## **QRW Programme**

## Biomolecular Interactions and Engineering QMB Satellite Symposium 1 September – 2 September, 2019, Rydges Hotel, Queenstown, New Zealand

Sund	lay	1	Se	pte	m	ber
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Time	Details	Room
9:00-9:10am	Opening remarks: Ren Dobson	Rees Room
	Session 1	
	Chair: Volker Nock and Adele Williamson	
9:10–9:40am	Keynote (K1) Olwyn Byron	Rees Room
	University of Glasgow, Scotland	
	The spins: bacterial aldehyde-alcohol dehydrogenase forms spiral complexes critical for	
	activity	
9:40–10:00am	Invited (I1) Jenny Malmstrom	Rees Room
	University of Auckland, New Zealand	
	Protein driven iron mineralisation: self-assembly towards functional nanostructures	
10:00–10:30am	Keynote (K2) Tim Cooper	Rees Room
	Massey University, New Zealand	
	Evolvability and its basis: adaptation of experimentally evolved bacteria	
10:30–11:00am	Morning Tea	Trade Area
	Session 2	
	Chairs: Margie Sunde and Paul Gardner	
11:00–11:30am	Keynote (K3) Laura Domigan	Rees Room
	University of Auckland, New Zealand	
	Lens protein biomaterials for use in ocular surgery	
11:30–11:50pm	Invited (I2) Michael Griffin	Rees Room
	University of Melbourne, Australia	
	Cryo-EM of the malaria parasite PA28/20S proteasome complex reveals an unusual	
11 = 0 10 10	activation mechanism with implications for artemisinin sensitivity	
11:50–12:10pm	Invited (I3) Brendon Green	Rees Room
	ADVANCED BIOTECH NZ, New Zealand	
12:10 12:2000	ABNZ - Bovine collagen for wound care	Door Boom
2:10–12:30pm Selected (S4) Michal Bernach	, , ,	Rees Room
	University of Canterbury, New Zealand  Artificial leaf surfaces and fluorescently labelled bacteria to investigate phyllosphere	
	microbiology	
12:30–1:30pm	Lunch	
12.30-1.30pm		
	Session 3	
	Chairs: Karen Fleming and Peter Mace	I = =
1:30–2:00pm	Keynote K4) Margaret Sunde	Rees Room
	University of Sydney, Australia	
2,00 2,2000	Viral proteins that mimic host protein interactions to undermine antimicrobial defenses	Deec Deec
2:00–2:20pm	Selected (I5) Vanessa Morris University of Canterbury, New Zealand	Rees Room
	Cysteine oxidation triggers amyloid fibril formation by the tumour suppressor p16	
2:20–2:35 pm	Selected (S1) Mihnea Bostina	Rees Room
2.20–2.33 pm	University of Otago, New Zealand	Rees Room
	Using Cryo-EM to understand seneca valley virus specific tropism for cancer cells	
2:35–3:00pm	Keynote (K5) Dominika Elmlund	Rees Room
2.33 3.00pm	Monash University, Australia	ACCS ROOM
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	The TAFs of TFIID bind and rearrange the topology of the TATA-less RPS5 promoter	

	Session 4	
	Chairs: Tim Cooper and Emma Petrie	
3:30-3:50pm	Invited (I6) Paul Gardner	Rees Room
	University of Otago, New Zealand	
	Protein expression is controlled by the accessibility of translation initiation sites	
3:50-4:10pm	Invited (I7) Will Barker	Rees Room
	Mint Innovation, New Zealand	
	A biometallurgical approach to recovering gold from electronic waste	
4:10-4:30pm	Poster Plugs	Rees Room
4:30-6:30pm	Poster Session (with beer/wine)	Rees Room
7:00pm – late	Conference Dinner – Winnies (shared with Infectious Diseases)	

Monday 2 S	eptember	<del>,</del>
Time	Details	Room
<u>9</u>	Session 5: Membrane Protein Structure and Function (shared with Infectious Diseas	<u>es)</u>
	Chair: Jane Allison	
9:00–9:35am	Keynote (K6) Karen Fleming sponsored by Maurice Wilkins Centre	Queenstown
	John Hopkins University, USA	Room
	From Chaperones to the Membrane with a BAM!	
9:35–9:55am	Invited (I6) Ren Dobson	Queenstown
	University of Canterbury, New Zealand	Room
	Insane in the membrane: Biology of bacterial sialic acid metabolism.	
9:55-10:30am	Keynote (K7) Michelle Dunstone	Queenstown
	Monash University, Australia	Room
	Pore forming proteins of the immune system: What happens when there are no target-	
	recognition domains?	
10:30am –	Morning Tea	
11:00am		
	Session 6	
	Chair: Laura Domigan and Michael Griffin	
11:00-11:20am	Keynote (K8) Juliet Gerrard	Rees Room
	University of Auckland, New Zealand	
	Protein nanotechnology: towards applications	
11:20-11:40am	Invited (I7) Volker Nock	Rees Room
	University of Canterbury, New Zealand	
	Using Lab-on-a-Chip technology to reduce complexity in plant-fungi interaction studies	
11:40-11:55am	Selected (S2) Akash Bhattacharya	Rees Room
	Beckman Coulter, USA	
	How does a "scorched earth" enzyme work? Experimental and computational studies on	
	the human antiretroviral restriction factor SAMHD1.	
11:55-12:10pm	Selected (S3) Esteban Cruz	Rees Room
	University of Sydney, Australia	
	Multifunctional gold nanoparticles targeted against HER2-amplified cells for selective	
	delivery of cytotoxic payloads	
12:10-12:30pm	Keynote (K9) Elizabeth Ostrowski	Rees Room
	Massey University, New Zealand	
	Population genetics of allorecognition in the social amoeba	
12:30-2:00pm	Lunch	

	Session 7	
	Chair: Olwyn Byron and Dominika Elmlund	
2:00–2:30pm	Keynote (K10) Tom Laue sponsored by Lab Supply Ltd University of New Hampshire, USA High concentration protein solutions: insights from analytical ultracentrifugation and analytical electrophoresis	Rees Room
2:30–2:50pm	Selected (S4) Adele Williamson University of Waikato, New Zealand Repair outside the box? Structural and functional diversity of bacterial ATP-dependent DNA ligases	Rees Room
2:50–3:10pm	Invited (S5) Alexander McLellan University of Otago, New Zealand Promoters to drive Chimeric Antigen Receptor (CAR) T cell therapy	Rees Room
3:10-3:30pm	Invited (I8) Emma Petrie  Walter + Eliza Hall Institute, Australia  Learning from viral inhibitory proteins to block the pathway to necroptotic cell death	Rees Room
3:30–4:00pm	Afternoon Tea	
	Session 8: Chair: James Murphy and Vanessa Morris	
4:00–4:25pm	Keynote (K11) Jane Allison University of Auckland, New Zealand Elucidation of allosteric mechanism via network analysis of molecular dynamics simulation	Rees Room
4:25–4:40pm	Invited (S6) Adam Middleton University of Otago, New Zealand Discovery of two inhibitors of ubiquitin chain growth and their future in cells	Rees Room
4:40–5:00pm	Invited (I10) Peter Mace sponsored by Beckman Coulter Life Sciences University of Otago, New Zealand Using helices to cope with stress	Rees Room
5:00–5:30pm	Keynote (K12) Tuomas Knowles sponsored by Thermo Fisher Scientific University of Cambridge, England Protein self-assembly and misassembly	Rees Room
5:30-5:35pm	Concluding remarks	Rees Room