ORGANIC & MEDICINAL CHEMISTRY CONFERENCE

UNIVERSITY OF WOLLONGONG AUSTRALIA

20th – 23rd November 2022

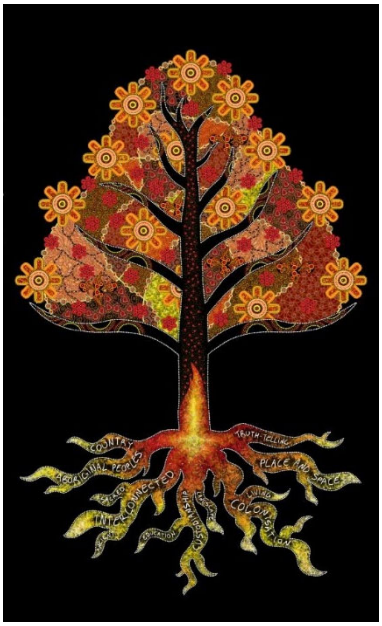
University of Wollongong

raci ROYAL AUSTRALIAN CHEMICAL INSTITUTE

Welcome to OMC2022!

Welcome to the joint conference of the **Royal Australian Chemical Institute (RACI)** Organic Chemistry, Medicinal Chemistry and Chemical Biology divisions. Located at the University of Wollongong, we have a fantastic program of speakers representing industry and academia including a Diversity in Chemistry panel session.

Acknowledgement of Country



We acknowledge that Country for Aboriginal peoples is an interconnected set of ancient and sophisticated relationships.

The University of Wollongong spreads across many interrelated Aboriginal Countries that are bound by this sacred landscape, and intimate relationship with that landscape since creation.

From Sydney to the Southern Highlands, to the South Coast.

From fresh water to bitter water to salt. From City to Urban to Rural.

The University of Wollongong Acknowledges the Custodianship of the Aboriginal peoples of this place and space that has kept alive the relationships between all living things.

The University Acknowledges the devastating impact of colonisation on our campuses' footprint and commit ourselves to truth-telling, healing and education.

Organising Committee

Professor Danielle Skropeta
University of Wollongong

Co-Chair

Professor Dave Lupton
Monash University

Co-Chair

Dr Sinead Keaveney
University of Wollongong

Co-Chair

A/Professor Christopher Hyland
University of Wollongong

Co-Chair

A/Professor Alex Bissember
University of Tasmania

Treasurer and Co-Chair

Committee Members: Prof Peter Scammells, Prof Kathryn Fairfull-Smith, Dr Lara Malins, Prof Joanne Blanchfield, A/Prof Carolyn Dillon and A/Prof Christopher Richardson

THANK YOU TO OUR SPONSORS!

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RACE ONCOLOGY

molecules

JOC The Journal of Organic Chemistry

AUSTRALIAN JOURNAL OF CHEMISTRY
AN INTERNATIONAL JOURNAL FOR CHEMICAL SCIENCE

Diversity and gender equity

Exhibition Booths

Getting to Wollongong

Driving

Wollongong is just over an hour's drive south of Sydney. The quickest way to get here is *via* the M1 Princes Motorway, however the coastal route *via* Lawrence Hargrave Drive has beautiful scenery and takes you across the famous Sea Cliff Bridge. **Parking is available at UOW – see page 8.**

Shuttle Bus Services from Sydney Airport

https://www.redy2go.com.au/wollongong-shuttles/

https://leisurecoastlimousine.com.au/airport-transfer-pricing/

Public Transportation Information

USING PUBLIC TRANSPORT

You need an Opal card to travel on public buses, trains, ferries and light rail in NSW. Link your card to a credit card for automatic top ups, or use the top up facilities at the UniShop or at a train station.

CONCESSION OPAL CARDS

To get a Concession Opal card you must be an eligible domestic full time students who meets the following criteria:

- Full time enrolled student
- Australian Citizen or Permanent Resident; and
- Have a NSW home address.

To get your card:

1. Log into SOLS **(uow.edu.au/student)** and provide your consent for UOW to confirm your eligibility with Transport for NSW.
2. Wait 48 hours, then go to **opal.com.au** to apply for your card.

Your card will be posted to your mailing address 5-7 days after your application is complete.

You need to travel with your Concession Opal card and your UOW student ID card or a Transport Concession Opal card as proof of entitlement to a concession fare.

ADULT OPAL CARDS

If you are not eligible for a Concession Opal card, you need to have an Adult Opal card. Retailers include the UniShop, 7Eleven, some newsagents and Woolworths. You may also be able to use contactless payments via a credit or debit card.

TRAIN

North Wollongong Station is the closest train station to the Wollongong Campus, on the South Coast line. It is a 10-15 minute walk from the campus, or quick trip on the North Gong Shuttle.

DIRECT BUSES TO UOW

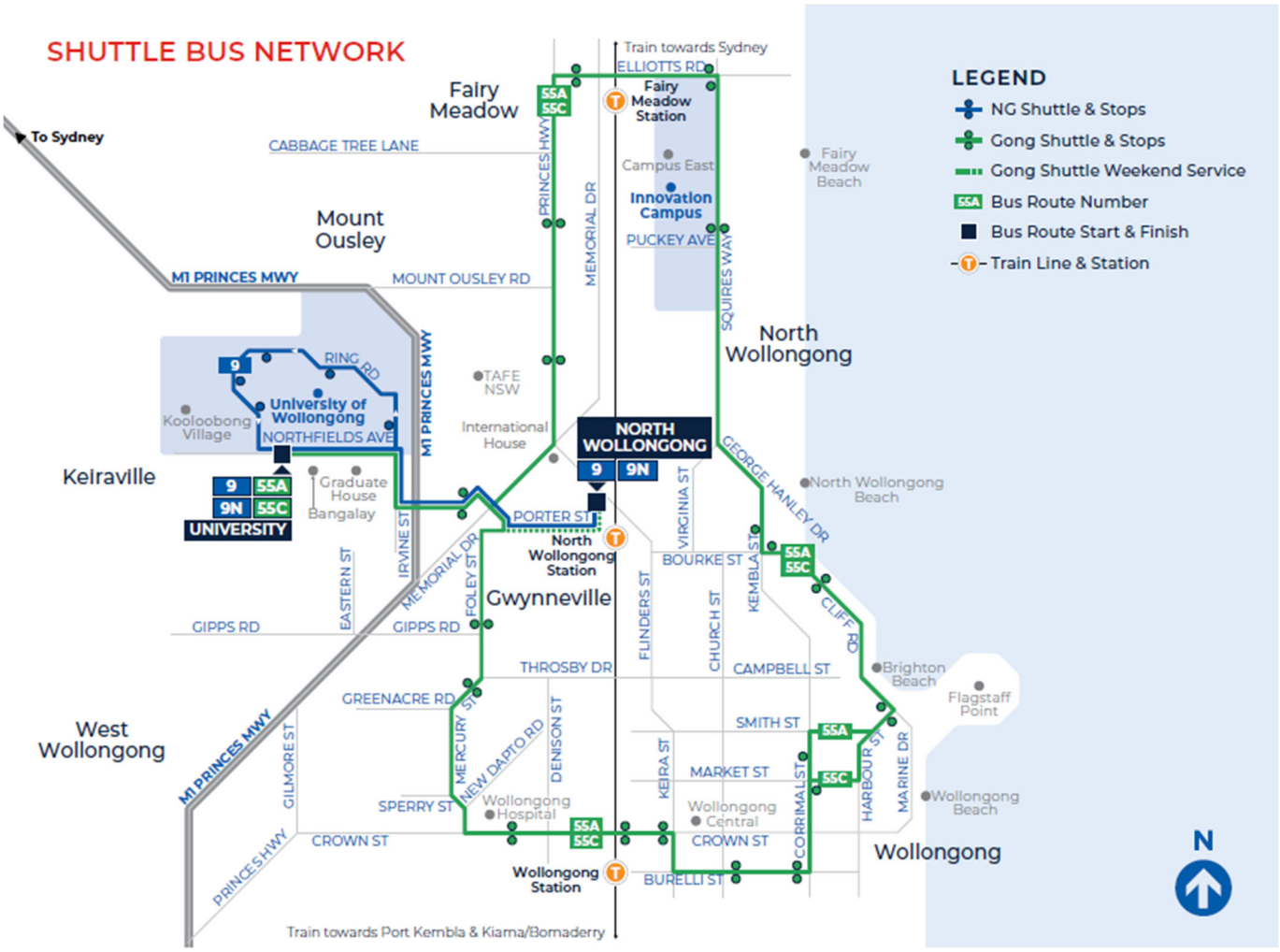
Several buses travel from nearby suburbs direct to the campus:

- Route 41 from Dapto through Unanderra and Figtree.
- Route 11 from Wollongong, Mangerton, Figtree, and Mt Keira.
- Route 53 from Shellharbour via Shell Cove, Flinders, Warilla, Windang, Primbee and Warrawong.
- Route 91 from Austinmer.
- Route 93 from Bulli.
- Route 887 from Campbelltown via Appin.

Getting Around Wollongong

Some of the most diverse scenery can be found here in Wollongong. Discover everything from beautiful beaches on vast coastlines, amazing vineyards and rolling mountains, to wonderful city scapes and much, much more. Wollongong, otherwise known as "*The Gong*", is home to many bars, restaurants, hotels, pubs, and locals.

For more information on local activities see: https://www.visitwollongong.com.au



North Gong (NG) Shuttle

NORTH GONG SHUTTLE UOW AUSTRALIA

Travels between the Wollongong Campus and North Wollongong Station on weekdays year round (a reduced timetable operates out of session). It also operates on Saturdays when there are exams. Route 9 stops around the Ring Road and Route 9N is direct to Northfields Ave bus interchange.

Gong Shuttle

GONG shuttle

Travels around Wollongong CBD, Fairy Meadow, North Wollongong and Gwynneville. This service also connects the Wollongong and Innovation campuses. Route 55C travels clockwise, and 55A travels anticlockwise, and operates weekdays, weekends and public holidays. Services North Wollongong Station on weekends only.

For more information on getting to the University of Wollongong campus see: https://www.uow.edu.au/about/locations/wollongong/getting-to-campus/

Main Conference Venue

McKinnon Building (Building 67)

Sessions will be run in rooms 101, 102, 104 and 107 in building 67, as well as lunches and morning/afternoon teas.

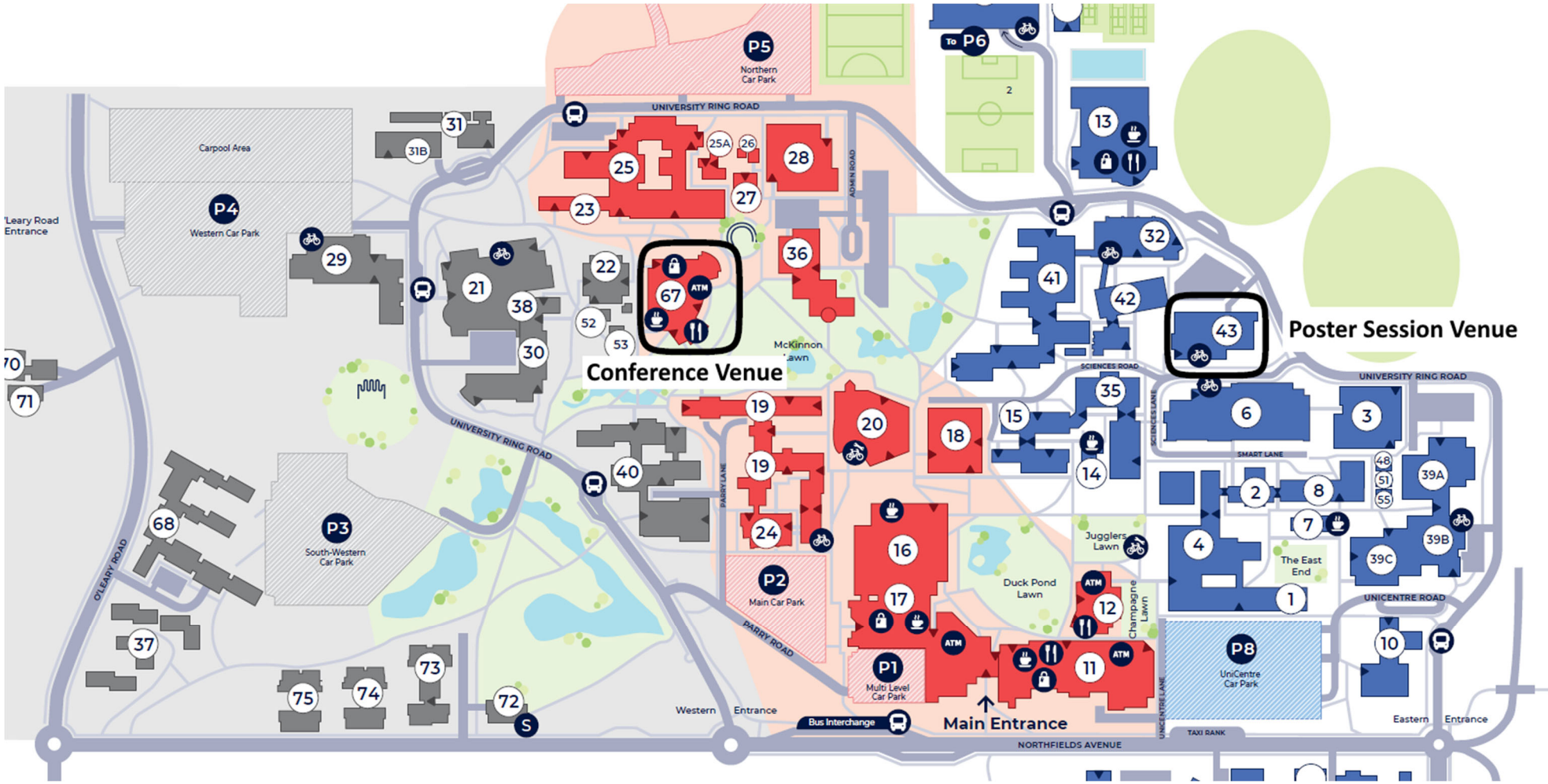
Speakers: please bring a copy of your presentation on a USB and load it onto the computer in the room your lecture will be delivered, prior to the session in which you're speaking.

Poster Session Venue

Science Teaching Facility (Building 43 – Ground Floor)

Poster Presenters: Venue will be open from Monday 8am for poster hanging.

University of Wollongong – Campus Map



Maps, building locations and directions are available on your phone *via* maps.uow.edu.au

Parking is available in P3, P4 and P8 (free on Sunday and $9.60 per day on Weekdays)

Seminar Program

Sunday 20 November 2022	
Room	**67.107**
Chairs	**Danielle Skropeta, Chris Hyland, Sinead Keaveney and David Lupton**
2:00	**Registration Desk Opens (67 Foyer)**
2:30-2:45	**Welcome & Opening**
2:45-3:15	**Joanne Jamie (Indigenous Chemistry)** Macquarie University, Australia *"The National Indigenous Science Education Program - Facilitating Equity, Inclusion and Belonging"*
3:15-4:05	***Margaret Sheil Award Lecture* - Kate Jolliffe** The University of Sydney, Australia *"Novel molecular receptors for the recognition, sensing and transport of anions"*
4:05-4:55	**Plenary: Corey Stephenson** University of Michigan, USA *"Redox catalysis strategies for complex molecules"*
5:00-7:00	**Welcome Mixer (67 Foyer)**
7:30 - Late	**Speakers Dinner** Kneading Ruby Restaurant

Monday 21 November 2022

Room	67.107			
Chair	David Lupton			
9:00 - 9:50	**Plenary Presentation: L.C. Campeau** Merck & Co. Inc., USA *"Changing the World, One Reaction at a Time"* Sponsored by **FB Rice**			
Room	**67.104**		**67.107**	
Chair	**David Lupton**		**Kellie Tuck**	
9:50 - 10:20	**Keynote: Kami Hull** University of Texas at Austin, USA *"Transition Metal-Catalyzed Amination Reactions"*		**Keynote: Dieter Hamprecht** Pharmaxis Ltd, Australia *"Inhibitors of lysyl oxidases: Intervention at the focal point of fibrotic processes for the treatment of myelofibrosis and other diseases"*	
10:20 - 11:00	**Morning Tea (67 Foyer)** Sponsored by **IMHRI**			
Room	**67.104**	**67.101**	**67.107**	**67.102**
Chair	**Paul Keller**	**Wade Petersen**	**Kellie Tuck**	**Charlotte Williams**
11:00 - 11:20	**Lara Malins** Australian National University, Australia *"Emerging Strategies for Late-Stage Peptide Modifications"*	**Mark Rizzacasa** University of Melbourne, Australia *"It's Hip to be Square! Alkyl Citrates Made Easy"*	**Peter Rutledge** The University of Sydney, Australia *"Tackling Antimicrobial Resistance with Natural Products, Synthesis, and Citizen Science"*	**Belinda Abbott** Latrobe University, Australia *"2,4-Thiazolidinediones as dihydrodipicolinate synthase inhibitors: antibiotics or herbicides?"*
11:20 - 11:40	**Craig Hutton** University of Melbourne, Australia *"Exploiting Thioamide Reactivity in Peptide Synthesis"*	**Sandra Wiedbrauk** Queensland University of Technology , Australia *"Synthesis of photoswitches for UV sun sensor"*	**Rachel Codd** The University of Sydney, Australia *"Enzyme-mediated machining of biocombinatorial pools of metal chelators"*	**Adam McCluskey** The University of Newcastle, Australia *"Modulating the shapeshifters"*
11:40 - 12:00	**Sally Plush** University of South Australia, Australia *"Coumarin amphiphiles as membrane-active antibacterial agents"*	**Brendan Byatt** University of Wollongong, Australia *"The Total Synthesis of Broussonetine Z"*	**Emma Watson** University of Adelaide, Australia *"Optochemical Control of Therapeutic Agents through Photocatalyzed Isomerization"*	**Purwantiningsih Sugita** IPB University, Indonesia *"In silico and in vitro study of biflavonoid derivatives from Araucaria hunsteinii K. Schum as potential treatment for MCF7's cancer cell"*

12:00 - 12:20	**Christoph Nitsche** Australian National University, Australia *"Targeting viral proteases with bicyclic peptides using biocompatible chemistry"*	**Jason Smith** University of Tasmania, Australia *"Pyrrole as a Scaffold for Synthesis: Approaches to Stemona Alkaloids"*	**Stephen Butler** University of Sydney, Australia *"DPAC sensors for the detection and differentiation of carboxylate and phosphate species"*	**Wenyi Li** University of Melbourne, Australia *"Bioconjugation for potent antimicrobial peptides development"*
12:20 - 1:30	**Lunch (67 Foyer)** Sponsored by **Ezzi Vision**			
Room	**67.104**		**67.107**	
Chair	**Lara Malins**		**Tara Pukala**	
1:30 - 2:00	**Keynote: Debabrata Maiti** Indian Institute of Technology, Bombay *"En-Light-ening C-H functionalization"*		**Keynote: Michael Kassiou** The University of Sydney, Australia *"Positron emission tomography imaging of cannabinoid type 2 receptors in neuroinflammation"*	
Room	**67.104**	**67.101**	**67.107**	
Chair	**Lara Malins**	**Milena Cysz**	**Shane Hickey and Sandra Wiedbrauk**	
2:00 - 2:20	**Martin Peeks** University of NSW, Australia *"Developments in pi-aromaticity"*	**Sinead Keaveney** University of Wollongong, Australia *"Developing new catalytic reactions using a combined experimental and computational approach"*	**Medicinal Chemistry and Chemical Biology Short Talks** Taylor Garrett Astrid Larin Changzhuang Bai Bairavee Ramachandran Wendy Cun Owindeep Deo James Wood Carl Soltau Liang Kooi Kok Bilqees Sameem	**See below for talk titles and affiliations**
2:20 - 2:40	**Ben Greatrex** University of New England, England *"Recent developments in the use of levoglucosenone and Cyrene in synthesis"*	**Angus Olding** University of Tasmania, Australia *"Studying Pre-transmetalation Intermediates in the Suzuki-Miyaura Reaction: Synthesis of Palladium(II) Boronates"*		
2:40 - 3:00	**Vanessa Chew** Monash Institute of Pharmaceutical Science, Australia *"Accessing Extended Heteroacenes via Catalytic Oxidative Tricyclization"*	**Scott Stewart** The University of Western Australia, Australia *"Dirhodium catalyzed transannulation of triazoles to substituted piperazines or 3,4-dihydro-1,4-oxazines"*		

3:00 - 3:20	**Brendan Wilkinson** University of New England, England *"New hydrophobic D-trehalose analogues as potential immunomodulators and cryoprotectants"*	**Jyoti Jyoti** University of Zurich, Switzerland *"Regioselective C-H arylation next to aliphatic groups"*	
3:20 - 4:00	**Afternoon Tea (67 Foyer)** Sponsored by **Ezzi Vision**		
Room	**67.107**		
Chair	**Alex Bissember**		
4:00 - 4:50	**Birch Medal Award Lecture, 2019 - David Lupton** Monash University, Australia		
4:50 - 5:00	***UOW and Molecular Horizons* – Micro-ED and Cryo-EM Information**		
5:00 - 7:00	**Organic/MCCB Combined Poster Session** **Building 43 - Ground Floor** **Poster prizes sponsored by the journal *Molecules***		
7:30 - Late	**Retirees Dinner / Bioactive Drug Discovery Dinner** Harbourfront Seafood Restaurant / Novotel		

2:00 - 3:20	**Medicinal Chemistry and Chemical Biology (Short Talks) – Sponsored by RACE Oncology**
Room	**67.107**
Chair	**Shane Hickey and Sandra Wiedbrauk**
	Taylor Garrett The University of Sydney, Australia *"Design and Synthesis of P2X7 Receptor Antagonists for the Treatment of Neurodegenerative Diseases"*
	Astrid Larin Queensland University of Technology, Australia *"Flavonoid-Nitroxides as Potential Hybrid Antioxidants"*
	Changzhuang Bai University of NSW, Australia *"Photoswitchable peptide-based hydrogel for dynamic control of cell fate"*
	Bairavee Ramachandran Monash University, Australia *"Discovery of Novel Protease Activated Receptor 2 (PAR2) Antagonists for Systemic & Directed Drug Delivery"*

	Wendy Cun University of Wollongong, Australia *"Synthesis and Evaluation of Cephamycin-based Anti-Sporulation Agents targeting Clostridioides difficile"*
	Owindeep Deo Monash Institute of Pharmaceutical Science, Australia *"The Design, Synthesis and Evaluation of Novel 9-Arylxanthenedione-based Allosteric Modulators for the δ- Opioid Receptor"*
	James Wood The University of Sydney, Australia *"Optimising Ligand Design for Theranostic Radiochemistry"*
	Carl Soltau Queensland University of Technology, Australia *"Antioxidants on Steroids! Design and Synthesis of Novel Nitroxide-Corticosteroid Hybrids"*
	Liang Kooi Kok University of Otago, New Zealand *"Universal CAR-T cell therapy using stimuli-responsive "Tags" and "Pro-tags""*
	Bilqees Sameem Macquarie University, Australia *"Fluorinated (-)- Balanol Analogues for Probing PKC and PKB/AGC Kinases Isozyme Selectivity"*

Tuesday 22 November 2022

Room	**67.107**			
Chair	**Mark Rizzacasa**			
9:00 -9:50	**Plenary: Vy Dong** University of California Irvine, USA *"Molecular Design and Synthesis"* Sponsored by **Pharmaxis**			
Room	**67.104**		**67.107**	
Chair	**Mark Rizzacasa**		**Kathryn Fairfull-Smith**	
9:50 -10:20	**Keynote: Mick Sherburn** Australian National University, Australia *"Step Economic Total Synthesis of Polycyclic Natural Products"*		**Keynote: Mark Blaskovich** University of Queensland, Australia *"Metallobiotics: A New Class of Antimicrobial Agents?"* ***Session sponsor ACS Infectious Diseases***	
10:20 -11:00	**Morning Tea (67 Foyer)** Sponsored by ***ACS Infectious Diseases***			
Room	**67.104**		**67.107**	
Chair	**Vinh Nguyen**		**Michael Kelso**	
11:00 -11:30	**Keynote: Rene Koenigs** RWTH Aachen University, Germany *"Unlocking novel reaction pathways of carbenes and nitrenes with photocatalysts"*		**Keynote: Sally-Ann Poulsen** Griffith University, Australia *"Chemical Probes and Native State Mass Spectrometry to Aid Biological Discovery"*	
Room	**67.104**	**67.101**	**67.107**	**67.102**
Chair	**Vinh Nguyen**	**Scott Stewart**	**Michael Kelso**	**Jonathan Foot**
11:30 -11:50	**Phil Chan** Monash University, Australia *"Copper Catalysed Strategies for Site-Selective Chlorination and Formylation"*	**Eilidh Young** The University of Auckland, New Zealand *"Total synthesis of lycibarbarines A-C"*	**Joel Tyndall** University of Otago, New Zealand *"Targeting HtrA protease: systematic modification to potential new antibacterial leads"*	**Joanne Blanchfield** University of Queensland, Australia *"Exploring traditional medicinal plants from the Northern Territory"*
11:50 -12:10	**Anastasios Polyzos** University of Melbourne, Australia *"Reductive Olefin Hydrofunctionalisation with Multiphoton Photoredox Catalysis"*	**Andreas zur Bonsen** University of Adelaide, Australia *"Intramolecular Tricarbonyl-Ene Reactions and α-Hydroxy-β-Diketone Rearrangements Inspired by the Biosynthesis of Polycyclic Polyprenylated Acylphloroglucinols"*	**Richard Payne** The University of Sydney, Australia *"New Technologies for the Synthesis and Semi-Synthesis of Bioactive Modified Proteins"*	**Luke Hunter** University of NSW, Australia *"A new strategy to treat stroke: protecting brain cells through pharmacological activation of the hypoxia response"*

12:10 -12:30	**Eric Ferreira** University of Georgia, USA *"(3+2) Cycloadditions Using Photocatalysis Based on Earth-Abundant Metals with Heterocyclic Ligands"*	**Steve Pyne** University of Wollongong, Australia *"Synthesis and structural revision of polyhydroxylated pyrrolidine alkaloids"*	**Jennifer Baker** University of Newcastle, Australia *"Computational design, synthesis and activity of novel KDM4 inhibitors"*	**Rajesh Kuppusamy** University of NSW, Australia *"Anti-Biofilm Activity of Second-Generation Guanidine-Embedded Anthranilamides"*
12:30 -1:30	**Lunch (67 Foyer)** Sponsored by ***AK Scientific***			
Room	**67.107**			
Chair	**Jason Smith**			
1:30 -2:20	***Birch Medal Award Lecture (2021)*** **– Craig Williams** University of Queensland, Australia *"Organic synthesis and other bits and pieces enjoyed along the way"*			
Chair	**Sally-Ann Poulsen**			
2:20 -3:10	**Adrien Albert Award Lecture, 2021 - Chris Burns** ***Award Sponsor: RACE Oncology***			
3:10 -3:50	**Afternoon Tea (67 Foyer)** Sponsored by ***CSIRO***			
Room	**67.104**		**67.107**	
Chair	**Philip Chan**		**Jonathan Baell**	
3:50 -4:20	**Keynote: Andy McNally** University of Colorado, USA *"Selective Functionalization of Pyridines, Diazines and Pharmaceuticals via Unconventional Intermediates"*		**Keynote: Narendra Ambhaikar** Piramal Pharma Solutions Mumbai, Maharashtra, India *"Development of Sustainable Synthetic Routes to Active Pharmaceutical Ingredients"*	
Room	**67.107**			
Chair	**Danielle Skropeta**			
4:20 -5:00	**Panel Discussion: Diversity in Chemistry** Sponsored by ***CSIRO***			
Room	**67.104**		**67.107**	
5:00 -5:30	**Organic AGM**		**MCCB AGM**	
5:30 -7:00	**Free Time**			
7:30 – Late	**Conference Dinner (Novotel North Beach – Admiral's Room)**			

Wednesday 23 November 2022				
Room	**67.104**		**67.107**	
Chair	**Uta Wille**		**Matt Piggott**	
9:00 - 9:30	**Keynote: Emily Parker** Victoria University of Wellington, New Zealand *"Reconstructing pathways for indole diterpene production"*		***Peter Andrews Award Lecture* - Tristan Reekie** University of NSW Canberra, Australia *"Synthesis and evaluation of small-molecule targets of the oxytocin receptor"* ***Award Sponsor: the Australian Journal of Chemistry***	
Room	**67.104**	**67.101**	**67.107**	**67.102**
Chair	**Uta Wille**	**Daniel Priebbenow**	**Matt Piggott**	**Yu Heng Lau**
9:30 - 9:50	**Tara Pukala** University of Adelaide, Australia *"Exploiting structural understanding of DNA triplex formation to underpin development of antigene technologies"*	**Thomas Fallon** University of Newcastle, Australia *"Synthesis and Applications of Substituted Shape-Shifters"*	**Kellie Tuck** Monash University, Australia *"The development of small molecule inhibitors of the N-type calcium ion channel for the treatment of neuropathic pain"*	**Yuning Hong** LaTrobe University, Australia *"Constructing Reactivity-based Fluorogenic Probes for Monitoring Protein Unfolding and Aggregation in Cells"*
9:50 -10:10	**Jonathan Morris** University of NSW, Australia *"Design and Development of Potent, Selective Splicing Kinase Inhibitors"*	**Lillian de Ceunick van Capelle** University of Wollongong, Australia *"Structure and Synthesis of Atropisomeric N-Heterocycles"*	**Kathryn Fairfull-Smith** Queensland University of Technology, Australia *"Dual Acting Quorum Quenching Agents Targeting the LasR Protein"*	**Alice Motion** The University of Sydney, Australia
10:10 - 10:30	**Vinh Nguyen** University of NSW, Australia *"Biomimetic Brønsted Acid-Catalyzed Carbonyl-Olefin Metathesis Enabled by Hydrogen Bonding Networks"*	**Fred Pfeffer** Deakin University, Australia *"Naphthalimide Based Inhibitors of Histone Deacetylase"*	**Jason Johansen-Leete** The University of Sydney, Australia *"Antiviral cyclic peptides targeting the main protease of SARS-CoV-2"*	**Siau Hui Mah** Taylor's University, Malaysia *"Xanthone Derivatives as Potential Lead Compounds for Anti-Alzheimer's Disease"*
10:30 - 11:10	**Morning Tea (67 Foyer)** Sponsored by ***Molecular Horizons Research Institute***			

Chair	Thomas Fallon	Emma Watson	Wenyi Li	Fred Pfeffer
11:10 - 11:30	**Nadeem Sadiq Sheikh** Universiti Brunei Darussalam, Brunei *"Synthesis of Bioactive Heterocycles: Computation and Experiment in Synergy"*	**Daniel Priebbenow** Monash University, Australia *"Acyl Silanes as Weakly Coordinating Directing Groups for C-H Functionalisation"*	***Graham Johnson Award*** **Charlotte Francke** The University of Sydney, Australia *"Semi-Synthesis of a Tick Salivary Evasin Protein Reveals the Critical Role of Tyrosine Sulfation for Activity"*	**Andrew Abell** The University of Adelaide, Australia *"Switchable Bioactives as Pharmaceuticals and Sensing Motifs"*
11:30 - 11:50	**Domenic Pace** University of NSW, Australia *"Designing Novel Organic Fluorophores for Solid-State Fluorescence"*	**Erin Louise Kuker** University of California Irvine, USA *"Diverging Hydroacylation and Hydrothiolation of Strained Alkenes through Catalyst Control"*	***ACES/RACI ECR Award*** **Yu Heng Lau** University of Sydney, Australia *"Cyclic peptides that target telomere maintenance in cancer cells"*	**Jonathan Baell** Monash University, Australia *"Development of ^{18}F PET Radiotracers for MERTK, a tyrosine kinase involved in neuroinflammatory disease"*
11:50 -12:10	**Uta Wille** The University of Melbourne, Australia *"Degradation of the Nitrification Inhibitor 3,4-Dimethylpyrazole Phosphate (DMPP) in Soils: Indication of Chemical Pathways"*	**Wade Petersen** University of Cape Town, New Zealand *"Photochemical Synthesis of Biologically Important Nitrogen-Containing Heterocycles"* University of Cape Town, South Africa	**Jonathan Foot** Pharmaxis, Australia *"Discovery and development of selective LOXL2/3 inhibitors for the treatment of IPF"*	**Charlotte Williams** CSIRO *"CSIRO Biomedical Manufacturing and what's going on in Bioconjugation Chemistry at CSIRO"*
12:10 - 12:30	**Jonathan Danon** University of Sydney, Australia *"Synthesis of a molecular Endless knot"*	**Milena Czyz** University of Melbourne, Australia *"Photoexcited Pd(II) Auxiliaries Enable Light-Induced Control in C(sp3)-H Bond Functionalisation"*	**Daryl Ariawan** Macquarie University, Australia *"Cyclotide scaffold to block tau-mediated toxicity"*	**Glenn Burley** University of Strathclyde, England *"Splice-switching small molecules as inducers of apoptosis"*
12:30 - 1:40	**Lunch (67 Foyer)** Sponsored by ***AK Scientific***			
Room	**67.104**		**67.107**	
Chair	**Chris Hyland**		**Jo Blanchfield**	
1:40 - 2:10	**Keynote: Gary Evans** Victoria University of Wellington, New Zealand *"The Development of Novel RNA Dependent RNA Polymerase Inhibitors"*		***Peter Andrews Award Lecture* - Liz New** The University of Sydney, Australia *"Multimodal and multivariate approaches to elucidating the chemistry of biological systems"* ***Award Sponsor: The Australian Journal of Chemistry***	

Room	67.107
Chair	**Chris Hyland**
2:10 - 3:00	**Plenary: Ryan Shenvi** The Scripps Research Institute *"Natural Product Synthesis Through the Lens of Informatics"*
3:00 - 3:30	**Closing Remarks & Poster/Talk Prizes**

Poster Program

Monday 5:00 to 7:00 PM — Building 43 (Ground Floor)

Poster #	Title	Author
1	Natural products isolation studies of native Australian plants	Thinley Gyeltshen
2	Novel Analgesic Discovery for the Treatment of Central and Peripheral Neuralgia	Dehui Kong
3	Enhanced wireless cell stimulation using soft and improved bipolar electroactive conducting polymer templates	Chunyan Qin
4	Computational evaluation of nitrogen-based transannular interactions in protopine and related heterocyclic systems - implications for drug design	Renate Griffith
5	1,8-Naphthalimide Lipid Droplet Imaging Agents	Shane Hickey
6	Design and synthesis of CNS active fluorinated P2Y12 ligands	Ben Ma
7	Terpenes from Dodonaea viscosa spp. Spatulata	Adriana Rocha Dutra Nobre
8	DECR1 inhibition: a novel prostate cancer therapeutic strategy	James Chakiris
9	Synthetic Studies Towards the Cyclopentene Moiety of Purpurolide A	Alisha Geurts
10	Synthetic Studies Towards Pallamolide A	Grace Drummond
11	Synthesis of Perdeuterated Linoleic Acid-d31 and Chain Deuterated 1-Palmitoyl-2-linoleoyl-sn-glycero-3-phosphocholine-d62	Michael Moir
12	Synthesis of pyrrolo[1,2-c]pyrimidines as potent and selective protein kinase inhibitors	Georgina chiu
13	Periodinane Oxy-Assisted (POA) Mechanism in IBX-Controlled Oxidative Dearomatisation of Pyrroles Mediated by Acetic Acid	Nina Gunawan
14	Photoactive Metal Carbonyl Complexes Bearing N Heterocyclic Carbene Ligands: Synthesis, Characterization, and Viability as Photoredox Catalysts	Meiqiong Tang
15	Tristaenone A: A new anti-inflammatory compound isolated from the Australian Indigenous plant Tristaniopsis laurina	Shintu Mathew
16	Optimizing Inhibitors of Carbonic Anhydrase Through Molecular Dynamics Simulations	Mackenzie Taylor
17	Synthesis and Study of Phosphangulenes as Superbulky Tuneable Ligands	Eve Poland
18	Leveraging C-H Functionalization Reactions via Excited State Chemistry	Claire Empel
19	Peptide-Drug Conjugates as a Novel Approach to Anti-Malarial Therapeutics	Caitlin Gare
20	Natural products extraction/isolation facilitated by pressurised hot water extraction	Rhiannon Terry

21	Metallaphotoredox catalysis marries the unparalleled capacity of transition metal catalysis to facilitate bond formation with the broad utility of photoinduced electron- and energy-transfer processes.1 The vast majority of metallaphotoredox protocols	Curtis Ho
22	Diastereoselective and enantioselective synthesis of anti-aminoalcohols and anti-fluoroamines via organocatalysis and Petasis-borono-Mannich reactions	Philip Chevis
23	Design and Synthesis of New Short Peptoids as Antimicrobial agents	Ghayah Bahatheg
24	Accessing polycyclic alkaloid natural products from simple bicyclic azepane scaffolds	Samuel Zarfos
25	On-Demand Electrochemical Synthesis of Metal Complexes and their Direct Application in Catalysis	Tom Nicholls
26	Pyrrole as a scaffold for the total synthesis of Stemona alkaloids	Wesley Olivier
27	Modified RNA nucleosides as selective anti-metastatic agents	Harrison Steele
28	Enantioselective Cyclopentane Synthesis via Phosphine Catalysed Double Umpolung of Conjugate Acceptors	Antonia Seitz
29	Remarkably facile assembly of all carbon 4° -stereocentres from Nazarov cyclisation: a re-examination of the substrate control	Shuqi Chen
30	Cupressuflavones from indonesian araucaria columnaris leaves and in vitro evaluation for their antioxidant and antiangiogenic activity against calf pulmonary arterial endothelial (cpae) cells proliferation	Hanhan Dianhar
31	Design and Synthesis of Novel Senolytics as a Treatment for Neurodegeneration	Nathan Castellino
32	Synthesis of Uronic Acid 1-Azasugars as Potential Inhibitors of a-Iduronidase, b-Glucuronidase and Heparanase	Vito Ferro
33	[1,4]-Substituted Azepines: Optimising Access to Biologically Active Tricyclics	Catherine Doherty
34	The Pd-catalysed asymmetric (3 + 2)-cycloaddition of vinylcyclopropanes with cyclic 1-aza-1,3-dienes	Quoc Hoang Pham
35	A Practical Procedure to Access (1*Z*,3*Z*,5*Z*)-Hexa-1,3,5-trienes	Nu Hong Nhan Ton
36	Direct Synthesis of Multi(boronate) Esters from Alkynes	Hoai Son Doan
37	Isolation of Natural Products from Endophytic Fungi of Dodonaea viscosa ssp spatulata	Greeshma Arun
38	Palladium-Catalyzed Formal (4 + 2)-Cycloaddition Reactions of 2â€‘Nitro-1,3-enynes with g-methylidene-d-valerolactones	Lloyd Kellermann
39	Biomimetic Total Synthesis of Atrachinenins A and B	Sarah French
40	A DFT mechanistic study on Nickel(II)-Catalyzed Arylative Cyclization	Chi Bong Eric Chao
41	TDP-43 and stress granules in amyotrophic lateral sclerosis and frontotemporal dementia: Are multiple cellular models required?	Andrew Montgomery
42	Development of peptidoglycan vaccines to protect against Streptococcus pyogenes using solid-phase synthesis	Asmaa Mahmoud

43	Scaffold Hopping as a means of Pharmacophore Exploration and Diversification of Compounds Targeting Protein Aggregation	Timothy Callis
44	Structural Analysis of Commercially Available Agrochemicals by Ion Mobility-Mass Spectrometry (IM-MS)	Olivia Rusli
45	Activating Protein Phosphatase 2A with Small Molecules	David Neale
46	Probing the Reactivity of the Natural Pyrethrins	Todd Markham
47	Enantioselective Phosphine-Catalysed All-Carbon Annulation via Umpolung of Allenoates	Xuan Nguyen
48	Mitochondria - An Emerging Therapeutic Target for Neurodegenerative Diseases	Krishayant Dhar
49	Vast BioScience Fragment Based Drug Discovery towards Novel P2X4R Inhibitor	Bill Chan
50	P2X4R Antagonists and the Modulation of Microglial Function	Chianna Dane
51	Tropylium-Catalysed Synthesis of Substituted 2H-Chromenes and Phenanthrenes via Carbonyl-Alkyne Metathesis	Jasnoor Mann
52	Third Generation TSPO PET Tracers for Imaging Neuroinflammation	Jonathan Danon
53	Synthesis and preliminary evaluation of new therapeutic agents for neutron capture enhanced particle therapy (NCEPT)	Chris Dobie
54	Exploring the structure, ion transport and inhibitor binding of the human Na+/H+ exchanger isoform one (NHE1)	Nehad Elsalamouny
55	Exploring substrate specificity of DesD, an enzyme responsible for the biosynthesis of siderophores	Joseph Wang
56	The Translocator Protein: Designing and Synthesising Novel Compounds for Neuroimaging and Targeted Degradation	Biling Chen
57	A suite of new panobinostat analogues engineered to form a hydrogen bond network to the distal binding pocket.	Callum Rosser
58	Biomimetic Synthesis Enables the Structure Revision of Furoerioaustralasine	Matthew Coleman
59	Developing an Ionic Halide Transfer and Addition (HTA) Process Driven by Synergy Between Theory and Experiment	Marzieh Bahmani
60	New Natural Products from World's Most Economically Devastating Fungal Wheat Pathogen	Brodie Bulcock
61	Synthesis and Biological Evaluation of Nitroxide Based Anti-Inflammatory Drugs and Profluorescent Probes	Naomi Weir
62	Polyynes to polycycles: New approaches to the rapid assembly of Ï€-rich materials	Ahmad El-Hawli
63	A new synthetic approach to chiral cyclen ligands for enhanced protein structural analysis	Jesse Metcalfe
64	Metabolomics-driven drug discovery of metalloenzyme-targeting natural products	Michael Gotsbacher
65	Antivirulence drug development for synergistic antibiotic attack	Hana Trenaman
66	Developing New Environmentally Benign Catalysts to Enable Substitution Reactions of Alcohols	Emily Jacobs

67	Novel methods towards 1,2-disubstituted bicyclo[1.1.1]pentanes: saturated bioisosteres of aromatic rings	Flynn Attard
68	1,2-Oxyalkylation of Alkenes with Tropylium Ion	Julian Burbidge
69	Cucurbiturils as a potential tool in drug delivery	Ahmed Abdulrahman
70	Design, Synthesis and Biological Evaluation of Novel PolQ Inhibitors for the Treatment of Ovarian Cancer	Yat Yin Tang
71	Design of a PROTAC assembly protocol and application to targeted LIM kinase degradation	Angus Muller
72	Guest-Dependent Isomer Convergence of a Permanently Fluxional Coordination Cage	Andre Birve
73	Amphiphilic peptides in combination with a polyglutamic acid-modified antigen as a self-adjuvanting vaccine delivery system	Jingyi Fan
74	Phosphine mediated annulation of propiolates and ketomalonates to furnish densely functionalized cyclopentenes via an enolium strategy	Yuji Nakano
75	A synthetic and computational study of (4+1)-cycloadditions of novel indoles and indolines	Kimia Rahmannia
76	Development of Selective p38Î³ activators for the treatment of Alzheimer's Disease	James Lloyd
77	Development of Selective and Cell Membrane Permeable Sialyltransferase Inhibitors for Improved Cancer Therapy	Rebecca Farrell
78	The development of Novel Allosteric Ligands of the Metabotropic Glutamate Receptor Subtype 5 for the treatment of neurological diseases	Scott Wong
79	Synthesis of 1-Deoxymannojirmycin from D-fructose using the Mitsunobu reaction	Peter Sunde-Brown
80	Applications of a resin displaying a cleavable virulence factor with potential for selecting antibiotic targets	Jenny Ni
81	Brønsted Acid-Catalyzed Ring-Opening Carbonyl-Olefin Metathesis	Tuong To
82	Novel dihydropyrrolones as dual-acting antimicrobials	Dittu Suresh
83	Structure-Activity and Structure-Toxicity Relationships of Novel Octapeptin Analogues Against Gram-negative Bacteria	Raghu Bolisetti
84	Glyoxylamide- and Anthranilamide-based Hydrogels as Antibacterial Materials	Vina Aldilla
86	The development of new potential Bcl-xL/Mcl-1 inhibitors as apoptosis modulators via High-Throughput Virtual Screening	Loan Ngoc Phuong Nguyen
87	The α4 integrin signaling inhibitor JK273 induces apoptosis in the Jurkat acute T cell leukemia cell line through various mechanisms of action	Thien Nhan Lu
88	Design and Synthesis of Novel Small-Molecule Inhibitors of RNA Polymerase as Antibacterial Agents	Robert Rourke

89	Development of novel ubiquitin specific protease 5 (USP5) inhibitors to treat MYCN-driven neuroblastoma	Phuoc Linh Dan Nguyen
90	Development and Application of a HPTLC derived Database for the Identification of Phenolics in Honey	Ivan Lawag
91	Tricyclic cell-penetrating peptides for the development of Intracellular Immunotherapy	Ole Tietz
92	Enantioselective approaches to the synthesis of bisabosquals	James Shephard
93	Shifting paradigm: High relaxivity, Gadolinium & Manganese based Dual Modal Imaging/Theranostic Agents	CuhaWijay Sathiyajith
94	Formal palladium-catalysed cycloadditions of zwitterionic dipoles with 2-nitro-1,3-enynes	Andrew Tague
95	Synthesis of photoswitches for UV sun sensor	Sandra Wiedbrauk
96	Synthesis of covalent peptide inhibitors for the Chikungunya virus non-structural protein-2 protease	Junming He
97	An exploration of weak hydrogen bonding in the solid state through the lens of a dipropargylic mannose derivative	Roger Read
98	Electronic and optical properties of [3]radialenes and related molecules	Bethany Hillier
99	Recent Developments on Therapeutics for Coronavirus	Irshad Ahmad
100	Synthesis of mannitol-based bis-1,2,3-triazoles and their biological applications	Adnan Mohammed
101	Development and Application of a HPTLC derived Database for the Identification of Phenolics in Honey	Ivan Lawag
102	Using a proteomic approach to investigate unique targets for designed degraders	Kayla Williams
103	Protein Semi-Synthesis via Expressed Protein Selenoesters	Sameer Kulkarni
104	Pd-Catalysed Late-Stage C-H Arylation of Peptides	Yuezhou Wu
105	The synthesis of CYP121A1 inhibitors as potential therapeutics for Tuberculosis	Denham Hopper
106	Electron-transfer Diels-Alder reactions: DFT-guided insights into reactivity and selectivity	Joseph Wang
107	Tropylium-Catalysed *ortho*-Alkylation and Alkenylation Reactions of Diarylamines	Sujlesh Sharma
Follow-up poster from MCCB Short Talk Session		
108	Design and Synthesis of P2X7 Receptor Antagonists for the Treatment of Neurodegenerative Diseases	Taylor Garrett
109	Photoswitchable peptide-based hydrogel for dynamic control of cell fate	Changzhuang Bai
110	Antioxidants on Steroids! Design and Synthesis of Novel Nitroxide-Corticosteroid Hybrids	Carl Soltau