



Genome: Science of Life

Our successful exhibition in partnership with Tūhura Otago Museum will be running again over the summer months.

With revamped content, the exhibition promises to be a fun event for the whole family over summer.

We look forward to your visit, particularly if you have out-of-town guests.

The exhibition kicks off on 7 November and will run until 19 February, 2023. We'll provide more information in our next newsletter.

Indigenous Genomics Platform (IGP) update

We are pleased to announce our third IGP project.

Realising the potential of genomics for swamp maire replanting in the Rangitāne rohe, led by Paul Horton (Rangitāne o Manawatū), Keith Funnell (Plant & Food Research), and Colan Balkwill (Te Herenga Waka-Victoria University of Wellington)

The swamp maire (*Syzygium maire*), a nationally critically threatened tree, is the subject of active restoration in the Manawatū region, especially along the

new Te Ahu a Turanga (Manawatū Tararua highway). The population genetics of the plant are already being studied, but iwi need greater capability and capacity in the use of genomics, and the mātauranga of swamp maire, to enable implementation of genomics knowledge to guide forest restoration.

This project enables the participation of kaitiaki Rangitāne o Manawatū in the Aotearoa science system. Rangitāne o Manawatū will gain access to a broad range of scientific expertise to aid in developing innovative, mātauranga Māori led kaitiakitanga of swamp maire.

Together with habitat suitability mapping, genomic information will be built into an integrated restoration model for the Manawatū. Rangitāne o Manawatū will develop protocols for implementing genomics knowledge into a restoration model, using video production to document this journey of using genomic information to allow others to visualise and share this experience.

Read more about the project [here](#). Additional projects will be announced as they are assessed.

Asia-Pacific Genetics Seminar Series



We are pleased to announce that on **November 17 at 4 pm** (NZ time) **Prof John Bowman** will be discussing the origin and evolution of land plants in the latest seminar of this international series.

The evolution of land flora fundamentally shifted the course of life on earth. Prof John Bowman has contributed substantially to our understanding of the evolution and developmental genetics of plant life. Since 2006 he has been at Monash University, where he leads the Land Plant Research Group. Prof Bowman was elected a Fellow of the Australian Academy of Sciences in 2014.

A full profile on Prof Bowman and the abstract of his talk are [on our website](#).



Please [register for this seminar](#). You are welcome to share the link with colleagues.

Genomics Aotearoa Seminar Series

This month we have the second seminar in our mini-series on the **Human Pangenome Reference Consortium (HPRC)**. In the first seminar, Karen Miga introduced the goals of the HPRC, and broader application of the methods to other species. If you missed it, you can see it on our [YouTube channel](#).

The second HPRC seminar is on **October 7 at 10 am. Alice Popejoy and Nanibaa' Garrison** (Navajo) from NIH/NHGRI will be discussing the ethical, legal and social challenges faced by the consortium when constructing a human pangenome.

Later in the month, on **October 21 (at the usual time of 3 pm)**, **Andrew Allan** from the University of Auckland will be talking about **Gene editing in perennial tree crops; why, how, what?**

Thanks to our September seminar presenters:

- Kirsten Boggs (Sydney Children's Hospitals Network) and Zornitza Stark (Victorian Clinical Genetics Services), who talked about *Acute Care Genomics: rapid rare disease diagnosis on a national scale*.
 - Leah Kemp from ESR, whose talk was titled *Why is it so hard to actually do reproducible research in computational biology? Lessons learnt from a bioinformatician's past self*.
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A reminder that the [zoom link](#) for Friday seminars is always the same, even if the time differs.

Please [let us know](#) if you have suggestions for future presenters or topics.

Bioinformatics training

RNA-seq workshop 1 November, 2022 – Online (10am–4pm)

Co-hosted by Genomics Aotearoa and NeSI, this online workshop focuses on:

- Quality assessment
- Trimming and filtering
- Mapping and read counts
- Differential expression analysis
- Over-representation analysis

This workshop requires no prior experience with RNA-seq but does assume some familiarity with R and bash.

This workshop is fully online and is hands-on. It will be run on the NeSI High Performance Computing (HPC) platforms – you will only require a working computer with an internet connection and a browser.

There is no cost associated with this workshop.

You can preview the material for the workshop [here](#).

Register at [Eventbrite](#).

If you have any questions about this workshop, including whether it is suitable for you, please [contact Tyler McInnes](#).

eResearch NZ 2023 call for abstracts

The **eResearch NZ 2023** hybrid conference will be held from **Wednesday February 15 to Friday February 17, 2023**, at the University of Waikato in Hamilton. Genomics Aotearoa is hosting eResearch NZ 2023, along with REANNZ and NeSI. The event will be delivered in partnership with the University of Waikato.

The theme this year is **Capability, Connectivity and Equity** – with a focus on research and capability-building initiatives that involve partnerships with tangata whenua.

eResearch NZ 2023 invites submissions of **lightning talks, presentations, birds-of-a-feather and workshops** of work underway or completed within the last year. [Abstract submission](#) closes on **21 October**.

Conference registration opens on 28 October. [Visit the conference website for updates](#).

New to our website

How can the little known *Gillenia* shrub improve productivity in New Zealand's pipfruit industry?

Gillenia is a perennial shrub related to fruiting trees like apples and pears, all part of the Rosaceae family. Despite belonging to one of the most economically important plant groups globally, little research has been done on *Gillenia* until now.

Genomics Aotearoa-funded researchers based at Plant & Food Research were the first to sequence the *Gillenia* genome in 2021, and have since created a new high quality genome assembly using the very latest sequencing technology.

Read more on our [website](#).

Genomics Aotearoa YouTube Channel



Seminars added to our YouTube channel this month include [Karen Miga's introduction to the HPRC](#).

We welcome suggestions for linking to content that aligns with Genomics Aotearoa's vision that our community would find useful. Please email [Jess McLean](#).

25th New Zealand Molecular Ecology Meeting



UNIVERSITY OF
AUCKLAND
Waipapa Taumata Rau
NEW ZEALAND



school of biological sciences



25-27 November 2022

You are warmly invited to attend the 25th New Zealand Molecular Ecology Meeting, to be held at Shakespear Regional Park Lodge & Open Sanctuary (25km north of Auckland City).

Registration and abstract submission is now open! Submit your abstract [here](#) and complete your registration [here](#).

Both registration and abstract submission close on 31 October but **spaces are limited, so get in quick!**

The meeting will begin with an opportunity for a pre-conference guided field trip to Tiritiri Matangi Island Sanctuary on Friday 25 November.

Registration includes onsite accommodation and food and is very reasonably priced thanks to generous support from the University of Auckland School of Biological Sciences.

For more information, contact [Shane Lavery](#) or [Priscila Salloum](#).

Genomics events calendar

- **October 30-November 2:** [Australasian Genomic Technologies Association \(AGTA\) 2022](#) meeting
 - **November 6-9:** [The Society for Molecular Biology and Evolution \(SMBE\) regional meeting](#)
 - **November 17:** [Asia-Pacific Genetics Seminar: John Bowman - the origin and evolution of land plants](#)
 - **November 25-27:** [25th New Zealand Molecular Ecology meeting](#)
 - **February 15-17, 2023:** [eResearch NZ conference](#)
 - **July 16-21, 2023:** [23rd Congress of Genetics](#)
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Have some news to share?

If you have items to share in future newsletters, please [get in touch](#).

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