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A tribute to microbial biologist Professor Craig Cary: 1954-2024



It is with great sadness that we acknowledge the death of Professor Craig Cary, who passed away on February 29, 2024. A microbial ecologist with the University of Waikato, Craig was a valued member of Genomics Aotearoa's Science Leadership Team, and an advisor to researchers on multiple Genomics Aotearoa projects.

Craig studied microorganisms in the world's most harsh environments, including deep-sea thermal vents, and was well respected for his ecology research in the Antarctic. His contributions are considerable. His most famous discoveries centered on *Alvinella pompejana* (the Pompeii worm); its remarkable survival capabilities in extreme conditions making it the most thermal-tolerant organism known to science. And in March 2023, Craig

undertook a world first survey for bird flu, where he monitored a colony of one million Adelie penguins, trekking nine hours in and around the colony to look for signs of infection. Read more on the University of Waikato [website](#).

Genomics Aotearoa Co-Director Professor Peter Dearden said Craig was a larger-than-life character. "He was delightful, erudite and energetic and I enjoyed many interesting conversations with him. The Genomics Aotearoa team acknowledges the amount of work he put into making sure his studies would benefit us all. He will be missed by the New Zealand and international microbial ecology community. We pass on our condolences to Craig's family and colleagues."

Genome Science of Life exhibition update



The Genome Science of Life exhibition continues its tour of New Zealand, featuring at the Motueka Museum April 7-June 8. It has also debuted in Auckland, featuring at ASB Polyfest which enjoyed great numbers and gained good feedback, and as part of the Museum of Transport And Technology (MOTAT)'s April School Holidays Programme (April 13-28).

He whakapāha – an apology

In the previous newsletter we introduced a new project "Kauri dieback detection - developing real time, point-of-need surveillance." This project is being undertaken in the Te Rarawa rohe, and is a collaboration between Te Rarawa

Iwi, specifically the Te Rarawa Iwi CoLab Kauri Ora Rangers and the Warawara Kaitiaki Komiti, researchers from Bioprotection Aotearoa, the University of Otago, and BioSense.

Regrettably, the introduction was accompanied by an image of Tāne Mahuta, the iconic kauri tree within Waipoua forest, and upon the whenua of Te Iwi o Te Roroa.

Genomics Aotearoa unreservedly apologises to both Te Iwi o Te Roroa and Te Rarawa Iwi for this error. As an organisation we are attempting to engage with mana whenua in a respectful and supportive manner, thereby establishing mutual trust and understanding. We regret that we have fallen short in this instance.

We acknowledge the intimate whakapapa relationships that connect hapū and iwi with their respective whenua and ngahere. In view of these intergenerational and familial relationships with nature, we recognise that using an image of kauri from the rohe of Te Iwi o Te Roroa to represent the kauri of Te Rarawa Iwi was completely inappropriate.

In acknowledging our error, we also challenge all science researchers to ensure they are sensitive to relationships mana whenua have with their respective lands, waters, nature and taonga, and take care not to repeat our mistake!

In the news

- **Hope new research will help get answers for those with rare disorders**, [Radio New Zealand](#), March 29.

- **Life savers - How genetic data will revolutionise your diagnosis and treatment**, [Listener](#) (March 23-29 edition).

Let us know if you have a research story you'd like to share in the media.

Genomics Aotearoa research

Publications

[A population genomics analysis of the Aotearoa New Zealand endemic rewarewa tree \(*Knightia excelsa*\)](#), Ann M. McCartney, Emily Koot, Jessica M. Prebble, Rubina Jibran, Caroline Mitchell, Ana Podolyan, Alexander J. Fergus, Elise Arnst, Katie E. Herron, Gary Houliston, Thomas R. Buckley & David Chagné. npj Biodiversity volume 3, Article number: 7 (2024).

[High niche specificity and host genetic diversity of groundwater viruses](#), Emilie Gios, Olivia E Mosley, Michael Hoggard, Kim M Handley. *The ISME Journal*, wrae035, 07 March 2024.

Genomics Aotearoa Seminar Series

Please join us and invite colleagues for our upcoming Genomics Aotearoa Friday seminar:

May 3: Carla Finn (Victoria University of Wellington), on "Developing genomic resources of the haku/warehenga (Yellowtail Kingfish, *S.lalandi*) to support Māori-led aquaculture."

Thank you to our recent speakers:

- Andelka Phillips (University of Oxford) and Jan Charbonneau (University of Tasmania), talking on "Privacy and the World of DTC - Data Breaches are already happening."
- Ronald Jenner (Principal Researcher, Natural History Museum, London), speaking on "Seeing evolution through a cladistic blindfold; the challenges of thinking about evolving lineages in a world of taxa."
- Paul Gardiner (University of Otago) asking "Should I trust my bioinformatic tools?"

Upcoming bioinformatics training

Single-Cell RNA-seq Analysis Workshop: Expressions of Interest

This workshop, taught by Professor Mik Black, will introduce skills and tools required for the analysis of single-cell RNA-seq data (scRNA-seq data) in R. The workshop will be taught online over four half-days, on May 8, 9, 15 and 16 (9am-1pm).

This is an advanced workshop which requires an intermediate level of R knowledge and experience. To participate, you must have either completed the Genomics Aotearoa Intermediate R workshop, or have an equivalent level of experience (e.g., be a semi-regular R user). Because of the complexity of this workshop we will not have the time or resources to solve coding errors. However, the focus of this workshop will be on the concepts and discussion of the statistical methodology rather than your ability to code quickly.

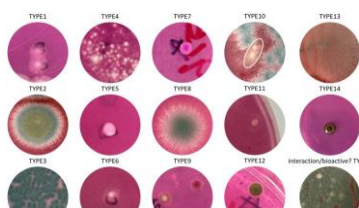
Because we expect a high level of interest in this workshop and we have limited spaces, we are inviting [expressions of interest](#) no later than Friday April 26 and will select a group of attendees based on needs and experience. We will

endeavour to maximise the overall positive impact on research in Aotearoa and distribute this training as fairly as possible. You will be advised whether you are able to attend the training by end of day Monday April 29.

If you would like some exposure to teaching and training through volunteering, or if you have ideas for future workshops, please get in contact with Tyler McInnes (tyler.mcinnnes@otago.ac.nz).

New to our website

Introducing a new Genomics Aotearoa project: Marine-fungi as a source of antimicrobials



New antimicrobials are needed to help against the antimicrobial resistance crisis. Research is now looking to the oceans for natural products with therapeutic effects to treat infection.

Studies have shown microbes like bacteria and fungi that live on host macro-organisms such as sponges or seaweeds produce natural chemicals that prevent the growth of harmful microbes and pathogenic disease. These marine microbes may therefore be a treasure trove of unique compounds with antimicrobial activity. This Genomics Aotearoa project investigating this antimicrobial potential is a concerted effort that combines Pacific-led scientific research and Pacific Indigenous wisdom. It is a collaboration between researchers from Victoria University of Wellington and Kōrero O Te `Ōrau, an environmental Non-Governmental Organisation (NGO) in the Cook Islands.

Read more [here](#)

Introducing ...SING Aotearoa intern Baeli Spedding-Devereux



University of Otago PhD student Baeli Spedding Devereux found the SING Aotearoa 2023 programme an excellent opportunity to be part of an immersive environment, one that offered new ways of understanding the Māori perspective on knowledge.

Read about the SING experience and Baeli's studies [here](#).



Genomics Aotearoa Annual Report 2023

If you haven't already, take a look at the Genomics Aotearoa 2023 Annual Report [here](#). And please pass on the link or let us know if you have collaborators who would appreciate a hard copy.

Genomics events

- **Aug 19-21:** GeneMappers 2024 conference, Christchurch

- **Aug 31-Sept 5:** Queenstown Research Week, Queenstown
- **Oct 28-Nov 1:** Biodiversity Genomics Conference (BG24),online

Let us know if you would like to add an event.

Genomics Aotearoa YouTube Channel



[Genomics Aotearoa YouTube Channel](#)

We welcome suggestions for hosting content that our community would find useful - please email genomics.aotearoa@otago.ac.nz

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