

Melbourne, Australia, 23 – 25 November 2016

EMERGING THERAPEUTICS SUMMIT

Hosted by the International Innovative Research Network



SUMMIT CHAIR



Prof. Jonathan Baell
Monash University

COMMITTEE MEMBERS



Prof. Jagat Kanwar
Deakin University



Prof. Irena Cosic
RMIT University



Prof. Jiming Ye
RMIT University



Dr. Annabella Newton
Phillips Ormonde Fitzpatrick



Dr. Manuela Jorg
Monash University



Dr. Tu Le
**International Innovative
Research Network**



SUMMIT INFORMATION

● Registration desk

The registration desk will be open in the foyer on the ground floor of Mercure Melbourne Treasury Gardens hotel, 13 Spring street, Melbourne, at the following times:

Wednesday 23 November

8:00am to 5:00pm

Thursday 24 November

8:30am to 6:00pm

Friday 25 November

8:30am to 5:00pm

● Name badges and dinner tickets

All delegates are required to wear name badges throughout the summit. Name badges are your ticket of admittance to all summit sessions. Dinner tickets are located behind your name card in your name badge. Please remember to bring your ticket to the function. If you believe you have booked for the dinner and do not have a ticket, please see the team at the Registration Desk.

● Where do I get help?

Please contact the team at the Registration Desk or any of the ETS'16 committee members. If you need urgent medical assistance, the hotel staff can also assist.

● Transport

Taxi can be arranged by the hotel reception on the ground level of the hotel. Parliament train station and tram stops are within walking distance. City Circle tram is free but other transports require Myki cards.

● Abstracts

Abstracts can be downloaded from the summit website (www.ets16.org).

● Instructions for presenters

Oral presentations

There are three types of oral presentation. It is important to remember that the times listed below are the **total** times for presentations. Speakers should aim to talk for several minutes less than these times, to allow for questions and changeover. Suggested times are included below. The session chairs will follow the schedule rigorously.

Plenary lectures:

40 minutes (e.g. 35 + 5 mins)

Invited lectures:

25 minutes (e.g. 20 + 5 mins)

Oral communications:

15 minutes (e.g. 13 + 2 mins)

Speakers are strongly encouraged to bring their talks to the summit on USB drivers. They should load them onto the computer before their session and allow time for checking.

Technical staff will be available to assist if needed. If you are planning to use your laptop, please check the connection between your laptop and the projector prior to your session.

Poster presentations

Poster boards will be located in the foyer. When placing your poster on the appropriately-numbered poster board, please ensure that it is presented in a portrait (vertical) format. The size of the poster must not exceed 950mm in width by 1200mm in height. Please use Velcro to fix your portrait (vertical) poster to the allocated poster board in the morning on your presentation day. Please do not move the poster board numbers.

● Catering

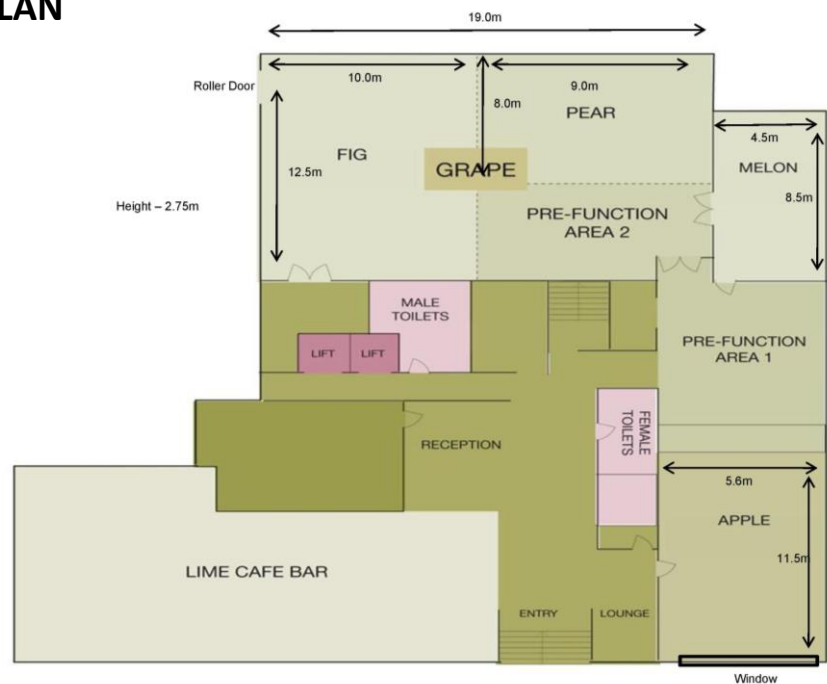
The following catering is included in the summit registration fee: all morning teas, lunches, and afternoon teas.

The summit dinner is NOT included in the registration fee.

● Luggage storage

For delegates departing directly to the airport, limited luggage storage is available daily at the Registration Desk

VENUE FLOOR PLAN



Plenary sessions will be held in the Grape room (Fig + Pear). Concurrent sessions 1, 3, 5, 7, 9, and 11 will be held in the Fig room. Concurrent sessions 2, 4, 6, 8, 10, and 12 will be held in the Pear room. The workshop and talk during breaks will be held in the Melon room. Catering (morning teas, lunches and afternoon teas) will be served at the Lime Café Bar.

DINNER FUNCTION

Dinner function will hold at the Pavilion in Fitzroy Garden, 7 minutes walk from the summit venue.



POSTER LIST

- P01 Julia Beveridge, *Monash University (Australia)*
Hit-to-lead optimization: Single agents for the treatment of Chagas disease
- P02 Prasanna Lakshmi Abbaraju, *University of Queensland (Australia)*
Asymmetric silica nanoparticles as a vaccine platform: Influence of shape on immunological responses
- P03 Andrew Tang, *Monash University (Australia)*
Designing Turn-on Fluorescent Probes for Nitroreductase
- P04 Naznin Akhtar, *Deakin University (Australia)*
Zinc doped ferrite nanoparticles for magnetic resonance imaging
- P05 Phei Ching Lim, *Hospital Pulau Pinang (Malaysia)*
Original vs. generic fixed-dose glibenclamide/metformin: Cost-effectiveness and safety
- P06 Dr. Sergio del Rio-Sancho, *University of Geneva and University of Lausanne (Switzerland)*
Short duration iontophoresis for targeted topical peptide delivery into the skin
- P07 Joanna Macdonald, *Deakin University (Australia)*
Aptamers as therapeutic modalities for the treatment of breast cancer brain metastases
- P08 Monila Nadikudi, *University of Tasmania (Australia)*
Novel short-chain quinones against mitochondrial dysfunction induced seizures
- P09 Jamie Strachan, *RMIT University (Australia)*
Encapsulation of therapeutic peptides and proteins into bulk and cubosomes lipid cubic phase
- P10 Suman Chaudhary, *Deakin University (Australia)*
Novel *Azadirachtin indica* encapsulated guar gum nanoparticles for cancer nanotherapy
- P11 Estelle Suys, *Monash University (Australia)*
An *in vitro* digestion – *in vivo* absorption model to examine the impact of polymers on drug absorption
- P12 Dr. Shuo Deng, *National University of Singapore (Singapore)*
The role of gelsolin in 5-Fluorouracil resistance in colorectal cancer: molecular mechanisms and potential therapeutic implications
- P13 Dr. Remi Szabo, *University of Wollongong (Australia)*
Design & Development of Novel Selective Sialyltransferase Inhibitors using Computational Tools
- P14 Dr. Alexe Bojovschi, *RMIT University (Australia)*
Microwave and gold nano-particles based protein therapy
- P15 Dr. James Swarbrick, *Monash University (Australia)*
X-ray Crystallography and Paramagnetic NMR to Expedite Structure-Based Drug Discovery

SUMMIT PROGRAM - 23 November			
8:00-9:00	Registration		
9:00-9:10	Opening ceremony and grant ceremony		
9:10-10:30	Plenary session 1 Chair: Prof. Jonathan Baell, <i>Monash University (Australia)</i>		
9:10-9:50	Prof. Hakim Djaballah, <i>Qurient, Inc., and University of Science and Technology of Korea (Korea)</i> Are we winning the fight against global disease?		
9:50-10:30	Prof. Maria Kavallaris, <i>University of New South Wales (Australia)</i> Targeting cancer-associated genes using nanoparticle delivery of gene silencing		
10:30-11:00	Morning tea + 'How to pitch' workshop delivered by Dr. Laura Faulconer, <i>STC (Australia)</i> and Ms. Fiona Lewis, <i>Monash University (Australia)</i>		
11:00-12:30	Concurrent session 1: Mechanisms of diseases and drug development Chair: Prof. Daniel Hoyer, <i>University of Melbourne (Australia)</i>	11:00-12:30	Concurrent session 2: Drug delivery Chair: Prof. Ben Boyd, <i>Monash University (Australia)</i>
11:00-11:25	Prof. Leann Tilley, <i>University of Melbourne (Australia)</i> Targeting the malaria parasite's stress response to overcome artemisinin resistance	11:00-11:25	Prof. Hakkim Chan, <i>University of Sydney (Australia)</i> Advancing antimicrobial therapy by inhalation aerosol technology
11:25-11:50	Prof. Marc Pellegrini, <i>Walter & Eliza Hall Institute of Medical Research (Australia)</i> Pro-apoptotic drugs to treat infectious diseases	11:25-11:50	A/Prof. Michelle McIntosh, <i>Monash University (Australia)</i> Bringing gold-standard oxytocin therapy to all women to prevent post-partum haemorrhage
11:50-12:15	Prof. Jagat Kanwar, <i>Deakin University (Australia)</i> Targeted nanodelivery in cancer and corneal haze	11:50-12:15	Dr. Charlotte Conn, <i>RMIT University (Australia)</i> Lipid-based nanomaterials for delivery of therapeutic proteins and peptides
12:15-12:30	Dr. Melanie Hutton, <i>Monash University (Australia)</i> Engineered bovine colostrum: an alternative to antibiotics for <i>Clostridium difficile</i> infections	12:15-12:30	Tang Li, <i>Monash University (Australia)</i> Exploring the solid state of nanocrystallised drug in liposomes and its changes upon exposure to biorelevant media using synchrotron based SAXS
12:30-1:30	Lunch Lunch speaker: Dr. Andi Horvath, <i>University of Melbourne (Australia)</i> Science Public Speaking – from good to great talks		

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1:30-3:30	Plenary session 2 Chair: Prof. Roy Robins-Browne, <i>University of Melbourne (Australia)</i>		
1:30-2:10	Prof. Daniel Hoyer, <i>University of Melbourne (Australia)</i> Orexin, sleep and much more		
2:10-2:50	Prof. Enzo Palombo, <i>Swinburne University of Technology (Australia)</i> Traditional medicinal plants as a source of new drugs		
2:50-3:20	Poster session during afternoon tea		
3:20-4:50	Concurrent session 3: Mechanisms of diseases and drug development Chair: A/Prof. Ross Vlahos, <i>RMIT University (Australia)</i>	3:20-5:00	Concurrent session 4: Natural medicine Chair: Prof. Enzo Palombo, <i>Swinburne University of Technology (Australia)</i>
3:20-3:45	Prof. Roy Robins-Browne, <i>University of Melbourne (Australia)</i> Disarming bacterial virulence: a contemporary approach to antimicrobial chemotherapy	3:20-3:45	Prof. Andrew Scholey, <i>Swinburne University of Technology (Australia)</i> Dietary flavonoids for brain and cognition: evidence from human trials
3:45-4:10	Dr. Morag Young, <i>Hudson Institute of Medical Research (Australia)</i> Understanding the molecular and cellular specificity of mineralocorticoid signalling in cardiovascular disease	3:45-4:10	Prof. Ming Wei, <i>Griffith University (Australia)</i> Explore the potential of cane toad extracts as novel therapy for cancer and/or anxiety
4:10-4:35	A/Prof. Tim Thomas, <i>Walter & Eliza Hall Institute of Medical Research (Australia)</i> Novel high affinity inhibitors of the MYST family of chromatin regulators are effective in inducing cellular senescence	4:10-4:35	Prof. Jonathan Baell, <i>Monash University (Australia)</i> Your biologically active natural product may not be a good starting point for drug discovery, even if it is an FDA-approved drug! Why is this so?
4:35-4:50	Dr. Chong-Yew Lee, <i>Universiti Sains Malaysia (Malaysia)</i> Neuroprotective effect of a blood-brain barrier permeable aurone in <i>Caenorhabditis elegans</i> models	4:35-5:00	Prof. Jiming Ye, <i>RMIT University (Australia)</i> Repurposing drugs developed from natural products for diabetes and fatty liver disease

SUMMIT PROGRAM - 24 November			
9:00-10:30	Plenary session 3 Chair: Prof. Magdalena Plebanski, <i>Monash University (Australia)</i>		
9:00-9:40	Prof. Tim Hirst, <i>Gamma Vaccines (Australia)</i> Lessons from a vaccine developer!		
9:40-10:20	Dr. Joanne Alcindor, <i>MecRx (Australia)</i> In the Company of Friends – How MecRx Went from an Idea to a Fully Fledged Pharma Startup		
10:20-11:00	Prof. Peter Duggan, <i>CSIRO (Australia)</i> Low molecular weight inhibitors of neuronal calcium ion channels		
11:00-11:30	Morning tea		
11:30-1:00	Concurrent session 5: Translational research and enabling technologies Chair: Dr. Joanne Alcindor, <i>MecRx (Australia)</i>	11:30-1:00	Concurrent session 6: Vaccine and gene therapeutics Chair: Prof. Tim Hirst, <i>Gamma Vaccines (Australia)</i>
11:30-11:55	Prof. Darren Kelly, <i>OccuRx and University of Melbourne (Australia)</i> Molecules to Medicine, developing anti fibrotics for chronic kidney disease	11:30-11:55	Prof. Magdalena Plebanski <i>Monash University (Australia)</i> Precise solutions for complex diseases: engaging nanotechnology and immunotherapy
11:55-12:20	Prof. Jonathan Baell, <i>Monash University (Australia)</i> Translation at the Academic-Industry Interface: Case Study Cameos	11:55-12:20	Prof. Nikolai Petrovsky, <i>Flinders University (Australia)</i> Vaccines for prevention or treatment: from influenza to Alzheimer's disease
12:20-12:45	A/Prof. David Anderson, <i>Burnet Institute (Australia)</i> Point of care diagnostics for global health - pushing the boundaries	12:20-12:45	Dr. Jim Vadolas, <i>Murdoch Childrens Research Institute (Australia)</i> Gene therapy for haemoglobin disorders
12:45-1:00	George Lovrecz, <i>CSIRO (Australia)</i> Virus-like particle production in the Collaborative Protein Production Facility at CSIRO	12:45-1:10	Dr. Frank Sainsbury, <i>University of Queensland (Australia)</i> Virus-like particle engineering for therapeutic delivery
1:10-2:00	Lunch		

SUMMIT PROGRAM - 24 November

2:00-4:00	Plenary session 4 Chair: Dr. Andrew Laslett, <i>CSIRO (Australia)</i>		
2:00-2:40	Prof. Melissa Little, <i>Murdoch Children's Research Institute (Australia)</i> Rebuilding human kidneys: how do we move from organoid to medical application?		
2:40-3:20	Prof. Alan Mark, <i>University of Queensland (Australia)</i> Validating of protein:ligand complexes: Reconciling theory and experiment		
3:20-4:00	Prof. Dave Winkler, <i>CSIRO (Australia)</i> Tripeptide motifs as a drug design paradigm: recent case studies		
4:00-4:30	Afternoon tea		
4:30-5:40	Concurrent session 7: Stem cell therapeutics Chair: Veronica Glattauer, <i>CSIRO (Australia)</i>	4:30-5:40	Concurrent session 8: Computational approaches Chair: Prof. Alan Mark, <i>University of Queensland (Australia)</i>
4:30-4:55	Dr. Andrew Laslett, <i>CSIRO (Australia)</i> Harnessing pluripotency: novel antibodies for human stem cell biology	4:30-4:55	Dr. Elizabeth Yuriev, <i>Monash University (Australia)</i> Capturing flexibility in structure-based design: from drugs to sugars and back again
4:55-5:10	Dr. Ilaria Stefani, <i>University of Queensland (Australia)</i> Rapid optimization of lineage commitment and media formulation using microfluidic bioreactors	4:55-5:10	Dr. David Chalmers, <i>Monash University (Australia)</i> Computational approaches to drug formulation
5:10-5:35	Dr. Dean Brenner, <i>University of Michigan (USA)</i> Dietary polyunsaturated fatty acids modulate the adipose secretome to modify mammary stem cell self-renewal	5:10-5:35	A/Prof. Ashley Buckle, <i>Monash University (Australia)</i> Circumventing the stability-function trade-off in protein engineering
5:35-5:50	Dr. Robyn Meech <i>Flinders University (Australia)</i> The role of B-catenin in muscle stem cell function and dysfunction	5:35-5:50	Prof. Irena Cosic, <i>RMIT University (Australia)</i> Design of Therapeutic Peptides Using the Resonant Recognition Model
6:30-10:30	Dinner function Dinner speaker: Dr. Warwick Tong, <i>Cancer Therapeutics CRC (Australia)</i>		

SUMMIT PROGRAM – 25 November			
9:00-10:20	Plenary session 5 Chair: Prof. Peter Duggan, <i>CSIRO (Australia)</i>		
9:00-9:40	Prof. Yogeshva Kalia, <i>University of Geneva (Switzerland)</i> Targeted Topical Drug Delivery: New Strategies and Opportunities		
9:40-10:20	Prof. Thomas Davis, <i>Monash University (Australia)</i> Polymers and the BioNano Interface		
10:20-11:00	Dr. Charles Lindall, <i>CSIRO (Australia)</i> Raising money for early stage R&D		
11:00-11:30	Morning tea		
11:30-1:15	Concurrent session 9: Drug delivery Chair: Prof. Thomas Davis, <i>Monash University (Australia)</i>	11:30-1:15	Concurrent session 10: Mechanisms of diseases and drug development Chair: Prof. Ming Wei, <i>Griffith University (Australia)</i>
11:30-11:55	Prof. Ben Boyd, <i>Monash University (Australia)</i> Lipid-based delivery systems for addressing unmet medical needs	11:30-11:55	A/Prof. Ross Vlahos, <i>RMIT University (Australia)</i> Novel pharmacological strategies for the treatment of chronic obstructive pulmonary disease and its comorbidities
11:55-12:20	A/Prof. Keiji Itaka, <i>Tokyo University (Japan)</i> mRNA delivery using nano drug delivery systems for intractable diseases and regenerative medicine	11:55-12:20	Dr. Lenka Munoz, <i>University of Sydney (Australia)</i> Non-kinase targets of protein kinase inhibitors
12:20-12:45	Dr. Georgina Such, <i>University of Melbourne (Australia)</i> Engineering endosomal escape using pHlexiparticles	12:20-12:45	A/Prof. Danielle Skropeta, <i>University of Wollongong (Australia)</i> Glycosyltransferase inhibitors as a novel anti-metastatic strategy
12:45-1:00	Dr. Tristan Clemons, <i>University of Western Australia (Australia)</i> The role of Lysyl oxidase inhibitors in the treatment of fibrotic disorders and scarring in the skin	12:45-1:00	A/Prof. Anton Dolzhenko, <i>Monash University (Malaysia and Australia)</i> Construction of bioactive compounds on purine isosteric scaffolds
1:00-1:15	Blake Smith, <i>Murdoch Children's Research Institute (Australia)</i> Hijacking the Sidt2 RNA transporter for siRNA delivery	1:00-1:15	Dr. Sarah Shigdar, <i>Deakin University (Australia)</i> Aptamers as therapeutic modalities for the treatment of breast cancer brain metastases

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1:15-2:15	Lunch		
2:15-3:55	Concurrent session 11: Diagnostics, sensors and imaging Chair: Prof. Justin Gooding, <i>University of New South Wales (Australia)</i>	2:15-3:55	Concurrent session 12: Mechanisms of diseases and drug development Chair: A/Prof. Danielle Skropeta, <i>University of Wollongong (Australia)</i>
2:15-2:40	To be advised	2:15-2:40	Dr. Mary Tolcos, <i>RMIT University (Australia)</i> A new therapy to promote myelination and improve neurological outcomes following fetal growth restriction
2:40-3:05	Prof Richard Tilley, <i>University of New South Wales (Australia)</i> Non-toxic quantum dots and magnetic nanoparticles as bio-imaging agents	2:40-3:05	Dr. Nicole Smith, <i>University of Western Australia (Australia)</i> Occurrence of G-quadruplex DNA in fibrosis and astrogliosis
3:05-3:30	A/Prof. Chamindie Punyadeera, <i>Queensland University of Technology (Australia)</i> Salivary diagnostics for the detection of cardiovascular diseases and cancers	3:05-3:30	Dr. Manuella Jorg, <i>Monash University (Australia)</i> Synthesis and Pharmacological Evaluation of Novel Positive Allosteric Modulators of the M ₁ Muscarinic Acetylcholine Receptor
3:30-3:55	Dr. Guozhen Liu, <i>Macquarie University (Australia)</i> From cytokine sensing to cell-based therapy	3:30-3:55	Dr. Johan Basuki, <i>CSIRO (Australia)</i> Photo-modulated Ocular Drug Delivery of Biomacromolecular Therapeutics
3:55-4:20	Afternoon tea		
4:20-5:00	Plenary session 6 Chair: Prof. Jonathan Baell, <i>Monash University (Australia)</i>		
4:20-5:00	Prof. Justin Gooding, <i>University of New South Wales (Australia)</i> Cell based measurement tools to explore therapeutic action		
5:00-5:10	Award ceremony and closing ceremony		

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