



Te Mana Tangata Whakawhanake

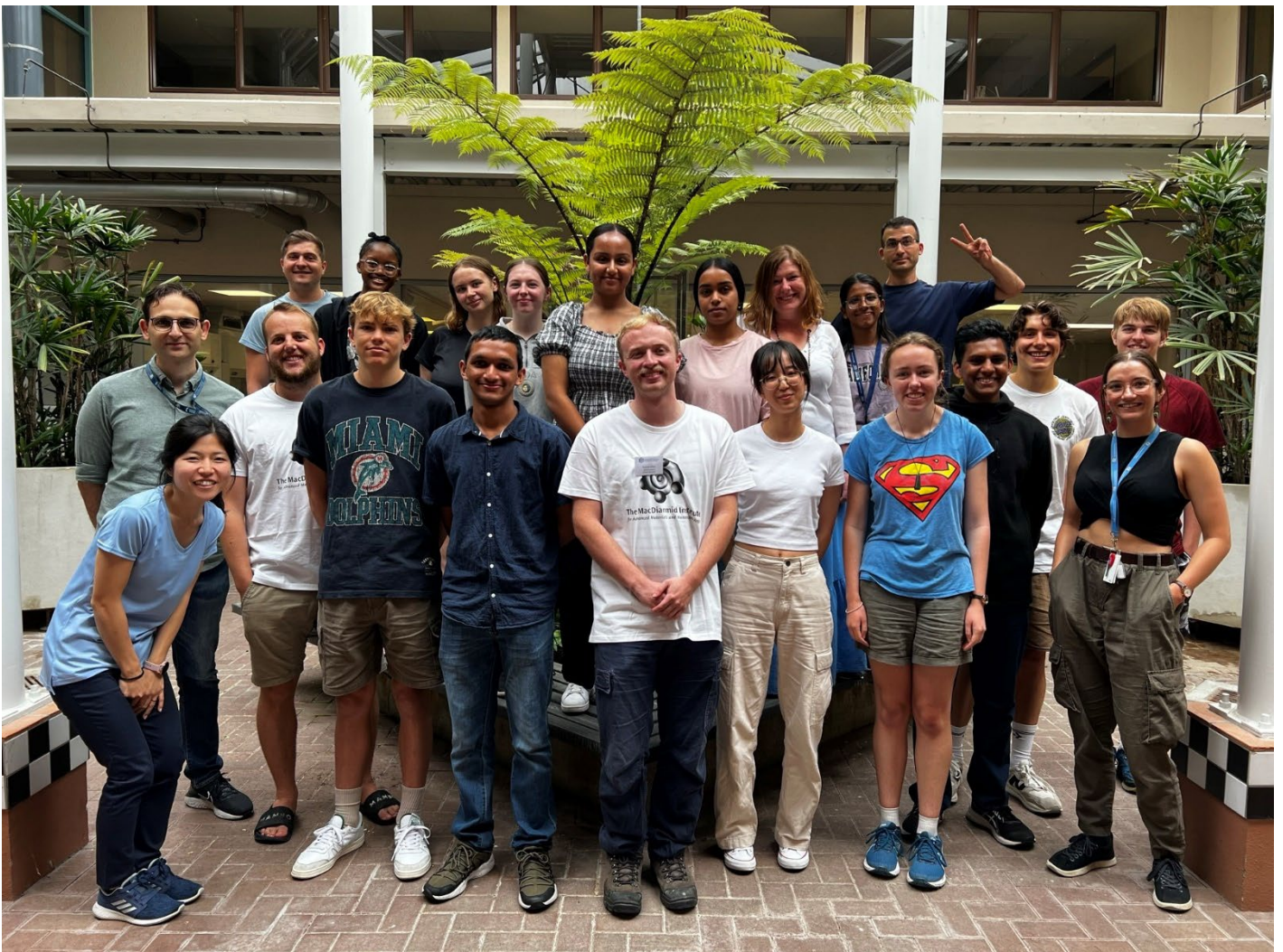
MacDiarmid Institute

Advanced Materials & Nanotechnology

Welcome to our first newsletter of 2023, which comes hot on the heels of our hugely successful conference on [Advanced Materials and Nanotechnology \(AMN10\)](#) in Rotorua last month. The biennial conference was attended by nearly 500 scientists, mostly from overseas, who were welcomed with a powhiri from [Ngāti Whakāue](#). In her opening speech, the [Minister for Research, Science, and Innovation, Hon. Dr Ayesha Verrall](#), announced [new initiatives supporting Māori and Pacific people into the Research, Science and Innovation \(RSI\) system and workforce](#). The Minister congratulated the Institute for leadership in this space, citing our longstanding [DiscoveryCamp](#), and commended the Institute for our [Discovery Scholarships](#) for undergraduate students in physics, chemistry, and materials engineering.

Our 2023 [DiscoveryCamp](#) ran at the [University of Canterbury](#) and [NanoCamp](#) at [Massey University](#). [Check out this video of DiscoveryCamp 2023](#) to see how much fun the campers had.

Looking ahead, we are hosting two Techweek events in May, this year running events in Auckland and Palmerston North. And our Regional Lecture Series will kick-off mid-year - [Check out our video from the 2022 Regional Lecture Series here](#). If you're interested in attending any of these, [please let us know](#).



News and Updates

DISCOVERY SCHOLARSHIP

[The 2023 Discovery Scholarships round is now complete, and we were delighted to confirm the following 18 scholarships:](#) 6 Te Huarahi Ki Mua Awards (for previous Discovery Scholarship recipients)

- 4 Te Mātauranga Pūtaiao Awards (Māori Science Award)
- 4 Te Taumata Awards (High Achiever Award)
- 3 Piki Ake Awards (Step It Up Award)
- 1 Te Kainga Rua Award (Second Chance Learner Award)

[Meet some of our Discovery Scholar cohort for 2023 here!](#) Watch this space as we'll be adding more profiles soon.



[Two MacDiarmid students reflect on their time at the Global Young Scientists Summit, Singapore 2023](#)
University of Otago students [Mohsin Ijaz](#) and [Maia Dean](#) attended the tenth [Global Young Scientists Summit \(GYSS\)](#) in Singapore. GYSS brings together a select group of young researchers from around the world to discuss science and technology trends and how research can address major global challenges. [Read about their experience here.](#)



[Taking nano and quantum science education into Rotorua schools](#)

At [AMN10](#) we teamed up with our outreach partners from [Otago Museum](#) and our Australian partners at [FLEET](#) to take science outreach into Rotorua schools for 320 students, ranging from primary school to early high school aged. [Read about the workshops here.](#)



[AMN10 - Professor Richard Taylor. Fractal fluency: Using fractal designs to promote health and performance](#)
[University of Oregon Professor Richard Taylor](#) gave the [AMN10 public talk](#) at [Scion](#) in Rotorua, speaking of fractal patterns in nature, about using architecture and design to adapt these to home and work environments to create wellbeing and citing the neuroscience behind this effect. [Listen to his RNZ interview with Kim Hill to hear more about his work.](#)



[Derek Kawiti from Te Herenga Waka – Victoria University of Wellington's School of Architecture and Design Innovation, one of two newly appointed Māori professors](#)
Principal Investigator [Derek Kawiti](#) (pictured with [Deputy Vice-Chancellor \(Māori\) Professor Rawinia Higgins](#)) has been appointed as a professor at [Te Kura Waihanga—Wellington School of Architecture and Design Innovation](#). The pōwhiri at Te Aro campus to welcome Professor Kawiti and colleague [Professor Rod Barnett](#) was a special moment for the kura (school) as it was the first time two Māori Professors had been appointed at the same time. [Read the RNZ coverage here.](#)



[Update from He Honoka Hauwai: German-NZ Green Hydrogen Centre](#)

The [German-NZ Green Hydrogen Centre](#), co-led by [University of Otago](#), MacDiarmid Institute Principal Investigator, [Professor Sally Brooker](#) and [Dr Paul Jerabek](#) from the [Helmholtz Zentrum Hereon's Institute for Hydrogen Technology](#) have launched a new [webpage](#) and [LinkedIn](#) page. Their new name *He Honoka Hauwai: German-NZ Green Hydrogen Centre*, logo, and whakatauki was gifted by [Te Rūnanga o Ngāi Tahu](#), which you can [read all about here](#).
He honoka hauwai, he hirikapo auaha;
A hydrogen alliance, uniting innovative minds.



[Diagnosing disease with pill-sized robots](#)

Alumnus [Dr Muhammad Rehan](#) and Associate Investigator [Dr Ebu Avcı](#) from [Massey University](#) feature in an article and video by [Education New Zealand](#) on their ground-breaking pill-sized robotic capsule that enables targeted sampling to provide a much more detailed analysis, allowing for earlier diagnosis of killer diseases. [You can learn more about their gut research here](#).

Recent media



[Watch "The Drawing Board" – new television show hosted by Principal Investigator Professor Derek Kawaiti](#)

Principal Investigator [Professor Derek Kawaiti](#) from [Te Herenga Waka – Victoria University of Wellington](#) hosts the new show "[The Drawing Board](#)" made by [Te Māngai Pāho fund media](#) and broadcast on [Māori+](#). The series spans stories about whenua (land), partnership, and the intersection of architecture & sustainability. Spot the MacDiarmid Institute Governance Board Chair [Hēmi Rolleston](#), [Scion](#)'s General Manager Te Ao Māori and Science Services, in Episode One!



[Professor Michelle Simmons: making machines at the atomic limit](#)

[AMN10](#) Plenary Speaker [Professor Michelle Simmons](#) from [Silicon Quantum Computing](#) at the [University of New South Wales](#) spoke with [Kim Hill](#) on [RNZ's "Saturday Morning"](#) about her team's recently built quantum processor in silicon that simulates the behaviour of a small organic molecule - a major milestone towards the world's first quantum computer. [Listen to the full interview here](#).



[Dame Margaret Brimble's new drug wins FDA approval](#)

Trofinetide, the first drug treatment for the neurological condition known as [Rett Syndrome](#), is the first neurological drug from Aotearoa New Zealand to receive [FDA approval](#). It marks a remarkable achievement in the 20-year journey since the molecule was first discovered by Associate Investigator, [Distinguished Professor Dame Margaret Brimble](#). Originally investigated for treating brain injuries, it instead began clinical trials in 2012 in connection with Rett syndrome.



[RNZ Our Changing World: Green data storage, green walls](#)

Alumnus [Dr Joe Schuyt](#) currently a postdoc with Principal Investigator [Professor Grant Williams](#) at [Te Herenga Waka – Victoria University of Wellington](#), spoke with [RNZ's Claire Concannon](#) on "[Our Changing World](#)" about how using luminescence to encode data into specialised materials might be the key to our growing data storage needs. [Listen to the episode here.](#)



[Making Venture Capital Investing more accessible – a Deep Tech future](#)

Check out [Matū's Dr Andrew Chen](#) chatting with Simon Pound on the "[Business Is Boring Podcast](#)" about DeepTech innovations including our affiliated start-up [Liquium](#) and other novel materials and energy tech, and on breaking down the barriers to making Venture Capital more accessible. [Listen to the full episode here.](#)



[Is the next big breakthrough really, really, really small?](#)

Principal Investigator, [Associate Professor Natalie Plank](#) from [Te Herenga Waka – Victoria University of Wellington](#), researches nanoscale physics, specialising in the study of carbon nanotubes. Her research focuses on creating incredibly fast, accurate, and sensitive sensors. [Learn more about her nanoscale research here.](#)

Thank you for your continued interest and support in our work. If you know anyone who may be interested in receiving our General Newsletter please forward this on to them and ask them to [let us know](#) if they'd like to sign up for our quarterly newsletters.