Institute of Medical Research	<b>What clinical and surrogate outcomes should be used to evaluate medicines in older adults? - 315</b> Prof Darrell Abernethy, Johns Hopkins University School of Medicine; Food and Drug Administration, USA
11:00 – 11:30	<b>The GABA-B receptor and psychiatric disorders - 307</b> Dr SJ Enna, University of Kansas Medical Center, USA	<b>Targeting adenosine receptors for cardiac remodelling - 311</b> Dr Lauren May, Monash University	<b>Polypharmacy intervention trials - 316</b> Prof Petra Thuermann, University Witten; HELIOS University Hospital Wuppertal, Germany
11:30 – 12:00	<b>Pharmacology of chaperones in the CNS: Re-emergence of sigma-1 for neuropsychiatric and neurological disorders - 308</b> Dr James Barrett, Drexel University College of Medicine, USA	<b>Mechanisms downstream of IGF-1R for targeting diabetes-induced cardiac remodeling - 312</b> Dr Miles De Blasio, Baker IDI Heart & Diabetes Institute	<b>Drugomics to understand polypharmacy - 317</b> Prof David Le Couteur, The University of Sydney; Concord Hospital
12:00 – 12:30	<b>Addiction and the brain: The role of the immune system - 309</b> Prof Mark Hutchinson, The University of Adelaide	<b>Targeting inflammation and fibrosis in early life to protect against life-long respiratory and cardiovascular complications - 313</b> Dr Jane Bourke, Monash University	<b>Identification of positive allosteric modulators of the glucagon-like peptide-1 receptor - 321</b> Dr Francis Willard, Eli Lilly and Company, USA
		<b>Targeting epigenetic mechanisms to limit pulmonary fibrosis in COPD - 314</b> Prof Philip Hansbro, The University of Newcastle; Hunter Medical Research Institute	<b>Role of cyclic AMP in BRL37344 and isoprenaline mediated glucose uptake by <math>\beta</math>2-adrenoceptors - 322</b> Dr Masaaki Sato, Monash University
		<b>Panel discussion</b>	<b>Engineering ultra-stable <math>\alpha</math>1-adrenoceptor subtypes allows the interrogation of ligand selectivity and fragment screening using ligand-observed NMR - 323</b> Dr Daniel Scott, The Florey Institute of Neuroscience and Mental Health

Medicine, Nursing and Health Sciences

## Monash Biomedicine Discovery Institute

Enhancing lives through *discovery*

- We have discovery programs in:**
- Cancer
  - Cardiovascular Disease
  - Development and Stem Cells
  - Metabolic Disease and Obesity
  - Neuroscience
- Partnering with industry to deliver:**
- Solutions to unmet clinical needs
  - A pipeline of translatable discoveries
  - Innovative therapeutics
  - Technologies for research and diagnosis

**Research Opportunities in the Department of Pharmacology**  
Scientists within the Department of Pharmacology, all of whom are members of the BDI at the Clayton Campus, offer a highly collaborative environment for early career and established researchers.

More information can be obtained by contacting Head of Department, Professor Robert Widdop.  
Email: robert.widdop@monash.edu

[monash.edu/discovery-institute](http://monash.edu/discovery-institute)

Department of Pharmacology and Therapeutics,  
School of Biomedical Sciences

## RESEARCH AND COLLABORATION OPPORTUNITIES AT AUSTRALIA'S LEADING UNIVERSITY

Exciting research and collaboration opportunities with industry engagement in an innovative and inclusive environment for both early career and established researchers. Current projects include:

### Lung Health Research Centre

A collaboration with the Royal Melbourne Hospital fostering translational research excellence that closely aligns with patient needs to improve their lung health.

### The Therapeutic Technologies Research Initiative (TTRI)

TTRI supports the development of new applications of organ-on-a-chip technology to transform drug-screening processes using principles embedded in the inter-discipline, mechanopharmacology.

### Australian Venom Research Unit (AVRU)

An international networked group researching national and regional venomous injury problems and providing up to date information to health networks, industry, media and the community.

### BioCurate Pty Ltd

A joint venture with Monash University to realise the full potential of Australia's innovative opportunities to develop new medicines.

[biomedsciences.unimelb.edu.au](http://biomedsciences.unimelb.edu.au)



## Providing leadership for research and teaching in Biomedical Sciences

One of Australia's leading Biomedical Sciences Schools with more than 200 Honours and Postgraduate students studying in Pharmacology, Physiology, Neuroscience, Developmental Biology and Anatomy.

### Research Themes:

- Therapeutic Development and Translation
- Cell Signaling and Function
- Brain Development and Function
- Tissue Injury and Repair
- Functional Morphology

### For information on:

**Student opportunities:** [www.uq.edu.au/sbms/our-research-students](http://www.uq.edu.au/sbms/our-research-students)

**Staff opportunities:** [www.uq.edu.au/sbms/programs/all](http://www.uq.edu.au/sbms/programs/all)

**Or contact** The Head of School (Acting):

Professor Rod Minchin at [r.minchin@uq.edu.au](mailto:r.minchin@uq.edu.au)



THE UNIVERSITY  
OF QUEENSLAND  
AUSTRALIA

School of  
**Biomedical Sciences**

[www.uq.edu.au/sbms](http://www.uq.edu.au/sbms)

CRICOS Provider Number 00025B



Organized by:



Jointly with:



ISN Secretariat: Kenes International

Rue François-Versailles 7

1207 Geneva, Switzerland

Tel.: +41 22 908 0488 | Fax: +41 22 906 9140

[www.neurochemistry.org](http://www.neurochemistry.org)



12:30 – 13:25	<b>Lunch with exhibitors</b>			<b>SIG meeting: Drug Disposition and Response</b>
	Clarendon Auditorium Foyer	Sponsored by  School of Health and Biomedical Sciences		<b>Room:</b> Clarendon Room B
13:30 – 15:30	<b>Oral presentations 5: Urogenital and Gastrointestinal</b>	<b>Oral presentations 6: Toxicology and Pharmacogenomics</b>	<b>Oral presentations 7: Pharmacoepidemiology</b>	<b>SIG meeting: Drug Discovery</b>
	<b>Room:</b> Clarendon Room D	<b>Room:</b> Clarendon Room A	<b>Room:</b> Clarendon Room B	<b>Room:</b> Clarendon Auditorium
	<b>Chairs:</b> Dr Betty Exintaris and Prof Russ Chess-Williams	<b>Chair:</b> Dr Daniel Barratt	<b>Chair:</b> Dr Julia Gilmartin	<b>Chair:</b> Prof Steven Charlton
13:30 – 13:45	<b>Identification of novel irritant sensing mechanisms in the bladder</b> - 324 Miss Ashlee Caldwell, University of Adelaide	<b>A pilot feasibility study to assess CYP2B6*6 genotype frequency and adverse effects to efavirenz in HIV/AIDS patients in Papua New Guinea</b> - 332 Prof Andrew Somogyi, University of Adelaide	<b>Fracture risk with zopiclone: Application of a varying-coefficient cox model to examine influence of age as a risk factor for fractures</b> - 340 Dr Prasad Nishtala, University of Otago, New Zealand	<b>Allosteric targeting of metabotropic glutamate receptor 5: New insights and opportunities</b> - 348 Dr Karen Gregory, Monash University
13:45 – 14:00	<b>Nav1.8 is required for mechanosensation in hypersensitive colonic afferents and nav-induced colonic pain in vivo</b> - 325 Ms Andelain Erickson, University of Adelaide	<b>Relationship between whole blood and intra-graft tacrolimus concentrations in renal transplant recipients</b> - 333 Assoc Prof Benedetta Sallustio, The Queen Elizabeth Hospital	<b>Do medications and prescribing patterns increase the risk of hospitalisations from aged care facilities? A systematic review</b> - 341 Miss Kate Wang, Monash University	<b>Exploring conformational landscapes of muscarinic acetylcholine receptors</b> - 349 Dr David Thal, Monash University
14:00 – 14:15	<b>Pharmacology of the human beta3-adrenoceptor agonist mirabegron at the mouse beta3-adrenoceptor</b> - 326 Dr Dana Hutchinson, Monash University	<b>Statin induced myalgia, is there a genetic link?</b> - 334 Dr Simran Maggo, University of Otago, New Zealand	<b>Investigation of hospital opioid prescribing among opioid naive surgical patients</b> - 342 Mr Luke Kardell, The University of Sydney	<b>From surrogate ligands to phenotype: Exploring the function of orphan GPCR, GPR37L1</b> - 350 Dr Nicola Smith, Victor Chang Cardiac Research Institute; University of New South Wales
14:15 – 14:30	<b>Evidence for mu and delta opioid receptor coexpression and functional interactions in the mouse colon</b> - 327 Mr Jesse Di Cello, Monash University	<b>A pharmacological exploration of the in vitro neurotoxicity of king cobra (ophiophagus hannah) venom</b> - 335 Mr Tam Huynh, Monash University	<b>“Real world” patients are different to trial participants – application of direct oral anticoagulant clinical trial eligibility criteria to a hospitalised cohort</b> - 343 Ms Laura Fanning, Monash University	<b>The role of central beta-3 adrenergic receptors in the control of metabolism and glucose homeostasis</b> - 351 Dr Stephanie Simonds, Monash University
14:30 – 14:45	<b>The tachykinin NK2 receptor antagonist, ibodutant, displays gender- and agonist-dependence in the human colon</b> - 328 Miss Stelina Drimousis, University of New South Wales	<b>Combining Adverse Outcome Pathways with multitask machine learning to simultaneously improve in silico rodent carcinogenicity prediction performance and enable mechanistic interpretation</b> - 336 Mr Davy Guan, The University of Sydney	<b>N-of-1 trials for assessing the effects of deprescribing medications on short-term clinical outcomes in older adults: A systematic review</b> - 344 Mr Alexander Clough, The University of Sydney	<b>Diverse activation pathways in class A GPCRs converge near the G-protein-coupling region</b> - 352 Dr AJ Venkatakrishnan, Stanford University, USA
14:45 – 15:00	<b>Legumain is a novel biomarker and therapeutic target in inflammatory bowel disease</b> - 329 Dr Laura Edgington-Mitchell, Monash University	<b>The changing face of snakebite in Australia: 10 years of the Australian snakebite project (ASP)</b> - 337 Dr Christopher Johnston, University of Newcastle	<b>Polypharmacy and the incidence of falls, fractures and weight loss in residential aged care facilities</b> - 345 Dr Jenni Ilomaki, Monash University	<b>Enhancing endogenous opioid signalling in the amygdala through positive allosteric modulation of DOR</b> - 353 Dr Bryony Winters, The University of Sydney
15:00 – 15:15	<b>Identification of novel sites of TRPV4 expression in the mouse colon</b> - 330 Mr Pradeep Rajasekhar, Monash University	<b>Utilization of multiple reaction monitoring scan mode for the simultaneous determination of amlodipine and lercanidipine in human plasma</b> - 338 Dr Ahmed Abdalla, University of South Australia	<b>Medication review in Australian residential aged care facilities: A systematic review</b> - 346 Ms Esa Chen, Monash University	
15:15 – 15:30	<b>Biological effects on rat prostatic smooth muscle and chemical fractionation of costus speciosus rhizome</b> - 331 Ms Eunice Su Nguok Ngie, Monash University	<b>Gelofusine ameliorates colistin-induced nephrotoxicity</b> - 339 Miss Shaz Sivanesan, Monash University	<b>Evaluation of the national minimum dataset for neurological conditions in older adults</b> - 347 Ms Sujita Narayan, University of Otago, New Zealand	
15:30 – 15:55	<b>Afternoon tea with exhibitors</b>			
16:00 – 17:00	<b>Clarendon Auditorium Foyer</b>			
	<b>MPGPCR keynote address</b>			
	<b>Room:</b> Clarendon Auditorium	Sponsored by   Institute of Pharmaceutical Sciences		
	<b>Chair:</b> Prof Patrick Sexton	<b>GPCRs and ACRs (Arrestin-coupled receptors): A tale of two transducers</b> - 354 Prof Robert J Lefkowitz, Nobel Laureate, Duke University Medical Center, USA		
17:00 – 18:00	<b>MPGPCR poster presentations</b>			
	Clarendon Auditorium Foyer			
19:00 – 23:00	<b>Meeting dinner</b>			
	Showtime Events Centre, 61 South Wharf Promenade, South Wharf			

## Wednesday 30 November 2016

08:00 – 16:30	<b>Registration desk open</b>			
	Clarendon Auditorium Foyer, Melbourne Convention and Exhibition Centre			
08:30 – 09:30	<b>Keynote presentation</b>			
	<b>Room:</b> Clarendon Auditorium			
	<b>Chair:</b> Prof Dom Geraghty			
	<b>Unravelling the circuitry and chemistry of reward-seeking - 400</b> Prof Andrew Lawrence, Florey Institute for Neuroscience and Mental Health			
09:30 – 10:25	<b>Morning tea with exhibitors</b>			
	Clarendon Auditorium Foyer	Sponsored by 		09:55am – 10:25 <b>SIG meeting: Neuro- and Behavioural Pharmacology</b>
	MPGPCR poster presentations			<b>Room:</b> Clarendon Auditorium
10:30 – 12:30	<b>Symposium 13: Safe prescribing: now and the future</b>	<b>Symposium 14: IUPHAR and therapeutic targeting</b>	<b>Symposium 15: Ion channel function and dysfunction in the vascular, and gastrointestinal and urogenital tracts</b>	<b>Symposium 16: MPGPCR Molecular neuroscience</b>
		Sponsored by 		Sponsored by 
	<b>Room:</b> Clarendon Room A	<b>Room:</b> Clarendon Room B	<b>Room:</b> Clarendon Room D	<b>Room:</b> Clarendon Auditorium
	<b>Chairs:</b> Prof Sepehr Shakib and Prof Sarah Hilmer	<b>Chairs:</b> Dr SJ Enna and Dr Michael Spedding	<b>Chairs:</b> Dr Paul Bertrand and Assoc Prof Lu Liu	<b>Chair:</b> Dr Michelle Halls
10:30 – 11:00	<b>What I wish I knew: An intern's prescribing journey - 401</b> Dr Arunima Jain, The Canberra Hospital	<b>IUPHAR: Its organization and mission for world health - 405</b> Dr SJ Enna, IUPHAR	<b>TRPA1 channels and serotonin release from enterochromaffin cells - 410</b> Dr Paul Bertrand, RMIT University	<b>Molecular mechanisms of pain control by opioid receptors - 414</b> Prof Gregory Scherrer, Stanford University, USA
11:00 – 11:30	<b>Prescribing curriculum and competency - 402</b> Prof Sarah Hilmer, Royal North Shore Hospital; The University of Sydney	<b>IUPHAR: Pharmacological variables and therapeutic targeting - 406</b> Dr Michael Spedding, IUPHAR	<b>Ion channels and visceral afferents in the gut and bladder - 411</b> Assoc Prof Stuart Brierley, Flinders University; South Australian Health and Medical Research Institute	<b>Location-dependent signaling of metabotropic glutamate receptor 5, mGlu5 - 415</b> Prof Karen O'Malley, Washington University School of Medicine, USA
11:30 – 12:00	<b>PSA – is it the solution? - 403</b> Dr Claire Harrison, Monash University	<b>Synergies and challenges for academic/pharma drug targeting - 407</b> Dr James Barrett, IUPHAR	<b>Local and regional regulation of endothelial function in diabetes - 412</b> Dr Marianne Tare, Monash University	<b>Orphans and veterans: GPCR-mediated regulation of striatal function - 416</b> Dr Chris Langmead, Monash University
12:00 – 12:30	<b>ePrescribing – the devil is in the detail - 404</b> Assoc Prof Matt Doogue, The University of Otago, New Zealand	<b>The specific challenges in India/Africa/China - 408</b> Dr Bhagirath Patel, IUPHAR; Dr Guanhua Du, Chinese Pharmacological Society	<b>TRPV3 control of uterine blood vessels - 413</b> Dr Tim Murphy, University of New South Wales	<b>Controlling efficacy at G protein coupled receptors; ligand-dependent modulation of G protein conformation and activity at the calcitonin receptor - 417</b> Dr Sebastian Furness, Monash University
	<b>Panel Discussion</b>	<b>Critical role of clinical pharmacology in therapeutic targeting - 409</b> Dr Darrell Abernethy, Dr David Webb, IUPHAR		<b>Cooperativity as the molecular basis of allosteric modulator receptor subtype-selectivity at muscarinic receptors - 418</b> Dr Celine Valant, Monash University
12:30 – 13:25	<b>Lunch with exhibitors</b>			<b>SIG meeting: Clinical Pharmacology</b>
	Clarendon Auditorium Foyer			<b>Room:</b> Clarendon Room A
	MPGPCR poster presentations and ASCEPT student poster finalists presentation			12:55-12:25 <b>SIG meeting: Cardiovascular</b>
				<b>Room:</b> Clarendon Room B

13:30 – 15:30	<b>Oral presentations 8: Clinical Pharmacology Trainees and Drug Disposition and Response</b>	<b>Oral presentations 9: Cardiovascular</b>	<b>Oral presentations 10: Education</b>	<b>Symposium 17: MPGPCR Novel insights into structure &amp; signaling</b>
	<b>Room:</b> Clarendon Room A	<b>Room:</b> Clarendon Room B	<b>Room:</b> Clarendon Room D	<b>Room:</b> Clarendon Auditorium
	<b>Chair:</b> Assoc Prof Matt Doogue	<b>Chairs:</b> Dr Jason Peart and Dr Brad Broughton	<b>Chair:</b> Assoc Prof Shane Bullock	<b>Chair:</b> Dr Katie Leach
13:30 – 13:45	<b>Diagnosing and recording adverse drug reactions in general medical patients, a cross-sectional study - 419</b> Dr Niall Hamilton, Canterbury District Health Board, New Zealand	<b>Cardiac-selective bone morphogenetic protein 7 (BMP7) gene therapy to target cardiac fibrosis in a mouse model of diabetic cardiomyopathy - 427</b> Dr Mitchel Tate, Baker IDI Heart & Diabetes Institute	<b>Peer feedback and scaffolding student learning: Developing an authentic assessment - 435</b> Dr Angela Finch, University of New South Wales	<b>Allostery in GPCR signalling - 439</b> Dr Dmitry Veprintsev, Paul Scherrer Institute, Switzerland
13:45 – 14:00	<b>Effectiveness of interventions to deprescribe inappropriate proton pump inhibitors in older adults: A systematic review - 420</b> Dr Tom Wilsdon, Flinders Medical Centre	<b>Clinical experience with pharmacological conditioning of donor hearts with glyceryl trinitrate (GTN) and erythropoietin (EPO) after declaration of circulatory death (DCD) - 428</b> Dr Mark Hicks, St Vincent's Hospital	<b>Evaluating student perceptions of current laboratory report feedback - 436</b> Dr Klaudia Budzyn, Monash University	
14:00 – 14:15	<b>The uptake of TPMT pharmacogenomic testing across specialty units at a tertiary hospital - 421</b> Dr David Liew, Austin Health	<b>Interleukin-18 is crucial for the development of renal inflammation and elevated blood pressure in a mouse model of hypertension - 429</b> Ms Jordyn Thomas, Monash University	<b>Surviving bioscience and pharmacology; an eBook for accelerated nursing students - 437</b> Dr Sheila Duggrell, Queensland University of Technology	
14:15 – 14:30	<b>Restarting psychoactive medications post intentional overdose: A move towards a consensus - 422</b> Dr Emma Tay, St Vincent's Hospital	<b>Functional and inflammatory effects of thrombotic cortical stroke in males and females - 430</b> Miss Catherine Nguyen, Monash University	<b>Developing student awareness of potential career options in the pharmaceutical industry - 438</b> Dr Barbara Kemp-Harper, Monash University	<b>Novel insights into class B GPCR activation and signaling - 440</b> Dr Denise Wootten, Monash University
14:30 – 14:45	<b>Meropenem stability in 24 hour continuous infusion; a simulation study - 423</b> Dr Katherine Langan, Monash University; The Alfred Hospital	<b>Shear stress mediates cell surface expression and interaction of TRPV4 with other mechanoreceptors - 431</b> Dr Sara Baratchi, RMIT University	<b>Structural mechanism of ligand activation in class C GPCRs - 441</b> Dr Qing Fan, Columbia University, USA	
14:45 – 15:00	<b>Challenges of an electronic medication management system. The evolving role of a clinical pharmacologist in interpreting current evidence and implementing this into an eMM system - 424</b> Dr Christopher Morris, Princess Alexandra Hospital	<b>Influence of ACE inhibitors on frailty and cardiac function in middle-aged female C57BL/6 mice - 432</b> Dr Alice Kane, Dalhousie University, Canada		
15:00 – 15:15	<b>Participation of clinical pharmacology trainees in TGL expert groups - 425</b> Prof Robert Moulds, Therapeutic Guidelines	<b>CCL18 as a mediator of the pro-fibrotic actions of M2 macrophages in the vessel wall during hypertension - 433</b> Miss Mingyu Zhu, Monash University		
15:15 – 15:30	<b>Substantial impact of altered PK in critically ill (ICU) patients on the antibacterial effects of meropenem evaluated via mechanism-based modelling (MBM) and the hollow-fibre infection model (HFIM) - 426</b> Dr Cornelia Landersdorfer, Monash University	<b>Plasma cell differentiation is not essential for the pro-hypertensive actions of B cells - 434</b> Miss Seyuri Moodley, Monash University	<b>Afternoon tea</b>	
15:30 – 16:00	<b>ASCEPT prize giving</b> <b>Room:</b> Clarendon Auditorium <b>Chair:</b> Prof Dom Geraghty			
16:00 – 17:00	<b>Symposium 18: MPGPCR structural biology</b> <b>Room:</b> Clarendon Auditorium <b>Chair:</b> Dr Denise Wootten			
16:00 – 16:30	<b>Chemokines and their receptors: Structural insights into binding, activation, specificity, and antagonism - 442</b> Dr Irina Kufareva, University of California, San Diego, USA			
16:30 – 17:00	<b>Structural studies of purinergic receptors P2Y1R and P2Y12R - 443</b> Prof Beili Wu, Shanghai Institute of Materia Medica, China			
17:00 – 18:00	<b>Closing keynote address</b> <b>Room:</b> Clarendon Auditorium <b>Chair:</b> Dr Chris Langmead <b>Structural insights into the dynamic process of G protein coupled receptor signaling - 444</b> Prof Brian Kobilka, Nobel Laureate, Stanford University, USA			
18:00 – 18:15	<b>MPGPCR prize giving and meeting close</b> <b>Room:</b> Clarendon Auditorium <b>Chair:</b> Dr Chris Langmead			

Sponsored by



 MONASH University  
Institute of Pharmaceutical Sciences

# Thank you to our sponsors

## Principal sponsor



## Major sponsor



## Key sponsors



Department of Pharmacology and  
Cardiovascular Disease Program,  
Biomedicine Discovery Institute,



## Sponsors



## Supporters



## Exhibitors



**Ranked #4 in world for Pharmacy & Pharmacology  
#1 in Asia-Pacific**



**MONASH University**  
Institute of Pharmaceutical Sciences



## **Enhanced Doctoral Program in Pharmacy & Pharmaceutical Sciences: Drug Discovery Biology**

### **KEY FEATURES:**

- 4-year degree
- 3x 6-week rotations in different labs (year 1)
- Advanced Course in Drug Discovery & Development (in year 1)
- No overlap between coursework & rotations
- Independent academic mentor
- Independent peer mentor
- Theme researchers publish in leading journals, e.g. Nature, Cell, Nature Chem Biol, Nature Comm, Cell Res, PNAS

Enquiries:

Pharm-ddb-enquiries@monash.edu

For further information:

<https://www.monash.edu/pharm/research/areas/drug-discovery/postgrad-study>

