Ōtākou Whakaihu Waka
UNIVERSITY OF OTAGO

Environmental Omics

Thursday 3 September – Friday 4 September, 2026 Te Pae, Christchurch, New Zealand

Wednesday 2 September

Time	Details	Location
	QRW Plenary Lecture *sponsored by Decode Science*	
4.45pm	Audience take seats	
5.00pm-5.10pm	**Introduction**	Conway C2+C3 live feed to C4 and C5
5.00pm-6.00pm	**Plenary Lecture:** KNZM CRSNZ FRSNZ FRCPA (Hon) *Harnessing the Power of the Immune System Using Basic Science and Cutting Edge Technologies*	Conway C2+C3 live feed to C4 and C5
6.00pm-8.00pm	**Evening Social Function & The Great QMB Trivia Night** *sponsored by Thermo Fisher Scientific*	Exhibition Area

Thursday 3rd September

Time	Details	Location
	<u>Session 1 Environmental technologies to protect natural ecosystems</u> **Chaired by Dr Alana Alexander (Ōtākou Whakaihu Waka | University of Otago)**	
9.00am-10.00am Keynote speaker	**Professor Amanda Black (EO1)** Lincoln University, NZ. *Omics in the landscape – what can they tell us about resilience*	Conway C1
10.00am-10.30am	**Morning Tea**	Exhibition Area
	<u>Session 2 Social and cultural dimensions of 'omics and eDNA</u> **Alana Alexander (Ōtākou Whakaihu Waka | University of Otago)**	
10.30am-11.00am Invited speaker	**Dr Dawn Lewis and Dr Vilma Perez (EO2)** ARC Centre of Excellence for Indigenous and Environmental Histories and Futures, James Cook University, AU. *Ancient environmental DNA studies in Australia*	Conway C1
11.00am-11.30am Invited speaker	**Professor Phil Wilcox (EO3)** University of Otago, NZ *TBA*	Conway C1
11.30am-11.45am	**Dr Clare Adams and Dr Alana Alexander (EO4)** University of Otago, NZ *Enabling the use and understanding of eDNA by hapori Māori*	Conway C1
11:45am-12:15pm Invited speaker	**Teremoana Porter-Rawiri (Abstract EO5)** University of Auckland, NZ *Fungal communities as expressions of puāwaitanga in Wairarapa wetlands*	Conway C1
12.15pm-12.30pm	**Thermofisher**	Conway C1

SEQUENCH

THE CRISPR HUB

12.30pm-1.30pm	**Lunch**	Exhibition Area
Session 3 Advances in 'omic technologies **Chaired by Benjamín Durán-Vinet (Ōtākou Whakaihu Waka | University of Otago)**		
1.30pm-2.00pm Invited speaker	**Dr Ang McGaughran (Abstract EO6)** University of Waikato, NZ *eDNA innovation stories from water, webs, and weasels*	Conway C1
2.00pm-2.15pm	**Gracie Kroos (Abstract EO7)** University of Otago, NZ *Temporal persistence of airborne environmental DNA in a natural open-air setting*	Conway C1
2.15pm-2.30pm	**Dr Benjamín Durán-Vinet (Abstract EO8)** University of Otago, NZ *CRISPR-based environmental biosurveillance platform for the detection of endangered dolphin species*	Conway C1
2.30pm-2:45pm	**Anh Thu Tran Nguyen (Abstract EO9)** University of Otago, NZ *Sensing RNA-protein interactions with ONT nanopore sequencing*	Conway C1
2:45pm-3:00pm	**Dr Elahe Parvizi (Abstract EO10)** University of Waikato, NZ *Recovering hypervariable ascidian mitochondrial genomes from Oxford Nanopore whole-genome sequencing datasets*	Conway C1
3.00pm-3.30pm	**Afternoon Break**	Exhibition Area
Session 4 eDNA ecology **Chaired by Dr Kaj Kamstra (Ōtākou Whakaihu Waka | University of Otago)**		
3.30pm-4.00pm Invited speaker	**Prof. Susie Wood (Abstract EO11)** Lincoln University, NZ. *From national gradients to millennial records: microbial community structure across space and time*	Conway C1
4:00pm-4:15pm	**Dr Clare Adams (Abstract EO12)** University of Otago, NZ *Advancing eDNA uptake through Southern Hemisphere collaboration and capacity building*	Conway C1
4.15pm-4.30pm	**Dr Aimee Van Der Reis (Abstract EO13)** University of Auckland, NZ *Exploring the diet of the vulnerable spotted shag*	Conway C1
4.30pm-4.45pm	**Nicolas Restrepo (Abstract EO14)** University of Otago, NZ *Environmental DNA metabarcoding of kelp forest and rocky shore ecosystems in the Bay of Plenty, northern New Zealand*	Conway C1
4.45pm-5:00pm	**Dr Richard O'Rorke (Abstract EO15)** University of Auckland, NZ *Using unique molecule identifiers (UMIs) on bulk DNA extracts to detect subtle genetic patterns amongst large larval populations*	Conway C1
5:00pm-5.15pm	**Dr Sarah Lowry (Abstract EO16)**	Conway C1

	PHF Science, NZ *Hyperplex PCR for the simultaneous detection and quantitation of 50 bacteria and viruses: application to the analysis of microbial water quality*	
5:15pm-5.30pm	**Prof. Phil Lester (Abstract EO17)** Victoria University of Wellington, NZ *Bioprotection using dsRNA biopesticides: controlling the parasitic mite Varroa destructor in honey bee colonies*	Conway C1
5.30pm-7.30pm	**Evening Social Mixer** *sponsored by Lab Supply*	Exhibition Area
7.30pm-late	**Dinner** **The Goldfinch Restaurant & Bar**	The Goldfinch 145 Victoria Street, Christchurch

Friday 4th September

Time	Details	Location
Session 5 eDNA applications **Chaired by Distinguished Professor Neil Gemmell (Ōtākou Whakaihu Waka | University of Otago)**		
9.00am-10.00am Keynote speaker	**Dr Toni Piaggio (Abstract EO18)** United States Department of Agriculture, Animal and Plant Health Inspection Service, US *CRISPR-Cas technology for advancing biocontrol and eDNA applications*	Conway C1
10.00am-10.30am	**Morning Tea**	Exhibition Area
Session 6 Unwanted: Detection and control **Chaired by Benjamín Durán-Vinet (Ōtākou Whakaihu Waka | University of Otago)**		
10.30am-11.00am Invited speaker	**Dr Manpreet Dhami (Abstract EO19)** Bioeconomy Science Institute, NZ *Investigating the invasion pathways of global pests – genomic mechanisms, source tracking and invasion fronts.*	Conway C1
11.00am-11.30am Invited speaker	**Dr Anna Clark (Abstract EO20)** University of Otago, NZ *Evaluating Gene Drives for Invasive Mammal Control in a Complex Ecological Model of the South Island of New Zealand*	Conway C1
11.30am-11.45am	**Jack Sissons (Abstract EO21)** Cawthron Institute, NZ *Modelling gene-drive-based control of an invasive ascidian*	Conway C1
11.45am-12.00pm	**Nishil Gounder (Abstract EO22)** University of Otago, NZ *Development and deployment of a CRISPR-based environmental biosurveillance platform for the detection of brushtail possums*	Conway C1
12.00pm-12.15pm	**John Mackay (Abstract E23)** Dnature diagnostics & research Ltd, NZ	Conway C1

	Out of the (bee) box diagnostics - Disease, Biosecurity and Surveillance via eDNA means and the Foster Method.	
12.15pm-12.30pm	**Dr Vinko Besic and Georgia Bell (Abstract EO24)** PHF Science, NZ *VibrioRapid: Developing a low-barrier assay for detecting Vibrio spp. directly from seawater*	Conway C1
12.30pm-1.30pm	**Lunch**	Exhibition Area
Session 7 Conservation Omics **Chaired by Dr Kaj Kamstra (Ōtākou Whakaihu Waka | University of Otago)**		
1.30pm-2.00pm Invited speaker	**Dr Sebastian Alvarez-Costes (EO25)** University of Otago, NZ *Genomic predictors of infectious disease mortality in endangered Hector's and Māui dolphins*	Conway C1
2.00pm-2.15pm	**Aryan Behal (Abstract EO26)** University of Otago, NZ *Investigation of Social Structure and Population History in New Zealand False Killer Whales*	Conway C1
2.15pm-2.30pm	**Dr Alexander Verry (Abstract EO27)** University of Canterbury, NZ *High-quality genomic resources inform population recovery for one of the world's most inbred birds - the Chatham Island black robin*	Conway C1
2.30pm-2.45pm	**Henry Collecutt (Abstract EO28)** University of Otago, NZ *Investigating Population Structure Among NZ Kuku (Perna canaliculus) using Long Read Sequencing*	Conway C1
2.45pm-3.00pm	**Dr Dafni Anastasiadi (Abstract EO29)** Bioeconomy Science Institute, NZ *Epigenetic biomarkers in management and conservation of taonga species*	Conway C1
3.00pm-3.30pm	**Afternoon Break**	Exhibition Area
Session 8 Methodological advances **Chaired by Dr Alana Alexander (Ōtākou Whakaihu Waka | University of Otago)**		
3.30pm-4.00pm Invited speaker	**Dr William Pearman (Abstract EO30)** University of Auckland, NZ *Host-microbiome research requires clearly articulated null hypotheses*	Conway C1
4:00pm-4:15pm	**William Taylor (Abstract EO31)** PHF Science, NZ *Iterative Database Development for Environmental Amplicon Analysis*	Conway C1
4.15pm-4.45pm Invited speaker	**Dr Alejandro Trujillo González (Abstract EO32)** Australian National eDNA Reference Centre, University of Canberra, AU *Automation of Molecular Workflows in Biosecurity: Removing Bottlenecks Without Compromising Sensitivity*	Conway C1