



Genomics Aotearoa team update

Welcome to the Genomics Aotearoa update for February 2021

Genomics Aotearoa seminar series

Genomics Aotearoa is excited to start our genomics seminar series with a talk from Adam Rutherford, a British geneticist, author and broadcaster, speaking live from the UK. He will be presenting 'Genetics, race, and scientific bias: A history' on Friday March 5 at 10am – please note the early start time. We invite you to attend, and to share the link with colleagues.

Adam is currently an Honorary Fellow at UCL (University College London), teaching the history of eugenics, race science, genetics, and science communication, as well as at universities around the world. He has been an audio-visual content editor for the journal Nature for a decade and is a frequent contributor to the newspaper The Guardian. He hosts the BBC Radio 4 programme Inside Science, has produced several science documentaries and has published books related to genetics and the origin of life, including How to Argue with a Racist.

We have an interesting seminar programme planned for 2021, but please email if you can help or if you are interested in presenting claire.grant@otago.ac.nz. Check our website regularly as seminar presenters will be listed under Education and Events as they are confirmed <https://www.genomics-aotearoa.org.nz/education-events>.

Genomics Aotearoa annual meeting

Genomics Aotearoa held its annual meeting this year via zoom – thanks to all those who gave up their time to take part, and to the presenters who updated us on work done over the last year, introduced GA's new projects and facilitated a fruitful discussion on future direction.

eResearch NZ 2021

Genomics Aotearoa, NeSI and REANNZ held its joint eResearch conference at Te Herenga Waka Victoria University of Wellington, for the first time in a hybrid form. The programme was a good mix of research updates, technical workshops and constructive discussion, with inspiration coming from keynote speaker Sydney Shep, Victoria University of Wellington advocating new ways of presenting data, and Joep de Ligt, ESR and Shaun Hendy, Te Pūnaha Matatini, outlining the collaboration and science involved in New Zealand's Covid response.

SINGAotearoa 2021

SINGAotearoa hosted its internship programme in Christchurch in January, highlights including a talk from Arapata Reuben, Kai Tahu Whakapapa Manager, Prof Suzanne Pitama from University of Otago, and Bruce Weir, Professor of Biostatistics and Professor of Genome Sciences at the University of Washington. The programme, funded by Genomics Aotearoa, continues to be a strong and positive way of informing and inspiring Māori students in genomics research – thanks to Phil Wilcox, Tuti Nikora, Kimi Henare, Ben Te Aika, Irene Kereama-Royal and Levi Collier Robinson for organising.

Bioinformatics training

Genomics Data Carpentry Workshop (online)

Genomics Aotearoa and NeSI will be running an **online Data Carpentry (Genomics) on March 16-17** <https://datacarpentry.org/genomics-workshop/>. This workshop introduces researchers to basic concepts, skills and tools for working with Genomic data. The Variant Calling Workflow will be used as an example to learn the concepts of read quality assessment, trimming and filtering reads, mapping and calling variants. Participants will also learn project organization and management, introduction to the command line and introduction to working with HPCs. NeSI platforms will be used for the workshop. Registrations close on March 9 <https://www.eventbrite.co.nz/e/genomics-data-carpentry-online-tickets-142449096081>

Hi-C Workshop - new date

Genomics Aotearoa's High Quality Genome and Population Genomics project, with the support of NeSI, will be running an in person Hi-C workshop on March 25 -26 in Auckland – this was postponed following the recent Covid lockdown in Auckland. The workshop will cover:

- Hi-C theoretical aspects (talks from experts and round-table discussions)
- Bioinformatics practical sessions about genome assembly and scaffolding, structural variants detection, metagenomes analysis, 3D chromosomal domains, phasing and haplotyping.
- Also, there will be a hands-on wet lab session (spaces very limited).

There are currently a few vacancies, so please get in touch with Ngoni as soon as possible if you are interested ngoni.faya@otago.ac.nz

Genomics training calendar

There is a new repo on Genomics Aotearoa's GitHub page called Workshops NZ <https://genomicsaotearoa.github.io/workshops-nz/>, which will show information about upskilling events and genomics workshops in New Zealand. This is a call for all workshop organisers/instructors to put their workshop details on the page so we can have a centralised workshop updates centre. For more information get in touch with Megan Guidry (NeSI) megan.guidry@nesi.org.nz or Ngoni ngoni.faya@otago.ac.nz.

Congratulations

Genomics Aotearoa post-docs Rachael Ashby, AgResearch and Alana Alexander (University of Otago) feature in an Otago Museum women in STEM exhibition <https://otagomuseum.nz/whats-on/100-women-100-words-infinite-possibilities>.

Published papers

- Daniel Shain, Philip Novis, Andrew Cridge, Krzysztof Zawierucha, Anthony Geneva & Peter Dearden (February 2021). Five animal phyla in glacier ice reveal unprecedented biodiversity in New Zealand's Southern Alps. Springer Nature <https://www.nature.com/articles/s41598-021-83256-3>
- Christina Straub, Elena Colombi, and Honour C. McCann (Dec 2020). Population Genomics of Bacterial Plant Pathogens. ASP Journals (online)

<https://apsjournals.apsnet.org/doi/10.1094/PHYTO-09-20-0412-RVW>

In the news

Link here to view a documentary in a series about science and policy in NZ, discussing whole genome sequencing (particularly as applied to Covid-19) which features Otago's Jemma Geoghegan <https://vimeo.com/501589297>

New on Sciblogs

Wasps are forever? The potential to eliminate an invasive pest in New Zealand; permissions withstanding, by Gemma McLaughlin, University of Otago PhD candidate
<https://sciblogs.co.nz/genomics-aotearoa/2020/12/21/wasps-are-forever-the-potential-to-eliminate-invasive-in-new-zealand-permissions-withstanding/>

New on the web

We have added some background on Precision Medicine to our genomics information page – take a look <https://www.genomics-aotearoa.org.nz/education-events/precision-medicine>

Share genomics news via:

- Twitter <https://twitter.com/GenomicsNZ>
- GitHub <https://genomicsaotearoa.github.io/>
- LinkedIn www.linkedin.com/company/genomics-aotearoa/
- Slack <https://genomicsaotearoa.slack.com/messages/DCWHX56P9/>

Let us know if you have anything to contribute - claire.grant@otago.ac.nz.

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Please pass the update on to others in your team.

Email [Claire Grant](mailto:claire.grant@otago.ac.nz) with news and feedback.



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