QRW Programme

Proteins

Thursday 7th – Friday 8th September, 2017

Rydges Hotel, Queenstown, New Zealand

Thursday 7th September		
Time	**Details**	**Location**
8.20am	**Welcome**	**Queenstown Room**
	<u>Session 1 – Protein folding</u> **Chaired by Laura Domigan (University of Auckland)**	
8.35am	**Danny Hatters (P1)** University of Melbourne, Australia *Tracking how mutant Huntingtin assemblies into inclusions reveals a Pyrrhic victory for survival*	**Queenstown Room**
9.00am	**Margie Sunde (P2)** University of Sydney, Australia *Viruses inhibit host cell necroptosis by forming decoy amyloid fibrils*	**Queenstown Room**
9.25am	**Sarah Atkinson (P3)** Monash University, Australia *Recognition by host nuclear transport proteins drives viral protein disorder-to-order transition*	**Queenstown Room**
9.45am	**Yuliana Tosaatmadja (P4)** Univeristy of Auckland, New Zealand *Understanding the mechanism of ester bond formation in bacterial adhesins*	**Queenstown Room**
10.00am	**Morning tea break**	**Trades Area**
	<u>Session 2 – Toxins and Cellular Defence</u> **Chaired by Chris Squire (University of Auckland)**	
10.30am	**Steve Almo (P5)** Albert Einstein College of Medicine, USA *New Strategies for Immunotherapy*	**Queenstown Room**
11.15am	**Michelle Dunstone (P6)** Monash University, Australia *The evolution of MACPF/CDC toxins: multiple assembly pathways for multiple targets*	**Queenstown Room**
11.40am	**Monica Gerth (P7)** University of Otago, New Zealand *Scratched, then sniffed? Exploring the role of chemoreceptors in host invasion.*	**Queenstown Room**
12.00pm	**M Bostina (P8)** University of Otago, New Zealand *Architecture of a large DNA virus as revealed by cryo-electron microscopy.*	**Queenstown Room**
12.15pm	**Senthil Arumugam (P9)** Univeristy of New South Wales, Australia *Lattice light imaging of intracellular events – examples from endocytosis and trafficking.*	**Queenstown Room**
12.30pm	**Lunch Break**	**Trades Area**

	<u>Session 3– Enzymes and pathways</u> **Chaired by Jane Allison (Massey University)**	
1.30pm	**Jon Sayers (P10)** University of Sheffield, UK *A fly-casting, thread, bend and barb mechanism ensures accurate cleavage of branched DNA molecules*	**Queenstown Room**
2.15pm	**James Murphy (P11)** *sponsored by Bio-Rad Laboratories Pty Ltd* The Walter and Eliza Hall Institute of Medical Research, Australia *Mechanistic studies of how the pseudokinase, MLKL, is activated and kills cells by necroptosis.*	**Queenstown Room**
2.35pm	**Renwick Dobson (P12)** University of Canterbury, New Zealand *Tales of sugary delights*	**Queenstown Room**
2.55pm	**Charlie Bond (P13)** The University of Western Australia, Australia *Structural studies and gel- and filament-forming properties of paraspeckle RNA-binding proteins*	**Queenstown Room**
3.15pm	**J.L. Brewster (P14)** University of Otago, New Zealand *Insights into the multiple activities of a primordial-like enzyme from Thermotoga maritima.*	**Queenstown Room**
	Afternoon tea break	**Trades Area**
<u>Session 4 – Protein Structure</u> **Chaired by Juliet Gerrard (University of Auckland)**		
4.00pm	**Michael Landsberg (P15)** *sponsored by Bio-Strategy* University of Queensland, Australia *Structure of the Tersinia entomophaga ABC toxin complex at near-atomic resolution*	**Queenstown Room**
4.25pm	**Lawrence Lee (P16)** Univeristy of New South Wales, Australia *Uncovering mechanisms for the self-assembly of supramolecular protein structures with artificial DNA templates.*	**Queenstown Room**
4.50pm	**Angus Grey (P17)** University of Auckland, New Zealand *Visualising ocular lens function and dysfunction with protein imaging mass spectrometry*	**Queenstown Room**
5.10pm	**Rachel North (P18)** University of Canterbury, New Zealand *The structure and function of a bacterial sialic acid transporter*	**Queenstown Room**
5.30-7.00pm	**Posters and mixer in trades area** *Sponsored by Bio-Rad Laboratories Pty Ltd*	**Trades Area**
7.00pm	**Joint dinner with Cell Signalling satellite at Rydges** Tickets are required	**Bazaar Restaurant, Level 6**

Friday 8th September		
Time	**Details**	**Location**
	<u>Session 5 – - Membrane proteins</u> **Chaired by Jack Flanagan (University of Auckland)**	
8.40am	**Ross Bathgate (P19)** University of Melbourne, Australia *Using engineered thermostabilized G protein-coupled receptors for interrogation of ligand selectivity and drug screening using NMR*	**Queenstown Room**
9.05am	**Lisa Martin (P20)** Monash University, Australia *Dual activity of cytochrome P450c17 - regulation of cortisols and androgens*	**Queenstown Room**
9.30am	**Brian Monk (P21)** University of Otago, New Zealand *Structure-function analysis of the antifungal target sterol 14α-demethylase*	**Queenstown Room**
9.50am	**Jane Allison (P22)** Massey University, New Zealand *Energetic and structural factors controlling membrane association and activity of wild-type and oncogenic H1047R PI3Kα*	**Queenstown Room**
10.00am	**Morning Tea**	**Trades Area**
	<u>Session 6 – Cell Signalling</u> **Chaired by Peter Shepherd (University of Auckland)**	
10.30am	**John Burke (P23)** University of Victoria, Canada *Exploring the structure and dynamics of phosphoinositide kinases and their role in disease*	**Queenstown Room**
11.10am	**Peter Mace (P24)** University of Otago, New Zealand *Apoptosis Signal-regulating Kinases–linking redox stress to MAPK signalling*	**Queenstown Room**
11.35am	**Catherine Day** University of Otago, New Zealand *Building chains – characterisation of ubiquitin chain assembly by TRAF proteins*	**Queenstown Room**
12.00pm	**Denise Wootten** Monash University *Novel insights into class B GPCR activation and signalling*	**Queenstown Room**
12.30pm	**Lunch**	**Trades Area**

Session 7 – Protein engineering and evolution **Chaired by Monica Gerth (University of Otago)**		
1.20pm	**Gerard Manning (P25)** Genentech, USA *Decoding the functions of kinases and phosphatases with bioinformatics - from a billion years of evolution to modern cancer genome sequencing.*	**Queenstown Room**
2.05pm	**Ashley Buckle (P26)** Monash University, Australia *Protein engineering of next generation monobodies*	**Queenstown Room**
2.30pm	**Wayne Patrick (P27)** *sponsored by Mediray* University of Otago, New Zealand	**Queenstown Room**
2.50pm	**Chris Squire (P28)** University of Auckland, New Zealand *Protein superglue from bacteria.*	**Queenstown Room**
3.10pm	Afternoon tea break	**Trades Area**
	Session 8 – Infectious diseases **Chaired by Peter Mace (University of Otago)**	
3.40pm	**Shaun Lott (P29)** University of Auckland, New Zealand *The structure and function of KstR, the major regulator of cholesterol catabolism in Mycobacterium tuberculosis*	**Queenstown Room**
4.00pm	**Yoshio Nakatani (P30)** University of Otago, New Zealand *Targeting NDH-2, an essential bacterial respiratory enzyme for development of novel antibiotics*	**Queenstown Room**
4.20pm	**Ivanhoe Leung (P31)** University of Auckland, New Zealand *Targeting isocitrate lyase for the treatment of latent tuberculosis*	**Queenstown Room**
4.35pm	**Ghader Bashiri (P32)** University of Auckland, New Zealand *Molecular insights into cofactor F_{420} biosynthesis uncover a revised pathway*	**Queenstown Room**
4.50pm	**Dave Ackerley (P33)** Victoria University, New Zealand *Engineering bacterial nitroreductases for biomedical research applications*	**Queenstown Room**
6.00pm - 7.00pm	**6.00pm Opening Remarks** **6.15pm Plenary talk** **Nobel prize winner Dr Bruce Beutler -** 2011 Nobel Prize in Physiology or Medicine, for "discoveries concerning the activation of innate immunity" University of Texas, USA **Sponsored: University of Otago**	**Queenstown Room**
7.00pm – 9.00pm	**Opening Night Mixer sponsored by Merck & pH Scientific**	**Trades Area, Rydges Hotel**