

Synthetic Biology Satellite Meeting Programme

Wednesday 4 September – Thursday 5 September, 2024

Rydges Hotel, Queenstown, New Zealand

| Wednesday 4 September | | |
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| Time | Details | Location |
| Session 1 | | |
| Chaired by Dr Rosannah Cameron (Victoria University of Wellington) | | |
| 9.00am-9.20am | Welcome & Mihi Dr Rosannah Cameron (Chair, SynBioNZ) - Introductions/housekeeping Dr Mark Calcott - Synthetic Biology Australasia (SBA) | Clancy's room, L5 |
| 9.20am-10.00am | Prof Claudia Vickers (SB1) Queensland University of Technology <i>Synthetic biology tools for metabolic engineering to deliver high titres in microbes</i> | Clancy's room, L5 |
| 10.00am-10.30am | Morning Tea | Trade Area, L4 |
| Session 2 | | |
| Chaired by Dr Rory Little (Victoria University of Wellington) | | |
| 10.30am-10.50am | Dr Revel Drummond (SB2) <i>sponsored by Bio-Rad Laboratories Pty Ltd</i> The New Zealand Institute for Plant And Food Research <i>New plant shapes: synthetic reprogramming of plant development</i> | Clancy's room, L5 |
| 10.50am-11.10am | Dr Alec Foster (SB3) Scion <i>Harnessing microbial power: Innovations in industrial strain development</i> | Clancy's room, L5 |
| 11.10am-11.20am | Jessica Chiang (SB4) University of Auckland <i>The potential of New Zealand fungi as generators of biomaterials for packaging</i> | Clancy's room, L5 |
| 11.20am-11.30am | Taylor Hibbard (SB5) Ferrier Research Institute <i>Diversification of indole terpenoids by a dual-functional prenyltransferase identified in Tolypocladium album</i> | Clancy's room, L5 |
| 11.30am-12.30pm | international Genetically Engineered Machine - What is iGEM? Joe Ramana (SB6) University of Canterbury <i>Bright ideas come in nanocompartments: A University of Canterbury iGEM project</i> iGEM panel Dr Louise Brown, Dr Amanda Board, Anna Donnan, Prof David Ackerley (Moderator) | Clancy's room, L5 |
| 12.30pm-1.30pm | Lunch | Trade Area, L4 |

| Session 3 – Shared Session with Biomolecular Interactions Centre Chaired by Dr Vanessa Morris (University of Canterbury) | | |
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| 1.30pm-2.10pm | Dr Hafna Ahmed (SB7) CSIRO <i>Engineering thermostable bioplastic degrading enzymes</i> | Clancy's room, L5 |
| 2.10pm-2.30pm | Dr Adele Williamson (SB8) University of Waikato <i>Enzymatic ligation of xeno nucleic acids with non-canonical bases</i> | Clancy's room, L5 |
| 2.30pm-2.50pm | Dr Rebecca McKenzie (SB9) Malaghan Institute <i>A glimpse into New Zealand's RNA technology development platform</i> | Clancy's room, L5 |
| 2.50pm-3.00pm | Dr Juan Pinheiro de Oliveira Martinez (SB10) CSIRO <i>High-throughput optimization of protein expression and UPR-mediated cell stress monitoring in Pichia pastoris via biosensors</i> | Clancy's room, L5 |
| 3.00pm-3.30pm | A. Prof Phillip Wilcox (SB11) University of Otago <i>Understanding and incorporating Māori world views and expectations in gene technologies: implications for synthetic biology</i> | Clancy's room, L5 |
| 3.30pm-4.00pm | Afternoon Tea and Coffee Break | Trade Area, L4 |
| Session 4 - Shared Session with Biomolecular Interactions Centre Chaired by Jessica Chiang (University of Auckland) | | |
| 4.00pm-4.40pm | Dr Sarah Kessans (SB12) University of Canterbury <i>LUCY in the sky with diamonds: developing platforms for protein crystallisation in microgravity</i> | Clancy's room, L5 |
| 4.40pm-5.00pm | Dr Kelsi Hall (SB13) University Of Canterbury <i>A conserved second-sphere residue in lytic polysaccharide monoxygenases controls copper-site reactivity</i> | Clancy's room, L5 |
| from 5.00pm | Poster Session <i>sponsored by Integrated DNA Technologies</i> | Marquee, L7 |
| 5.30pm-7.00pm | Evening Social Function <i>sponsored by illumina</i> | Trade Area |
| 7.30pm-10.00pm | Casual Conference Function <i>Ticket holders only</i> | Winnies Gourmet Pizza Bar, The Mall |

| Thursday 5 September | | |
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| Time | Details | Location |
| Session 5 | | |
| Chaired by Dr Alistair Brown (Victoria University of Wellington) | | |
| 9.00am-9.40am | Dr Louise Brown (SB14) Hydgene Renewables <i>Leveraging synthetic biology for economical green hydrogen production from biowaste</i> | Clancy's room, L5 |
| 9.40am-9.50am | Dr Alistair Richardson (SB15) Victoria University of Wellington <i>Nodulisporic Acid Biosynthesis: A multifunctional monooxygenase delivers a complex and highly branched array</i> | Clancy's room, L5 |
| 9.50am-10.00am | Dr Natalie Curach Gingko Bioworks | Clancy's room, L5 |
| 10.00am-10.30am | Morning Tea | Reds Bar, L6 |
| Session 6 | | |
| Chaired by Dr Mark Calcott (Victoria University of Wellington) | | |
| 10.30am-10.50am | Prof Peter Dearden (SB16) <i>sponsored by Lab Supply NZ</i> University of Otago <i>The potential for the use of gene drives for pest control in New Zealand</i> | Clancy's room, L5 |
| 10.50am-11.10am | Dr Danielle Maddock (SB17) University of Auckland <i>Building synthetic chromosomes to separate junk from function in eukaryotic genomes</i> | Clancy's room, L5 |
| 11.10am-11.20am | Lani Burke (SB18) Ferrier Research Institute <i>Developing a tuneable inducible promoter system in Penicillium paxilli</i> | Clancy's room, L5 |
| 11.20am-11.30am | Kate Pitches (SB19) University of Auckland <i>Enzymatic degradation of polyethylene terephthalate (PET) plastic waste</i> | Clancy's room, L5 |
| 11.30am-12.30pm | GMO legislation in Aotearoa Panel Prof Claudia Vickers, Dr Alec Foster, Prof Emily Parker, A. Prof Phillip Wilcox, Dr Revel Drummond (Moderator) | Clancy's room, L5 |
| 12.30pm-1.30pm | Lunch | Bazaar Restaurant and Reds Bar, L6 |
| Session 7 | | |
| Chaired by Dr Danielle Maddock (University of Auckland) | | |
| 1.30pm-2.10pm | Dr Leon Scott (SB20) Queensland University Of Technology <i>The challenge of scale- creating pilot precision fermentation capacity</i> | Clancy's room, L5 |
| 2.10pm-2.30pm | Prof Dave Ackerley (SB21) Victoria University of Wellington | Clancy's room, L5 |

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| | <i>How to efficiently access the soil metagenome for high-throughput enzyme discovery and engineering</i> | |
| 2.30pm-2.50pm | Dr Rosannah Cameron (SB22) <i>sponsored by Lab Supply NZ</i> Victoria University of Wellington <i>Developing a synthetic biology toolkit for optimised secondary metabolite production in Penicillium paxilli</i> | Clancy's room, L5 |
| 2.50pm-3.10pm | Dr Lee Tejada (SB23) Fonterra <i>Novel enzyme-based biosensor for yeast assimilable nitrogen</i> | Clancy's room, L5 |
| 3.10pm-3.30pm | Awards, closing remarks and thank you | Clancy's room, L5 |
| 3.30pm-4.00pm | Afternoon Tea and Coffee Break | L5 Lobby |