

44th Lorne Conference on Protein Structure and Function 2019 –Draft Program – (updated Nov 19 2018)

| Sun 10 th Feb | | |
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| 2:00 pm | Registration | |
| 3:40 pm | Welcome Address | Jacqui Matthews |
| 4-6 pm | Session 1 | <i>In the cellular milieu</i> |
| | Chairpersons | Danny Hatters and Charlie Bond |
| 30 | Michael Rosen (UT Southwestern) | Physical Mechanisms of Cell Organization on Micron Length Scales |
| 30 | Maria Barna (Stanford University) | Ribosome heterogeneity in translating the genetic code: from genes to organisms |
| 30 | Mikhail Savitski (EMBL Heidelberg) | Thermal and proteolytic stability of proteins in drug discovery and fundamental biology |
| 6-6:30 | break | |
| 6:30 pm | Session 2 | <i>Leach Lecture</i> |
| | Chair | Jacqui Matthews |
| 50 min | TBC | TBC |
| 7:30 pm | Mixer Light dinner Trade Display | |

| Mon 11 th Feb | | |
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| 7:00 am | Breakfast | |
| 8:30 am | Session 3 | <i>Drug design and therapeutics</i> <i>*JOINT SESSION WITH SATELLITE *Sponsored by FB Rice</i> |
| | Chairpersons: | Sheena McGowan and TBC |
| 30 | Margaret Brimble (Science Centre 301, Auckland) | Development of Peptide Therapeutics from A New Zealand Perspective |
| 15 | Brendon Lee (Australian National Uni) | #57491 The evolution of nitroimidazole antibiotic resistance in <i>Mycobacterium tuberculosis</i> |
| 15 | Amy McGrath (University of Wollongong) | #57545 The β 2-clamp as a novel antimicrobial target |
| 30 | Wayne Fairbrother (Genentech, South San Francisco) | Regulation of CARD9-mediated BCL-10 nucleation |
| 10:30 am | Morning Tea/Coffee Break | |
| 11:00 am | Session 4 | <i>Lightning talks</i> |
| | Chairpersons: | Jane Allison and TBC |
| 10 | Michael Kuiper (Data61/CSIRO) | #57320 Molecular visualization with Unity and Vuforia |

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| 10 | Richard Berry (Walter and Eliza Hall Inst) | #57369 The cryo-EM structure of the endocytic receptor DEC205 reveals a conformational control-mechanism for antigen detection by dendritic cells |
| 10 | Subir Sarker (La Trobe University) | #57303 World's smallest viral capsid structure: A robust and targeted delivery platform for the biomedically important cargo |
| 10 | Amanda Buyan (Australian National Uni) | #56884 Understanding Piezo1's Relationship with Lipids |
| 10 | Christopher Stubenrauch (Monash University) | #57234 Membrane protein insertion through the lateral gate of TamA |
| 10 | Geqing (Tony) Wang (La Trobe University) | #57271 "Open sesame": fragments crack open a cryptic pocket on a challenging protein-protein interaction target |
| 10 | Nicholas Liaw (Walter and Eliza Hall Inst) | #57318 The molecular basis of JAK/STAT inhibition by SOCS1 |
| 10 | Kaavya Krishna Kumar (Stanford University) | #57394 Structure of a Signalling Cannabinoid Receptor 1-G Protein Complex |
| 1:00 pm | Lunch | |
| 4-6:00 pm | Session 5 | Poster Session A including refreshments (Note Odd / Even rule) |
| 6:00 pm | Dinner | |
| 7.45 pm | Session 6 | Special Evening lecture |
| | Chairperson: | Colin Jackson |
| 50 | Frances Arnold (Caltech) | Enzymes by Evolution: Bringing New Chemistry to Life |
| 9 pm | Session 7 | Poster Session B - Including Happy Hour & Trade Display |

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| Tues 12th Feb | | |
| 7:00 am | Breakfast | |
| 8.30 am | Session 8 | Pathogens and disease |
| | Chairpersons: | James Whisstock and TBC |
| 30 | Leo James (MRC-LMB) | TrimAway: Targeted degradation of pathogens and proteins by the cytosolic antibody receptor TRIM21. |
| 15 | Christopher McDevitt (University of Melbourne) | #57442 The structural basis of selective metal ion transport in pathogenic bacteria |
| 15 | Emma Petrie (Walter and Eliza Hall Inst) | #57202 Viral MLKL homologs subvert necroptotic cell death by sequestering cellular RIPK3 |
| 15 | Isabelle Rouiller (University of Melbourne) | #57239 Single particle cryo-EM analysis of the multidrug efflux pump TriABC from Pseudomonas aeruginosa |
| 15 | Roger Truscott (University of Wollongong) | #56975 Old proteins - a field in its infancy |
| 10:30 am | Tea and Coffee Break | |
| 11:00 am | Session 9 | Macromolecular Complexes |
| | Chairpersons: | Melissa Call and TBC |

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| 30 | Tamir Gonen (UC, Los Angeles) | MicroED opens a new era for biological structure determination |
| 15 | Christopher Draper-Joyce (Monash University) | #57478 Structural insights into the activation of the adenosine A1 receptor |
| 15 | Lisanne Spenkelink (University of Wollongong) | #57444 Single-molecule visualisation of protein dynamics in the eukaryotic replisome |
| 30 | Nenad Ban (ETH Zurich) | Protein synthesis: from ribosome assembly to targeting of membrane proteins |
| 1:10 pm | Lunch | Student lunch |
| 4 – 6:00pm | Session 10 | Poster Session C including refreshments (Note Odd / Even Rules) |
| 6:00 pm | Dinner (own arrangements) | |
| 7.45 pm | Session 11 | Robin Anders Young Investigators Award session |
| | Chairpersons: | Bostjan Kobe and TBC |
| 12 | Gavin Knott (UC, Berkeley) | Three distinct modes of CRISPR-Cas12a inactivation |
| 12 | Jessica Bridgford (University of Melbourne) | Proteostasis pathways in the mechanism of action of artemisinin, a Nobel Prize-winning antimalarial |
| 12 | Yu Heng Lau (University of Sydney) | Constructing synthetic organelles from self-assembling protein nanocompartments |
| 12 | Luke Formosa (Monash University) | Structural and functional analysis of COA7, an essential component of the mitochondrial complex IV assembly machinery |
| 12 | Yilin Kang (University of Melbourne) | The translocase of the inner membrane 22: a modern view of a mitochondrial insertase |
| 9.00 pm | Session12 | Poster Session D - Including Happy Hour & Trade Display |

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| Wed 13th Feb | | |
| 7:00 am | Breakfast | |
| 8.30 am | Session 13 | Engineering and design |
| | Chairpersons: | Craig Morton and TBC |
| 30 | Tanja Kortemme (UC, San Francisco) ***Protein Society Speaker | Building and dissecting biological functions |
| 15 | Robert Thompson (Princeton University) | #57547 Protein engineering through tandem transamidation |
| 15 | Dina Grohmann (University of Regensburg) | n/a SLAM-FRET provides insights into the conformational landscape of human Argonaute 2 |
| 15 | Daniel Scott (Florey Institute of Neurosci and Mental Health) | #57441 Coupling directed evolution with NMR to probe ligand induced changes in α 1A-adrenoceptor conformational equilibria and characterize fragment screening hits |
| 15 | Martin Stone (Monash University) | #57471 Evaluation and extension of the two-site, two-step model for binding and activation of chemokine receptor CCR1 |

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| 10:30 am | Tea and Coffee Break | |
| 11:00 am | Session 14 | Regulation |
| | Chairpersons: | TBC and TBC |
| 30 | Eva Nogales (UC Berkeley) ***Grimwade Medal awardee | TBC |
| 15 | Remco Sprangers (University of Regensburg) | n/a The structure and activity of the mRNA decapping complex inside and outside of cytoplasmic processing bodies |
| 15 | Vanessa Morris (University of Canterbury) | #57468 A new role for the neuronal cytokine S100B: Suppression of amyloid-beta aggregation |
| 30 | Patrick Cramer (Max Planck Institute of Biochemistry) | Integrated structural biology of transient transcription complexes |
| 1 pm | Lunch | |
| 1:15-2:15 pm | | Synchrotron Users Group Meeting ThermoFisher Workshop |
| 4:00 pm | Session 15 | Degradation |
| | Chairpersons: | Jon Oakhill and TBC |
| 30 | Helen Walden (University of Glasgow) | Allosteric regulation of RING E3 ligases |
| 15 | David Stroud (University of Melbourne) | #57242 Functional proteomics for understanding the assembly and breakdown of mitochondrial machines in health and disease |
| 15 | Laura Edgington-Mitchell (University of Melbourne) | #57870 Design and application of novel chemical probes to detect cathepsin X activation in oral cancer |
| 30 | David Komander (Walter and Eliza Hall Inst) | Structural biology of PINK1/Parkin mediated mitophagy |
| ~6:00 pm (no break) | Poster prizes and Closing | Jacqui Matthews & Danny Hatters |
| 7:30 pm | Conference Dinner | |
| 9:pm | Supper Party | |

Thurs 14th Feb

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| ~9-9.30 am | Bus Departures |
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| Summary – Speakers Final Program (excluding Leach Lecturer & Robin Anders Awardees) | Male | Female | Unclassified | Percent Female |
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| International - Invited | 8 | 7 | | |
| Abstracts | 15 | 8 | | |
| Total | | | | |

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| Chairs | | | | |
| Chairs | | | | |
| Delegates | | | | |
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