PŪTAHI MANAWA

HEALTHY HEARTS FOR
AOTEAROA NEW ZEALAND

HE PŪRONGO Ā-TAU
CoRE Annual Report

1 January - 31 December 2024

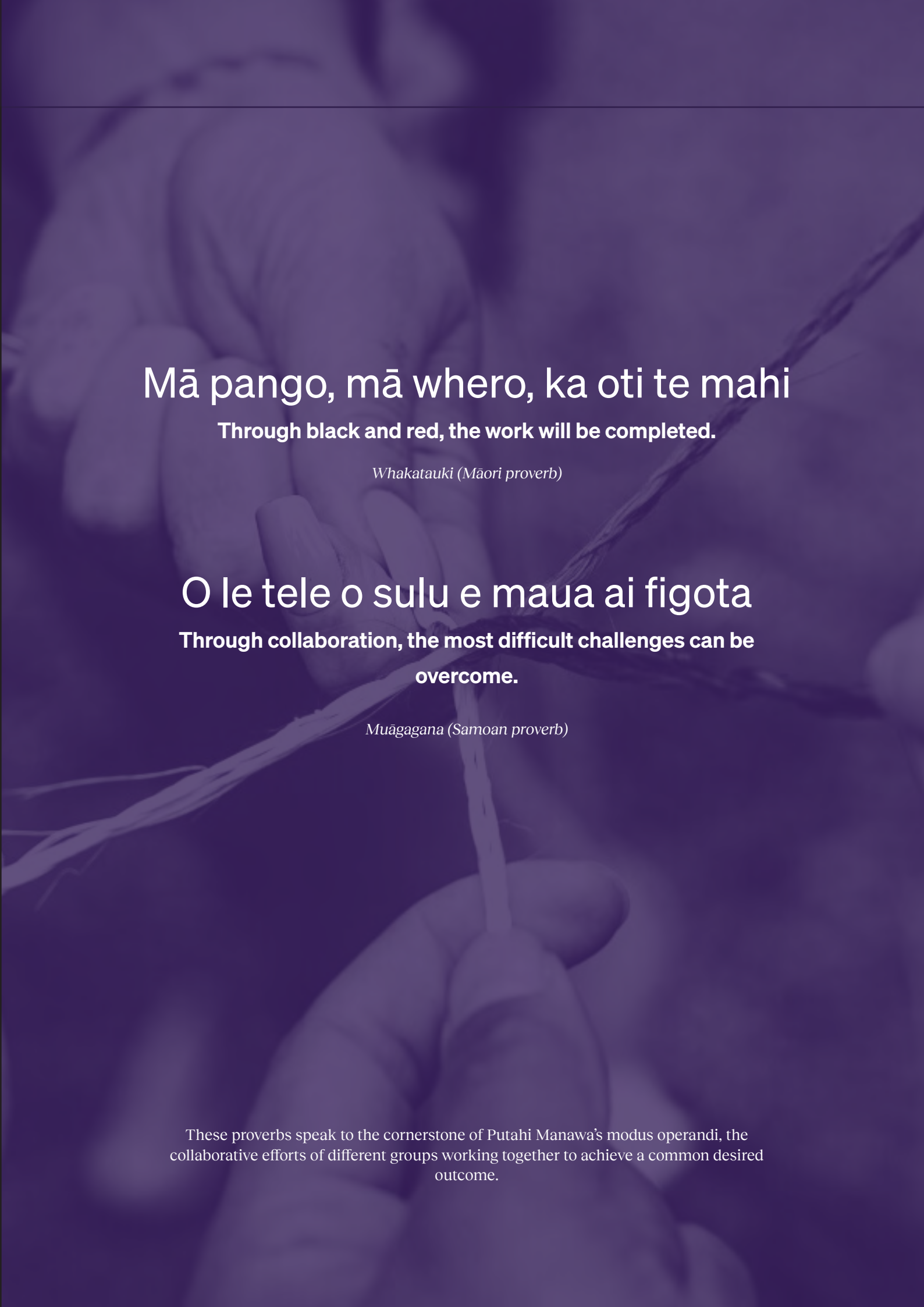
Mihi

Tihei mauri ora!
Kei ngā manawa tītī
Kei ngā manawa piharau
Kei ngā manawa kairoke
O tēnā rangahau
O tēnā kaupapa hurahura
Huri noa te motu
E kore ngā mihi e mimiti noa
Ko te ora whakatiketike o te manawa ki tai
Ko te ora tairangaranga o te manawa ki uta
Anei te Pūrongo-ā-tau
Hei mātakitaki māu.
Arotakengia
Ngā mahi o te tau tawhito
Hei huarahi ki te tau hou
Ka nui te mihi ki a koutou.
Hei hua ki te tau hou.

Greetings

We sneeze the breath of life!
We recognise the strength
The efforts
And commitment
Of the various research projects
And investigations
Across the country.
Accept these acknowledgements
Of the widespread impacts
And benefits of your efforts.
Here is our Annual Report
For your perusal.
Please review
The activities of the last year
Best wishes to you all.

Contents



Mā pango, mā whero, ka oti te mahi

Through black and red, the work will be completed.

Whakatauki (Māori proverb)

O le tele o sulu e maua ai figota

Through collaboration, the most difficult challenges can be overcome.

Muāgagana (Samoan proverb)

These proverbs speak to the cornerstone of Putahi Manawa's modus operandi, the collaborative efforts of different groups working together to achieve a common desired outcome.

Ko Wai Mātou? | Who Are We?

Vision

To achieve heart health equity for Māori and Pacific Peoples.

Kia tutuki ai te mana o te hauora ngakau mo nga iwi Māori me nga iwi o Te Moananui-a-Kiwa.

Ia ausia le tulaga tutusa o le soifua maloloina o le fatu mo Maori ma Tagata Pasefika.

Mission

Through research excellence, we will progress equity in heart health outcomes for Māori and Pacific Peoples and improve cardiovascular health and well-being for all in Aotearoa New Zealand.

Together, we will reach beyond a 'business as usual' approach and create a connected and collaborative environment for cardiovascular health research grounded within the Indigenous paradigm of Aotearoa. Our aim is to take a life course approach, guided by Māori and Pacific values and principles, to address the nation's crisis of equity for cardiovascular health in Aotearoa by earlier, more precise and personalised prevention, prediction, detection / diagnosis, and treatment of cardiovascular disease.

Ngā Wāriu o Pūtahi Manawa | Pūtahi Manawa Values

Toitoi Manawa
Encourage and Inspire
We encourage and inspire behaviours and actions that align and reinforce our vision and mission.

Manawa Whānau
Team and Stakeholders
Our team and stakeholders are the foundation of our work.

Tānga Manawa
Place of Refuge
Our approach is unified and collective, we create safe spaces to engage and work.

Manawa Popore
Considerate
We are committed to an approach that enhances the mana and general well-being of others through considered behaviours, language, and actions.

Manawa Tina
Decisiveness
Our vision and mission encourages and inspires a decision-making process which is underpinned by our shared values, due diligence, and transparency.

Manawa Rahi
Resilience
When faced with challenges, we remain firm and optimistic in seeking positive outcomes.

Manawa Ora
Breath of Life
We acknowledge the connection between us all through the breath of life. Identifying and acknowledging our connections gives us strength.

Puna Manawa
Spring of Water
The source (or spring) of our vision and mission is the source of our mana. Through knowing the source, we can extend our care within our team and to our communities.

Partners

Waipapa Taumata Rau University of Auckland

THE CENTRE FOR HEALTH

AUT

UC UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

University of Otago

PŪTAHI MANAWA
HEALTHY HEARTS FOR AOTEAROA NEW ZEALAND

Heart Foundation

HeartOtago
Manawa Ōtākou

CHRISTCHURCH HEART INSTITUTE

Manawaora
Integrated Health & Research

PŪHORO
He Waka Eke Noa

MANAAKI MANAWA
CENTRE FOR HEART RESEARCH
MEDICAL AND HEALTH SCIENCES

Host Institution:

Waipapa Taumata Rau University of Auckland

Collaborators

Mr Kent Gardner, (Chair)

Dr Mataroria Lyndon (Ngāti Hine, Ngāti Whātua, Waikato).

Professor Sue Crengle (Kāti Māmoe, Waitaha to Kāi Tahu)

Ms Sharon Shea, MNZM (Ngāti Ranginui, Ngāti Hauā, Ngāti Hine, Ngāti Hako).

Professor Palatasa (Tasa) Havea, ONZM (Vava'u, Tonga)

Professor Frank Bloomfield, (Ex officio) Deputy Vice-Chancellor Research, University of Auckland

Nā Te Pōari | From The Board

Tēnā koutou, Talofa lava, Mālō e lelei, and warm greetings.

This third annual report marks the midpoint in Pūtahi Manawa's journey as a Centre of Research Excellence. It is a moment to take stock—not only of research outputs, but of relationships, values, and the direction we are travelling together.

Pūtahi Manawa was established to address persistent inequities in heart health for Māori and Pacific peoples, and women. That work continues. What is encouraging is the steady progress being made—through research that is grounded in community, shaped by Indigenous values, and focused on outcomes that matter.

Among this year's developments:

• A novel cardiometabolic risk factor was identified, linking blood glucose and blood pressure—particularly relevant for Pacific populations where both conditions are prevalent.

• A genetic variant associated with sudden cardiac death in rangatahi Māori was discovered, offering one whānau long-sought answers and opening the door to earlier diagnosis and care for others.

• New diagnostic tools are being developed to address inaccuracies in measuring blood pressure in Māori and Pacific peoples.

• Culturally embedded lifestyle interventions are showing early signs of success, including meaningful weight loss in pre-diabetic patients through community-led programmes.

These are not abstract gains—they reflect years of trust-building and sustained effort by researchers, clinicians, and communities working in partnership.

Another area of focus this year has been the development of future leaders. More than 40 Māori and Pacific students participated in our summer research programmes—Kura Raumati and the inaugural Fatu Malosi—supported by a framework of tikanga, mentorship, and shared purpose. Many

are now pursuing further study, bringing their own experiences and aspirations to bear on the future of cardiovascular research in Aotearoa.

From a governance perspective, Pūtahi Manawa continues to evolve. A tripartite directorship model—bringing together Māori, Pacific, and academic leadership—is now well established. In 2025, the Advisory Board will transition to a new Te Tiriti-aligned structure that better reflects the kaupapa and the communities we serve.

None of this happens in isolation. It is the result of work shared across institutions, iwi, communities, and individuals. We extend thanks to everyone who has contributed—formally and informally—to this kaupapa.

The work is complex, the responsibility is real, and the direction is right.

Ngā manaakitanga, Mālō ʻaupito, Ia manuia tele, and warm regards,

Kent Gardner, Board Chair

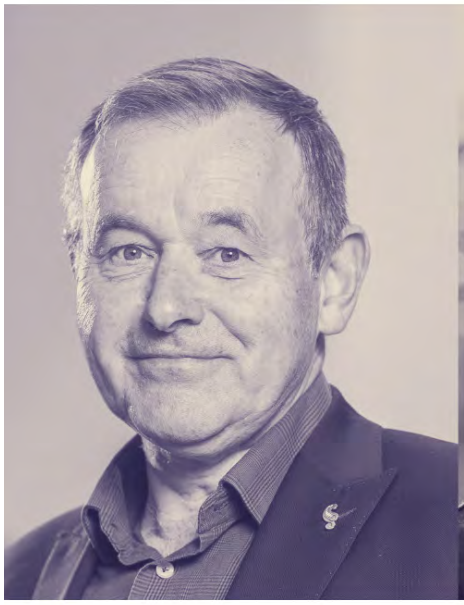
Professor Frank Bloomfield, Ex officio

Dr Mataroria Lyndon

Dr Sue Crengle

Ms Sharon Shea

Professor Palatasa Havea



Professor Julian Paton - Co-Director Heart Specialist.

Dr Karen Brewer, (Whakatōhea, Ngai Te Rangi) - Co-Director Māori.

Soteria Ieremia, (Vaie'e, Saoluafata, Lepea and Faleasiu, Samoa) - Co-Director Pacific.

He mihi nā Ngā Manutaki Tautoru | Welcome from the Co-Directors

Our mission is in addressing the biggest health threat to Aotearoa New Zealand, that of cardiovascular disease. We are approaching this problem through unique community interactions with academic and clinical scientists and striving towards therapeutic approaches that work for everyone in Aotearoa New Zealand.

Pūtahi Manawa Centre of Research Excellence (CoRE) set out to challenge old ways and, through our community-based work, we are beginning to discover what those living with heart disease need for heart health equity to improve. From the discovery of new genes that may be causing heart disease, to custom-building new guidelines to more accurately inform heart disease diagnosis for Māori and Pacific Peoples, to establishing a common cause of high blood pressure and high blood sugar for the first time. These novel discoveries and innovations are now ripe for translation and implementation to reduce the suffering from the heart disease of Māori, Pacific Peoples, and, ultimately, all New Zealanders.

Our summer research programmes, Kura Raumati and Fatu Malosi, got off to a great start, with 41 student researchers involved across the two programmes that will contribute to the workforce development aims of the CoRE. We are now seeing our students' abstracts accepted at significant conferences throughout 2025, nationally and internationally, as well as many receiving postgraduate scholarship awards, which you can read more about in our Investing in the Future section.

Seven research projects, funded through our primer and equity grant schemes, were completed in 2024, and we awarded our first-ever doctoral and postgraduate scholarships, five doctoral and seven postgraduate scholarships.

We hosted representatives of our Integrated Research Modules (IRMs), special projects, and Research Fellows for a day of sharing research progress, challenges, and identifying collaboration opportunities. The IRMs (our flagship research programmes) are central to our *business not as usual* model and have made significant contributions to redefining research excellence in a heart health equity Aotearoa New Zealand context.

We welcomed our inaugural Co-Director Pacific, Soteria Ieremia, who has made impressive connections and firmly embedded Pacific heart health excellence into the Pūtahi Manawa family. We are now a tripartite Directorship.

In furthering our aims to improve knowledge about heart function and heart health and to encourage Māori and Pacific children to continue studying Science subjects in general, we partnered with House of Science to develop Cardiovascular System Science resource kits for primary and intermediate schools. More details are in the Investing in the Future section.

We celebrated promotions and awards of our members and leadership teams and welcomed new staff. We wish to thank our fantastic operations team (Linda Fotherby, Matua Joe Pihema, Mei Bray, Tracey Kellett, Nuseta Hope), our Māori and Pacific Leadership Teams, Funding Panel Co-Chairs, Outreach and Education Team

and all members of our Advisory Board. We refined our membership and made it more accessible for those who align with our cause to connect online, meeting our community where they are. Read about these successes in our Enabling us for Excellence section.

Now, at the half-way point of the CoRE, we are delighted that our funding for the next 4 years has been confirmed and we can continue to support our traditionally underserved communities. Heart disease remains one of the most pressing public health challenges of our time, but we believe in the power of collective action. In the coming four years, we will focus on research translation and implementation as we strive for heart health equity for Māori, Pacific Peoples, and wāhine.

The Government Policy Statement on Health 2024–2027 reaffirms the government's commitment to improving the health and wellbeing of Māori, Pacific Peoples, and women, consistent with Te Pae Ora (Healthy Futures) Act 2022. We commend this direction and are fully aligned in our mission to bring community voices to the forefront of future health policy development.

In 2025, we are looking to the renewal of our Integrated Research Modules. We're excited to launch new Māori and Pacific community-led funding pools, and continue inspiring a new generation of Māori and Pacific heart health researchers with Pūhoro STEMM, Amanaki STEM, as well as be with our people at important events like Waitangi and Polyfest.

We invite you to join us in amplifying our mission. Whether through advocacy, education, or direct support, your voice and actions matter. Together, we are not just envisioning change—we are making it happen.

Dr Karen Brewer

Ms Soteria Ieremia

Professor Julian FR Paton

He Whakatau Pānga Rautaki | Strategic Impact Statement

The overarching mission of Pūtahi Manawa | Healthy Hearts for Aotearoa New Zealand is to improve equity in heart health for Māori, Pacific Peoples, and women through research excellence and precision medicine. Carrying out the government's commitment to *"accelerating action"* on cardiovascular disease, which remains the country's biggest killer and is primarily responsible for reduced life longevity of Māori and Pacific Peoples.

A *business not as usual* approach drives Pūtahi Manawa activities, underpinned by establishing trustworthy and reciprocal relationships with Māori and Pacific patients and their families across Aotearoa New Zealand, to develop equitable solutions for heart disease. Thus, our research partners with communities and does not have to be performed in a university. Pūtahi Manawa's community-based approach aligns with Health New Zealand's focus on "greater community leadership in health sector decision making, especially from those communities with high health needs." This model shapes the research performed and will inform national guidelines and policy to improve equity in heart health and life longevity and ultimately reduce hospitalisations.

Our world-class research

We are pleased to report that we are making excellent progress with improving equity in heart health and highlight some vignettes below:

Novel cardiometabolic risk factor identified.

Based on engagement with Pacific Peoples, the high prevalence of co-morbid hypertension and diabetes, combined with its difficulty to control clinically, drove a new epidemiological study that indicated a novel association between HbA1c (blood glucose) and blood pressure in pre-diabetic and diabetic patients. These data provide a new risk factor for earlier prognosis and more precise treatment of patients with co-morbid diabetes and hypertension. This association also indicated a common causal mechanism. We have recently identified the metabolic sensor responsible for this mechanism and are testing novel therapeutic strategies pre-clinically before starting a clinical trial.

Improved accuracy in cardiovascular measurement for Māori & Pacific Peoples.

Blood pressure is the most critical risk factor for cardiovascular disease. Yet, our data purports its measurement is disproportionately inaccurate in Māori and Pacific Peoples, resulting in a larger proportion of misclassifications of heart health risk. The development of a culturally informed blood pressure device is underway, and it will significantly impact national data accuracy and improved treatment. We are introducing pulse wave velocity to improve blood pressure management further. We are using MRI and ultrasound with AI to determine accurate ranges of cardiac parameters for Māori and Pacific men and women to improve diagnosis and treatment efficacy nationally.

Identification of a novel gene to predict sudden cardiac death (SCD).

Through community engagement that drives contributions to nationally agreed data sovereignty guidelines, we have recruited Māori whānau who have experienced SCD in their family into a study for genetic screening. SCD is more prevalent in Māori than in other ethnicities. The whole genome sequencing approach has paid off as we have identified a new single nucleotide polymorphism (SNP) associated with SCD. This SNP will better identify those at risk from SCD, especially whānau members of an SCD victim, and indicate the need for preventative care. This SNP will become an internationally accepted predictor of SCD. Parallel studies with Pacific families are now starting. Further, in Māori, we have identified several new variants of uncertain significance but absent from existing databases; this work is in collaboration with the He Kakano (NZ Variome) project. These unique data will redefine genetic variants in Māori to identify inherited cardiovascular diseases, allowing more accurate diagnoses and clinical decision-making. The causal functions of these variants are being determined *in vitro* and *in vivo*.

Overcoming physical and humane barriers to heart health treatment.

To improve access to heart health care for rural whānau, we have co-designed with communities ways to improve medication information via local pharmacists. If this demonstrates improved health, this will have a national impact. Many Māori return to the hospital as they are not given suitable instructions when leaving. Our community-based research has guided improvements in discharge notes, which again has the potential for national impact. Racism remains a major barrier to accessing healthcare. We are understanding the reasons for it, specifically in heart health; this information is critical for then addressing systemic racism.

Novel lifestyle interventions for improving heart health.

In a primary care service catering to Māori and Pacific People, a unique lifestyle intervention has reduced weight (7 kg in 3 months) in pre-diabetic and diabetic patients. A planned nationwide trial will generate evidence for new national guidelines. Additionally, our community-driven approach to sustaining healthy eating habits for Māori and Pacific Peoples identified the need for a cookbook with traditional recipes aligned with heart health stories and an interactive online platform providing heart health information for culturally aligned health solutions.

Unique biomarkers identified for women's heart disease.

After a heart attack, women have worse clinical outcomes and higher mortality and readmission rates than men. We use novel screening tools (e.g. Computed Tomography, Coronary Angiography, calcium scoring) and blood biomarkers to identify sex-specific biomarkers. Such data, once validated, will lead to changes in national guidelines to more precisely protect women after a heart attack. Either parent can pass on cardiometabolic disease to their offspring, which can be expressed in later life. Through community engagement with Māori and Pacific Peoples, our studies aim to find the best intervention to prevent this.

Outreach and education – building tomorrow's Māori and Pacific Peoples Workforce

We acknowledge this is a long game and have designed strategies that allow us to promote heart health from an educational standpoint and as a career option (researcher, clinician, or both). Our approach is to continuously assess our effort's effectiveness and recognise that this becomes quantitatively more assessable and accurate with time. Below are examples of our mahi.

Outreach and Education

Our Outreach and Education (OnE) team have co-led a hugely successful ten-week research internship programme for Māori (Kura Raumati in collaboration with Te Ara Poutama IRM and Pūhoro STEMM) and Pacific Peoples (Fatu Malosi). The data indicates that many students continue their research interest after the programme or more formally engage in research honours, Masters or PhD.

The ONE team also supported large-scale community events such as PolyFest and Pasifika in the Bay, which has led to initiatives with primary to high school-aged rangatahi / tupulaga / talavou on the importance of heart health, inspiring rangatahi/tupulaga talavou into careers in science and heart health-related fields.

House of Science collaboration

In 2024, we released Te Kete Manawa | The Heart Kit with the House of Science. This year, Pūtahi Manawa has developed and sponsored ten heart health educational kits in primary and intermediate schools throughout Aotearoa, New Zealand. Trial feedback from teachers, students, and families has been overwhelmingly positive.

Ako Webinar Series

Through our Ako webinar series (teaching/learning), we have continued to upskill researchers around equity, decolonisation and community engagement as we work to foster meaningful collaboration between researchers and communities across Aotearoa, New Zealand.

Concluding thoughts

We are excited to enter the second phase of Pūtahi Manawa, which will focus on the translation and implementation of our research conducted primarily by our main programmes of work called Integrated Research Modules or IRMs and Pūtahi Manawa's research fellows.

In 2025, IRMs will apply for renewal alongside new IRM projects assessed by an international reviewing panel. We are grateful for the continued guidance and support of our Māori and Pacific Leadership Teams who have both developed their strategies (see Pages 60-61 and 64-65) and we look forward to implementing these.

Dr Karen Brewer

Ms Soteria Ieremia

Professor Julian FR Paton

Kia Kounga Te Rangahau | Research Excellence

Research Excellence refers to the highest standards in academic research. It encompasses several key aspects: Rigorous Methodology, Innovation & Originality, Significance & Impact, Integrity & Ethics, Collaboration & Engagement, Sustainability & Reproducibility.

Pūtahi Manawa achieves all of this and adds a uniqueness that captures the New Zealand context.

Pūtahi Manawa has brought together, for the first time in a Centre of Research Excellence, Māori, Pacific and non-Māori-non-Pacific researchers working in unison. Our unique approach combines Māori and Pacific People's science and methodologies with more widely used science and methods. Our funding model undertakes health research by, with and for the communities involved. Engaging communities motivates patients and families to adopt recommendations from our research. This brings added value and is the best way to improve equity in heart health.

Double Trouble: New Zealand's First Look at Blood Pressure and Blood Glucose Together

For the first time in New Zealand, Pūtahi Manawa researchers are turning their focus to the combined impact of high blood pressure and high blood glucose ('Sweet Pressure')—two silent threats that often go hand in hand but have rarely been studied together.

High blood pressure (hypertension) affects around 25% of adults in Aotearoa, with even higher rates among Māori and Pacific Peoples—about half of people with high blood pressure show impaired glucose tolerance, which can lead to diabetes.

Meanwhile, diabetes continues to rise, with 5% of New Zealanders predicted to have diabetes under the current NZ definition by 2044. A person with diabetes is about twice as likely to have high blood pressure as someone who doesn't have diabetes. On their own, each condition increases the risk of heart disease and kidney failure—but when they occur together, the danger multiplies.

The Sweet Pressure IRM is uncovering how these two common conditions interact to shape long-term health outcomes. By studying them in tandem, scientists hope to identify earlier warning signs, sharpen prevention strategies, and better support the communities most at risk. It's a shift that could reshape how we think about and respond to long-term conditions.

Before this investigation, there was no data on how 'sweet pressure' shows up in New Zealanders. In 2024, renowned epidemiologist Professor Rod Jackson, Dr Katrina Poppe, and University of Auckland doctoral student Jingyuan Liang used Jackson's PREDICT (2021) primary care dataset tool to determine how much of an issue this is. Preliminary findings show a prevalence of 4.4% in women, higher in Pacific women (10%), Māori (6.3%), and Indian (5%), and 3.9% in men, higher in Pacific men (7%), Māori (6.2%), older men (6.1%) and other subgroups.

The PREDICT tool, developed with funding from the Health Research Council of New Zealand, uses algorithms based on primary care data to predict the risk of cardiovascular disease. PREDICT is an ongoing, open cohort study for the NZ population and is embedded into primary practice software systems nationwide, covering at least a third of the country's residents. Not only does this provide access to robust data, but Pūtahi Manawa Sweet Pressure research can have immediate societal impact.

Finding the sweet spot

Participants were identified as having "sweet pressure" if they had records showing a history of high

blood pressure plus a history of diabetes. Ms Liang said that they defined 'sweet pressure' for the first time for their research project.

High blood pressure was defined as lower than the standard clinical definition of high blood pressure for the purpose of this study because when one person has both high blood pressure and high blood sugar, the associated risks are heightened compared to having one condition on its own.

In New Zealand, people with an HbA1c of 50 mmol/mol or greater are diagnosed with diabetes, and those in the 41-49 mmol/mol range can be diagnosed with pre-diabetes. Ms Jiang said they used the lower HbA1c cutoff of ≥48 mmol/mol to identify people with a history of diabetes for the study, to align with the World Health Organisation's recommendations and the international trend to use the lower cutoff. Ms Liang says that lowering the cutoff for type 2 diabetes diagnosis means that people can get lifesaving treatment earlier. In NZ, this will impact Pacific People, Māori, and those from South Asia the most, improving heart health as well as general health equity.

Round off: the impact of the decimal point on blood pressure diagnosis

Professor Andrew Lowe, co-lead investigator on the Sweet Pressure IRM and his team looked at the effect of rounding off systolic blood pressure measurements and the resulting misclassifications in men and women using the PREDICT-CVD dataset. Blood pressure measurement inaccuracies disproportionately affect cardiovascular risk scoring for higher-risk groups, which includes Māori and Pacific Peoples and those with diabetes or on blood pressure-lowering medication, resulting in a larger proportion of misclassifications into risk categories for these groups and unnecessary treatment. The rounding effect puts men and women into the higher risk categories more than it misclassifies people into the lower risk categories, resulting in over-treatment of high blood pressure.

Chandel, T., Miranda, V., Lowe, A., & Lee, T. C. (2024). Zero end-digit preference in blood pressure and implications for cardiovascular disease risk prediction—A study in New Zealand. Journal of Clinical Medicine, 13(22), 6846. doi:10.3390/jcm13226846

Pressure Points: Navigating the Nuances of Blood Pressure

If we knew exactly what was causing a person's high blood pressure, we could target the cause with precision treatment. It's well established that measuring blood pressure is prone to inaccuracies, but a subsequent measurement could minimise some of the overtreatment that occurs. Pulse wave velocity measures the speed at which the blood pressure pulse travels through arteries. It is an important indicator of arterial stiffness and cardiovascular health.

A few things can happen in the body that results in high blood pressure readings: artery walls can become stiff, saturated fatty plaques can build up, the blood vessels can constrict, and the blood can become loaded with too much sodium, potassium, sugar and other substances that cause blood pressure to increase, for example. The nervous system, particularly the sympathetic nervous system, is involved in multiple processes in the body that promote and maintain high blood pressure. These reasons for high blood pressure can be individually targeted, allowing for different treatments to be administered depending on the cause.

Preliminary data indicate that pulse wave velocity in the NZ population differs from other regions (e.g. with African or European populations), with some of this variation likely due to the unique ancestry of the New Zealand population. Measuring and characterising pulse wave velocity for the NZ population will ensure NZ is delivering precision medicine for the highest quality and equitable health care for its unique population.

Integrated Research Modules

At the core of our research endeavours lie our Integrated Research Modules (IRMs), representing our flagship projects. These Modules employ multidisciplinary approaches, such as Māori and Pacific methodologies, epidemiology, epigenetics, physiology, bioengineering, and clinical science, to effectively tackle specific heart health challenges.

Each IRM must support students and contribute to a safe, inclusive, and equitable workforce.

Research is led by community-based researchers, collaborating with scientists and researchers with specific academic knowledge and experience. This approach facilitates reciprocal relationships conducive to workforce developmentof Māori and Pacific Peoples.

The section outlines our four IRMs: Title, amount awarded, primary investigators, descritption, collaborators, 2024 findings, publications, presentations and speaking events, students supported, outreach activities and additional funding secured where applicable.

Sweet Pressure – Improving outcomes for people with diabetes and high blood pressure in Aotearoa New Zealand IRM

Dr Fiona McBryde, Tanya Koro and Viliami Teumohenga from Amanaki STEM Academy, Professor Andrew Lowe at ASA Graduation

Amount awarded: $1,499,737

Primary Investigators

Dr Fiona McBryde and Professor Andrew Lowe

Description

Sweet Pressure investigates possible common causes for high BP and high blood sugar; with the goal to develop a program of high-quality, community-driven research including mechanistic, healthcare and lived-experience perspectives

Partners/collaborators

Turanga Health
Amanaki STEM Academy
University of Otago - Discovery Studies
University of Waikato
Te Tītoki Mataora - MedTech Research Translator (Co-funder)
Kia Aroha College
Rod Jackson - Epidemiology

Findings in 2024

See feature story on page 16 and 17.

Publications

Chandel, T., Miranda, V., Lowe, A., & Lee, T. C. (2024). Zero end-_digit preference in blood pressure and implications for cardiovascular disease risk prediction—A study in New Zealand. Journal of Clinical Medicine, 13(22), 6846. doi:10.3390/jcm13226846

Chandel, T., Miranda, V., Lowe, A., & Lee, T. C. (2024). Blood pressure measurement device accuracy evaluation: Statistical considerations with an implementation in R. Technologies, 12④. Doi:10.3390/technologies12040044

Presentations and Speaking Events

- Ropiha, R. (2024). Turanga Health in the Turanga Backyard -"Co-design + Co-decide = Champion the Spaces", Te Tītoki Mataora Forum, HealthTech Week, 25 June 2024, Auckland.
- Temohenga , V., & Koro, T. (2023). Transforming STEM education in jandals! NZ Medical Sciences Congress. 28-_30 August 2023, Queenstown.
- Chandel, T., Soberanis, V. F., Lowe, A., Lee, T., & Yu, Y. (2023). Blood pressure device accuracy evaluation: Statistical consideration with an implementation in R. NZ Medical Sciences Congress. 28-_30 August 2023, Queenstown.
- Defending blood flow to the brain in hypertension, diabetes and ischemic stroke. McBryde, FD. ISAN Meeting, Birmingham, UK. Autonomic Neuroscience: Basic and Clinical (2024).
- Feeling the pressure - _intracranial pressure, blood pressure and sympathetic drive in health and disease. Invited symposia speaker. McBryde. Medical Sciences Congress, Queenstown 2024.

Students supported

Courtney Brighouse, Sweet Pressure Summer Studentship, University of Auckland.
"Evaluating the glymphatic 'brain drain' in diabetes and hypertension".
Supervisors: Fiona McBryde and Tonja Emans.

Courtney Brighouse, B(Hons), University of Auckland.
"A novel treatment to improve brain health in diabetes and hypertension".
Supervisors: Fiona McBryde, Miriam Scadeng and Tonja Emans.

Areeb Iqbal, PhD Student, University of Otago.
"Pluripotent stem cells in the regeneration of the diabetic heart"
Supervisor: Daryl Schwenke.

Andrew Lowry, Doctoral Student, AUT.
Ngāruahine biomedical engineer, member of the Māori Advancement Committee (MAC) of the Auckland Bioengineering Institute, Research Officer AUT.

Outreach

- Pasifika Fusion Science Fair - July 2024
- Amanaki STEM Academy Science Fair - October 2024
- Amanaki STEM Academy student trip to Auckland

Additional Funding

- Charitable Donation from the Edney Foundation: $900k over 3.5 years "Finding the Sweet Spot – a new treatment for diabetes, hypertension and brain health". Will support Dr Tonja Emans and project funding for new PhD students Jack Sloan and Courtney Brighouse.
- Research Accelerator Program (RAP1), AUT $10k: Collaborative research for empowering Māori Mental Health in Gisborne. PIs Dr Andrew Lowe and Dr Ekta Darya – this funding is to seed a pilot study, which is underway.
- Charitable Donation from the Edney Foundation: $100k Research Fellowship (12 months): Finding the Sweet Spot – a new treatment for diabetes, hypertension and brain health. Dr Tonja Emans.

Our Hearts' Our Genes, Our Stories IRM

Amount awarded: $1,500,000

Primary Investigator

Dr Polona Le Quesne Stabej

Description

The purpose of this project is to find answers for families in Aotearoa where European-based genetic tests have failed to find a cause.

We believe genome sequencing can find previously unknown genetic changes causing inherited heart conditions. By finding the disease-causing genetic changes that whānau may carry, we can raise community awareness of how the power of gene sequencing can help transform healthcare through earlier detection of whānau members who may carry the disease-causing gene, improve diagnosis of heart-related genetic problems, in some cases, provide genetically guided treatment and counselling.

Partners/collaborators

University of Otago – Functional
Liggins Institute, University of Auckland - Professor J. O'Sullivan's team.
The University of Auckland – Genomics
Genetic Health Service NZ
Cardiac Inherited Diseases Group

Left to right: Saraya Hogan, Dr Polona Le Quesne Stabej, Dr Josh Agnew (paediatrician and Pacific engagement), Dr Karaitiana Taiuru (Kaitiaki Rōpu Lead), Prof Martin Kennedy (Te Whetu's supervision, U. of Otago), Dr Zoe Ward (bioinformatician on IRM), Dr Lisa Warbrick (Kaitiaki Rōpu member), Terisa Tagicakibau (IRM Pacific engagement lead), Te Whetu Kerekere (PhD student on IRM), Arahia Harawira (Kaitiaki Rōpu member, patient advocate). Front right: Romy Kerr (genetic counsellor on the IRM).

Findings in 2024

- See the feature story on page 23.
- Identified several variants of uncertain significance (VUS) absent from existing population databases but common in the Māori population through collaboration with the He Kakano (NZ Variome) project. Subsequently, refined the classification of genetic variants in patients with inherited cardiovascular diseases, allowing more accurate diagnoses and better clinical decision-making.
- Identified a gap in understanding the genetic testing process and its results through interviews with Māori patients and whānau. Providing clear, accessible explanations and supporting patients in understanding these results will be crucial for improving engagement.

Publications

Earle NJ, Winbo A, Crawford J, et al. Genetic Testing Yield and Clinical Characteristics of Hypertrophic Cardiomyopathy in Understudied Ethnic Groups: Insights From a New Zealand National Registry. *Circ Heart Fail*. 2024;17③:e010970. 10.1161/CIRCHEARTFAILURE.123.010970

Haran, C., Ghafouri, K., Xu, W., Hayes, I., Stiles, M., & Khashram, M. (2023). Prevalence of Genetically Triggered Aortopathy in Acute Aortic Syndrome in Aotearoa New Zealand. European journal of vascular and endovascular surgery : the official journal of the European Society for Vascular Surgery, 66⑥, 879–880. https://doi.org/10.1016/j.ejvs.2023.09.013

Editorial

Dunn KE. Why Ancestral Diversity in Genetic Testing Matters: Lessons Learned From Hypertrophic Cardiomyopathy. Circ Heart Fail. 2024;17③:e011484. 10.1161/CIRCHEARTFAILURE.124.011484

Presentations and Speaking Events

- Polona Le Quesne Stabej, Zoe Ward, Steph Burcher: Invited speakers: 'Whole Genome Sequencing in Inherited Cardiovascular Diseases)'. Aotearoa CARES: Human Genetic Society of Australasia (HGSA) New Zealand Branch meeting, Oct. 17, 2024.
- Saraya Hogan: Aotearoa CARES: Māori Perspective of Whole Genome Testing Regarding Cardiovascular Inherited Diseases: A Qualitative Kaupapa Māori/Phenomenology Framework. Human Genetic Society of Australasia (HGSA) New Zealand Branch meeting, Oct. 17, 2024.
- Saraya Hogan: Māori Perspective of Whole Genome Testing Regarding Cardiovascular Inherited Diseases: A Qualitative Kaupapa Māori/Phenomenology Framework. Heart Rhythm NZ 2024. Oct. 17, 2024.
- Polona Le Quesne Stabej and Thierry Lints: Invited talk: 'Teaching Generation Genome', Level 1 NCEA Genomics workshop for secondary school teachers, organised by genomics Aotearoa. Nov. 7, 2024, Auckland, New Zealand.
- Dr Polona Le Quesne Stabej, Dr Wilda Laux and Dr Robyn Lints: Workshop on genome and genetic variation for NCEA L1 – year 11 classes at Sancta Maria College (Flat Bush, Auckland); October 2024.
- Pete Jones: Two-day community-based science literacy event, Turangawaewae marae. One-on-one ECGs with a discussion about arrhythmias and BP and how they can run in families. November 2024.

Students supported

Saraya Hogan (Ngāti Hako), Master of Genetic Counselling (completed) University of Technology Sydney.

"Understanding the perspectives of Māori around whole genome testing regarding cardiovascular inherited diseases".

Additional Funding

Pūtahi Manawa: additional funding to support a Pacific student in qualifying as a genetic counsellor, as well as provide Dr Ian Hayes, clinical geneticist, with dedicated research FTE.

Te Ara Poutama: Living Well With Heart Disease IRM

Amount awarded by Pūtahi Manawa: $1,504,251
Heart Foundation co-funding: $1,023,041

Primary Investigator

Erina Korohina (Ngāti Porou)

Description

Co-designing heart health solutions with Māori whānau, while training 30 Māori into the heart health workforce.

Partners/collaborators

Restoring the balance: Heart health of wāhine, Fafine, Va'ine, Fifine and Women in Aotearoa IRM
Heart Foundation
Te Whare Tukutuku
Ngāti Porou Oranga
Mai Health - Tāmaki Makaurau
Poutiri Trust - Te Puke
Te Puna Hauora o te Raki Pae Whenua
Te Puna Ora o Mataatua - Whakatāne
Ngāti Whātua ki Orākei Whai Maia
Kariaka Marae - Ruatoria
Puketeraki Marae - Karitane Ōtepoti
Heart Health Research Trust
Pūhoro STEMM Academy

Findings in 2024

- Te Ara Poutama's summer research programme initiative, Kura Raumati is detailed further in the Investing in the Future section.
- As a result of the extensive co-design process that occurred over the first two years, five key research areas have emerged, each reflecting the priorities identified by our communities. These will be carried into either pilot projects or full projects.
- Access to heart health care: This project responds to the challenges faced by rural whānau in accessing pharmacist consultations and medications. This research arose from the completed co-design component and is determining new ways to improve medication information and support whānau through new ideas for communication with pharmacists.
- Identified new screening for cardiovascular health based on access to advanced screening tools (e.g. Computed Tomography Coronary Angiography, calcium scoring) and blood tests to assess novel sex-specific biomarkers.
- Through Kaupapa Māori research, patient interaction identified two resources that were needed: a cookbook with traditional recipes aligned with heart health stories, and an interactive online platform promoting culturally aligned health solutions.
- Racism remains a major barrier for accessing heart healthcare. We are determining ways to addressing systemic racism by understanding the reasons for it.

Presentations and Speaking Events

- Dr Anna Rolleston Kotahitanga: Working together for better heart health Kaupapa Māori Co-design Research at Tātai Oranga Symposium, November 21st and 22nd, Pākirikiri Marae, Tokomaru Bay.
- CSANZ ASM Ōtautahi - poster presentation on Kura Raumati Research Programme

CSANZ ASM Perth - Poster presentation on Kura Raumati Research Programme.

Students supported

All students supported through the Kura Raumati summer research programme (developed by Te Ara Poutama) and working on Te Ara Poutama projects are listed in the Investing in the Future section.

Additional Funding

Additional funding was received from Pūtahi Manawa to support more Māori students into the Kura Raumati Māori Summer Research Programme in the 2024/24 cohort.

Restoring the balance: Heart health of wāhine, Fafine, Va'ine, Fifine and Women in Aotearoa IRM

Amount awarded: $1,515,106

Primary Investigator

Associate Professor Johanna Montgomery

Description

With an overall goal to amplify the mana wāhine voice and change the way that heart health research is conducted in Aotearoa/New Zealand, we have conducted co-design hui and Talanoa with Māori and Pacific communities and are focusing on five unique workstreams:

- Create a heart health kete (basket of knowledge) via co-design with Māori and Pasifika communities.
- Produce a 'uniquely Aotearoa' perspectives paper and systematic review to document heart health considerations of NZ wāhine.
- Generate new knowledge of woman-specific cardiovascular risk factors and improve the accuracy of atherosclerotic CVD risk prediction for women.
- Acknowledge and consider the unique heart health environment for transgender people.
- Support the workforce development of wāhine via educational and career development opportunities.

Partners/collaborators

Manawaora Centre for Health
Pasifika Medical Association
PACIFICA Incorporated
Pacific Sports Communities
Pacific Language nests
Pacific Church Communities
Pacific/Equity Professional Collectives
Oamaru Pacific Island Community Group
Her Heart Australia: Dr Linda Worrall-Carter Dr Samia Mora (Harvard) and Dr Olga Demler (Harvard/ETH Zurich).
Aboriginal women's heart health: Dr Katherine Brown
Te Ara Poutama - Living well with heart disease IRM
The telehealth project (funded by HRC).
Coastal Peoples Southern Skies CoRE: Professor Justine Camp.

Findings in 2024

- Women have worse clinical outcomes when admitted with a first-acute coronary syndrome aged <75 years. The reasons for these alarming observations are being addressed and may lead to changes in national guidelines.
- Transgender individuals and parents of transgender individuals are concerned about the effects of hormone therapies on the heart.
- Clinical data for transgender populations is not available due to how data is recorded in Aotearoa. Therefore, determining cardiovascular risk for transgender populations will need a major system change in gender recording.

Publications

Earle NJ, Doughty RN, Devlin G, White H, Riddell C, Choi Y, Kerr AJ, Poppe KK. Sex differences in outcomes after acute coronary syndrome vary with age: A New Zealand national study. Eur Heart J Acute Cardiovasc Care 2024, 13③:284-292. doi: 10.1093/ehjacc/zuad151

Presentations and Speaking Events

- Tātai Oranga Symposium, 20th and 21st of November, Pākirikiri Marae, Tokomaru Bay.

Students supported

Zainab Bandukwala, Summer research student 2024/25, funded through Heart Health Research Group (Dept Medicine).
"Sex hormones and cardiovascular risk".

Yasheshwini (Vini) Shiv Sharma, Summer research student, University of Canterbury.
"What is known about cardiovascular health in Transgender Individuals: A Rapid Review of the Literature".

Protocol published on PROSPERO 19/02/2024 (https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=509809)

Discovery of a genetic cause of unexplained sudden cardiac death gives one family answers and will prevent the deaths of many more children

Pūtahi Manawa Researchers have discovered a genetic component that causes sudden cardiac death in young people. A Māori/European family in Aotearoa NZ lost three teenage children to sudden cardiac death and has sought a medical explanation since the nineties. The family has been working with our researchers in 2024 to find their own answers and help prevent more children dying from sudden cardiac death.

Inherited cardiovascular diseases (CVD) are a major cause of sudden unexpected death in young people. The genetic causes of inherited CVDs have been investigated for decades, but answers are found for less than half of patients. The chance of a genetic diagnosis is even less for patients from non-European ethnicities (including Māori and Pacific) as research has historically been biased toward European ancestry and genetics.

The family has been involved with the Cardiac Inherited Diseases Group (CIDG) since the late 1990s, when their 13-year-old child passed away while playing sports. The family was tested to find a genetic cause in an attempt to prevent further loss. The mother was found to be unaffected, while the father, who had passed away from melanoma, had previously undergone cardiac imaging that identified features of an inherited heart condition, Arrhythmogenic Right Ventricular Cardiomyopathy (ARVC), that can cause sudden cardiac death. Subsequently, the two surviving siblings were fitted with implantable cardioverter defibrillators (ICDs). An ICD is a small device that helps keep the heart beating steadily. It can reduce the risk of the heart stopping, and sudden cardiac death. To date, in one of the siblings this device is known to have saved their life at least once.

The family underwent targeted genetic testing in 1999 and more extensive sequencing in 2019. Despite these efforts, no clear genetic cause of their sudden deaths was identified. Families like this, where a genetic basis is strongly suspected but remains elusive, were a key motivation for this IRM research project.

The Pūtahi Manawa-funded IRM project, 'Our Hearts, Our Genes, Our Stories', aims to find answers for families where standard genetic tests, focussing on small sequences of DNA known to cause inherited CVD, have failed to find the cause. The project was set up as a collaboration between researchers led by Dr Polona Le Quesne Stabej (The University of Auckland), the national Cardiac Inherited Disease Group, Genetic Services NZ, and Professor Pete Jones (University of Otago). The collaborative believes that gene-agnostic analysis achieves more equitable healthcare for families

affected by sudden cardiac death. That is, analysing whole genome data without preconceived ideas about where genetic variations associated with a condition are located.

Finding answers and keeping the family safe with research integrity

In August 2024, the mother and one surviving daughter were approached about the study, which uses the latest whole genome sequencing techniques to analyse DNA in greater detail than what had previously been analysed. Both were keen to participate.

Researchers sequenced the whole genome of the mother, two deceased children, and one surviving child. Analysis of the sequenced genomes at the University of Auckland, led by Dr Zoe Ward and Dr Polona Le Quesne, revealed an abnormally expanded region, also known as an expansion, in the DMPK gene in all three affected children as a strong contributing cause of the sudden death in this family.

Dr Le Quesne says there is a distinction between diagnostic and research genetic testing and to keep the family safe, both are used in her research. “The sample goes to the clinical diagnostic lab first, they take a small amount of that sample and send to the researchers, retaining an untouched sample. When the researchers have found something that they wish to explore, the clinical lab then does their own testing with their sample to confirm a diagnosis. This keeps the family safe from receiving false or not clinically significant information.”

It’s important for CIDG to be a part of this IRM to ensure long-standing relationships with patients and their whānau are nurtured and respected.

New Insights and replicated findings

This DMPK expansion that was found by the researchers and confirmed through diagnostic testing, is known to cause a neuromuscular disorder, Myotonic Dystrophy Type 1 (DM1), that can also affect the heart and lead to early death. However, DMPK expansions are not routinely screened in sudden cardiac death cases and can be missed. This has resulted in a new diagnosis for the family and follow up care with the child who took part in the study being referred to neurology. Another surviving child and other members of the family will be screened for the gene expansion and their healthcare dramatically improved.

After identifying the DMPK expansion, Dr Le Quesne contacted Associate Professor Richard Bagnall at the Centenary Institute in Australia, a leading expert in inherited heart diseases. The findings were supported by Associate Professor Bagnall, who identified a similar expansion in a 6-year-old child who had died playing football, and a 20 year who had died during a cycling race, making a stronger case to include this novel type of screening in sudden cardiac death.

Changing standard practices

Dr Le Quesne says it’s paramount this information reaches cardiologists to update their screening practices to look for the neuromuscular condition DM1 in cases of sudden cardiac death. Once the seminal findings have been published, mid 2025, there are plans for abstract submissions to Human Genetic Society for Australasia Annual Scientific Meeting 2025, ESC Council on Cardiovascular Genomics, which will be held in Lisbon, Portugal in December 2025, and the European Human Genetics Conference 2026 and circulation of knowledge to cardiologists.

These discoveries have prompted further research to explore the role of this genetic expansion in sudden cardiac death. Dr Le Quesne, Associate Professor Richard Roxborough and Miriam Rodrigues from the Neurogenetics Research Clinic at the University of Auckland plan to set up a project to look at their registry of DM1 patients, Pūnaha Io – the New Zealand Neurogenetic Registry and Biobank for cardiac involvement and sudden death.

This IRM, using whole genome sequencing, has made a major international contribution to a genetic cause of sudden cardiac death.

Research completed in 2024

Seven of the research projects we funded were completed during 2024. Three were primer grants of around $50,000 to fund a pilot study or preliminary research that could lead to a larger, more comprehensive or in-depth study. The studies all worked in collaboration with Māori and/or Pacific communities and ranged from a dietary intervention trial to testing the acceptability of new diagnostic tools.

Three were Equity projects with funding of around $150,000 per project. Equity grants were designed as supplemental funding to existing studies to ensure the inclusion of Māori, Pacific Peoples or women in the research to ensure the findings are relevant to them. Projects ranged from co-design hui in Māori and Pacific communities focusing on access to access to health providers to AI improved heart healthcare and a study on the experiences of Māori tūroro (patients) and their whānau (families) when being transported directly to a cardiac arrest centre after a cardiac arrest.

One Project awarded $250,000 was completed, which looked at heart health in the context of our natural and built environment, western and Te Ao Māori concepts of heart health and intergenerational heart health.

Te Kāika DiRECT: A primary care-led weight management intervention for adults with diabetes and obesity

Investigators:
Dr Kim Ma'ia'i, (Samoan) Clinical Director, Te Kāika Health.
Dr Andrew Reynolds, Research lead, University of Otago.
Associate Professor Justine Camp, (Kāi Tahu, Kāti Mamoe, Waitaha) AI - Qualitative lead, University of Otago.

Award category: Primer grant
Award amount: $49,988
Project duration: February 2023 to December 2024

Project Aim: To determine if the DiRECT weight loss intervention, characterised by a three-month period of total meal replacement followed by a longer period of supported weight loss maintenance, acceptable and effective in Aotearoa.

This study arose from the desire of patients of Te Kāika Health looking for new and helpful ways to reduce their body weight and stop their type 2 diabetes progressing, because they viewed the current care as a failure. Te Kāika Health is a Māori Health Provider and medical practice of 5200 Māori, Pacific, refugee, and low-income clientele in South Dunedin. This was community-initiated research, with oversight from both primary care providers and health researchers, conducted by Pacific, Māori, and Pākehā. The pilot study was co-funded by Pūtahi Manawa and the Ministry of Social Development.

The study compared the outcomes for patients with obesity and either type 2 diabetes or prediabetes who received gold standard advice and support for weight loss when delivered within primary care with those on the DiRECT weight loss programme. The DiRECT weight loss programme has been successfully applied in the UK but it's suitability for Aotearoa was not known. Eighty per cent of the participants were Māori or Pacific.

The DiRECT programme led to a 6.9 kg average weight loss after three months, which was largely maintained at 12 months. This compared to the standard weight loss programme, which led to a smaller weight loss of 0.8kg after three months and 2.3kg after 12 months.

Participants found early and rapid weight loss motivating: "You see results quickly, and those results motivate you to keep going."

The study was an overall positive experience, preparing participants for long-term lifestyle change: "This study's just allowed me to actually hone in on that long-term lifestyle change as opposed to quick fixes."

A nationwide trial is now planned and has potential for impacting national guidelines.

Determining the normative arterial pulse wave velocity values in Māori and Pacific people in New Zealand

Principal Investigator: Dr Ekta Singh Dahiya
Co-investigators: Prof. Andrew Lowe, Prof. Rita Krishnamurthi, A/Prof. James Fisher, Dr John Sluyter, Dr Kevin Roos
Research Associates: Atarangi (Langi) Kepu-Kosene-Apiata, Xiale Paane and Kalani Partridge-Fruean

Award category: Primer grant
Award amount: $40,462
Project duration: November 2022 to December 2023

Arterial stiffness is the reduced compliance of arteries causing increases in blood pressure. It is measured as pulse wave velocity (PWV) and is an additional predictive measure for cardiovascular disease (CVD). This feasibility study aimed to estimate normative PWV values in Māori and Pacific Peoples in Aotearoa New Zealand. The study was based on co-design principles to facilitate engagement with Māori and Pacific communities. A key goal was to ensure mutually beneficial information was available to participants through information sheets and information sharing during the study. Secondly, this study also addressed past limitations by conducting a pilot study to assess recruitment rates and validate and refine other practical aspects of data collection.

The study incorporated Kaupapa Māori and Pasifika frameworks throughout. This included building from Te Tiriti o Waitangi principles to enhance cultural and ethical engagement with our collaborators and participants. The study measured the PWV values in 10 healthy Māori and Pacific New Zealanders, as well as height, weight and blood pressure. Although participants had higher blood pressure than the "healthy" range their mean PWV values were within the range of healthy as per European normative values. The pilot data indicated that the current "blanket" criteria used when determining the risk of CVD may not be appropriate for all within the Aotearoa New Zealand population.

Feedback from participants was generally positive as they spoke of a mana-enhancing interaction with team members. Overall, participants felt safe and welcomed throughout all stages of recruitment and felt well-informed to provide consent to participate in the study. Participants were also willing to invite extended family and friends to participate if the study is expanded.

This study is a starting point for future studies to refine the use of PWV for CVD risk prediction, with larger sample sizes and including other cardiovascular risk predictors. The protocols developed in this study via co-design with participants will ensure that Māori and Pacific Peoples are well represented should PWV become a nationally recognised risk factor.

An AI-powered ECG platform for real-time diagnosis and monitoring

Investigators:
Dr Jichao Zhao, Auckland Bioengineering Institute, University of Auckland
Dr Patrick Gladding, Te Whatu Ora
Misty Edmonds, Ngā Puhi, Tūwharetoa, Community Engagement Lead, Iwi United Engaged

Award category: Primer grant
Award amount: $32,094
Project duration: July 2023 to December 2023

Dr Zhao and his team are using emerging technologies and Artificial Intelligence (AI) to support the early diagnosis of people at risk of heart disease and improve the survival and wellbeing of New Zealanders with cardiovascular disease (CVD). The research addresses the critical need for improved efficiency of assessing electrocardiograms (ECG), one of the most accessible diagnostic instruments in the clinic to both diagnose CVD and monitor treatment. The research addressed three key clinical needs:

- An automatic AI framework to alleviate the need for health professionals to read ECGs.
- A cost-effective reusable, convenient ECG patch that can be used for continuous and up to 96-hour

recordings, increasing the chance of capturing cardiac arrhythmias.
- A platform for remote real-time diagnosis and monitoring for patients with CVD.

The team developed a mobile app that collected ECG recordings. The funding from this award was used to test the acceptability of the tool for Māori communities in South Auckland. Over sixty Māori participants trialled the ECG wearable device. Overall, the ECG device and AI platform was well received by most participants, who appreciated the concept and usability, and the team will work on improvements to overcome the issues. The team used word of mouth, along with easy-to-follow community posters, to disseminate the research findings and build connections between researchers, current and potential study participants, and their whānau.

Two Māori summer research students, Mr Rawiri Manley (funded by Pūtahi Manawa) and Ms Hine Ngatai, worked with Community Engagement Lead, Misty Edmonds, on the Māori community engagement and participant enrolment for their research projects.

The long-duration ECG data collected will reduce bias in the training of the AI so that it can reliably diagnose heart disease in Aotearoa New Zealand's diverse patient population.

The team is now planning a study incorporating an improved ECG wearable and AI to screen for atrial fibrillation in potential participants in the community and at hospitals. This project has led to a Health Research Council Health Delivery Research Career Development Award for Assoc. Prof. Zhao. The new award will support further development of the AI platform for diagnosing atrial fibrillation and identifying patients most suitable for ablation treatment, in collaboration with Professor Martin Stiles at Waikato Hospital.

Manawataki Fatu Fatu for ACCESS: Co-Design Workshop Series

Professor Matire Harwood and Dr Corina Grey, Primary Investigators for Manawataki FatuFatu for ACCESS.

Investigators:
Associate Professor Matire Harwood, Ngāpuhi, University of Auckland
Dr Corina Grey, Samoan, University of Auckland / Te Whatu Ora Waitematā
Dr Sandra Hanchard, Tongan, University of Auckland

Award category: Equity grant
Award amount: $149,002
Project duration: February 2023 to November 2024

Manawataki Fatu Fatu (Māori and Pacific hearts in unison) for Achieving Cardiovascular Care for Equity StudieS (MFF) aims to improve timely and equitable access to high quality heart healthcare for Māori and Pacific people. The Māori and Pacific team lead kaupapa Māori and Pacific, quantitative and qualitative research. The final phase of the Manawataki Fatu Fatu (MFF) programme will include the development of a Quality-Improvement-Equity Roadmap to reduce access barriers to evidence-based heart health care along the patient journey. The Pūtahi Manawa Equity Grant supported a series of national codesign hui/workshops (Kaitāia, Lower Hutt and South Auckland) to navigate what form the roadmap will take. There will be a follow-up online hui hosted to validate findings with participants.

Participants were Māori and Pacific patients/whānau with experience of cardiovascular risk assessment, acute coronary syndrome, and / or heart failure; and health service providers across primary care, paramedicine, specialists, Māori and Pacific community services, and health service managers, planners,

funders and commissioners. There was a total of 105 participants and whānau support across the four main workshops.

Analysis of each hui led to a framework for each region with key themes presented in diagrams. Continuous engagement throughout this process ensured that our analysis was relevant and best representative of the discussions held in the hui.

In Kaitaia the major challenges in accessing adequate heart healthcare were mainly attributable to inadequate resourcing, severe staffing shortages, postcode lottery and mistrust fostered by these chronic issues.

In Lower Hutt the key themes related to the power of using the strengths of Māori and Pacific communities, creating and maintaining ongoing relationships and developing a workforce that reflects their whānau and communities.

The key themes in South Auckland related to the vision of an equitable healthcare system and the actions required to realise this collective vision. Barriers such as racism and cultural safety were highlighted as significant obstacles, along with the familiar challenges related to limited access to a GP, high costs, and insufficient resources for Māori and Pacific-led services.

The findings from the regional workshops will be integrated into the Manawataki Fatu Fatu Quality Improvement Equity Roadmap report. The report will include thematic frameworks, participant quotes, photographs and artist illustrations from the workshops. The Roadmap will be published on the MFF website and disseminated back to participants, Whānau and Hapori Māori Advisory Group and Pacific Families Advisory Group, clinical networks, including the National Cardiac Clinical Network, Regional cardiac clinical networks, Cardiac Society for Australia and New Zealand, and Te Whare Tukutuku Indigenous Māori and Pacific cardiology rōpū. Our hope is that this study will provide the evidence to elicit change and improvement in access for Māori and Pacific for heart healthcare.

Impacts on patients and whānau of transporting out-of-hospital cardiac arrest patients out of the local area to Cardiac Arrest Centres

Investigators:
Associate Professor Bridget Dicker, Auckland University of Technology
Aroha Brett, Māori Health and Equity Lead for Clinical Services, Hato Hone St John

Award category: Equity grant
Award amount: $149,741
Project duration: October 2022 to July 2024

In New Zealand, out-of-hospital cardiac arrest (OHCA) is both common and associated with high mortality, with only one in ten New Zealanders surviving 30 days after the event. A 'Cardiac Arrest Centre' is a hospital with all the facilities needed to treat patients with cardiac arrest. Although compelling observational evidence shows that direct transport to a designated Cardiac Arrest Centre may lead to increased survival, this has not yet been investigated in New Zealand.

The research project explored the cultural, psychosocial, and practical impacts of transporting patients directly to specialist Cardiac Arrest Centres, using a qualitative approach. The study aimed to identify factors for policy-making and examined the relationship between survival rates and direct transport to these centres through a quantitative analysis.

The qualitative study employed a Kaupapa Māori Research approach, conducting five interviews and two focus groups with Māori tūroro (patients) and their whānau (families). Three main themes emerged: navigating care in unfamiliar settings, the importance of family (whānau), and respectful communication (mana-enhancing). The findings were published in 2025.

(Brett, A., Watling, M., Bright, F., Penney, S., Dicker, B., Howie, G., Brewer, K.M. (2025). Accessing care in an unfamiliar environment: Experiences of tūroro Māori and their whānau when transported outside their local area after a cardiac emergency. The New Zealand Medical Journal (Online), 138(1611), 24-32.)

Capacity building and project development were also achieved, including the beginning of a qualitative deductive analysis by a Māori Masters student and training for an emerging Māori Research Officer. Results were presented at the Australasian College of Paramedicine Primary Care Conference in Tasmania, Australia. The associated quantitative study, published in Resuscitation Plus, suggested a 22% decrease in 30-day mortality for patients transported directly to cardiac arrest centres, aligning with international research.

The research informed the Hato Hone St John Clinical Senior Leadership Team about the experiences of tūroro and whānau, influencing ambulance decision-making and highlighting the importance of effective communication to improve tūroro care.

Destination polices for tūroro experiencing an acute cardiac event have not generally been developed at Hato Hone St John. The researchers will use findings from this study in the development of destination policies as well as informing cultural safety training for EMS personnel that will save lives across Aotearoa New Zealand.

Improving Clinical Outcomes for People with Coronary Artery Disease In NZ

Investigators
Dr Nikki Earle, University of Auckland
Prof. Rob Doughty, University of Auckland

Award category: Equity grant
Award amount: $163,143
Co-funding from PM Carol Trust: $125,835
Project duration: January 2022 to September 2024

Improved treatments mean that more people are surviving events such as heart attacks, but they are then at high risk of further attacks. Historically, heart research studies have included more men than women, meaning that heart disease in women has not been as well investigated as in men. This award funded the enrolment of a further 400 women, bringing the total number of women in the study to 794 New Zealand women with a first-time heart attack. The study measured several heart biomarkers (including genetic markers of heart disease risk), as well as known clinical and environmental cardiovascular risk factors such as nutrition, stress, and physical activity. The aim of the study was to better understand how heart attacks manifest differently in women compared with men, and to identify risk markers for subsequent events that are specific to women leading to more personalised and better targeted treatments, and more equitable health outcomes for women with heart disease in New Zealand.

A Māori Governance Group (MGG) established at the start of this study helped to ensure Māori were well represented in the study. Genotyping (analysis of DNA) for all participants will be completed by early 2025. Additional funding from the Heart Foundation will pay for a bioinformatician to analyse this data. In addition, Pūtahi Manawa IRM project, *Restoring the balance: Heart health of wāhine, Fafine, Va'ine, Fifine and Women in Aotearoa*, has been able to use the plasma collected via this study to analyse five sex hormones that may impact heart health in women post-heart attack. During the study, the researchers also established a new collaboration with Professor Alison Heather (University of Otago and University of Cambridge) to investigate further the role of steroid hormones and their impact on cardiovascular disease in women, using the plasma samples collected.

Further work on the calculation of polygenic risk scores (a tool that estimates an individual's genetic predisposition to a disease or trait by aggregating the effects of many common genetic variants) is now being done by these Pūtahi Manawa researchers.

Which pulse matters? Learning from environments to enact equitable, intergenerational heart health.

Principal Investigators:
Dr Susannah Smith, Child Health/Physical Education, University of Canterbury
Prof. Jim Cotter, Exercise and Environmental Physiology, University of Otago

Co-Investigators:
Pā Ropata (Rob McGowan), Dr Kiri Reihana (Ngāpuhi, Whakatōhea Ngai Tūhoe), Prof Chris Bullen, Kristen Matthews (Cook Island Māori) Natasha Burton, Dr Hannah Berning, Nic Daniels, Dr Brendon Roxburgh, Lisa Davies (Kai Tahu), Dr Anna Rolleston (Ngāti Ranginui, Ngai Te Rangi, Ngāti Pūkenga)

Award category: Project grant
Award amount: $249,992
Project duration: April 2023 to June 2024

The aim of this study was to apply transdisciplinary and bi-cultural approaches to shed light on the environmental causes of heart health inequity. Our heart health and approach to its prevention and

management reflects our dominant cultural context of western values, knowledge and systems. Such knowledge is beneficial in identifying and treating heart diseases, but it has limitations and unaccounted costs. A westernised world view also regards people and their health as autonomous individuals who are independent from the wider environment. In contrast, according to Te Ao Māori, we are literally of the environment - yet we behave as though we are not. The consequences of disregarding the environmental underpinnings of heart health have been devastating for Māori and Pacific Peoples. This one-year project drew on the multi-disciplinary strengths of knowledge such as social theory and systems thinking, Te Ao Māori (via Tiwaiwaka and Atua Matua Māori knowledge frameworks), and physiology to better understand how to improve heart health equity for the generations to come.

The interdisciplinary research team identified categories that affect heart health and shape the heart-health environment for current and future generations (eg, nutritional factors, environmental factors, treatment, education, technological and structural factors). The western emphasis is overwhelmingly on medical and biological factors and treatment and is disconnected from nature. In contrast, Te Ao Māori emphasises whenua and mauri, connection to whenua and whānau, living a full life but accepting its limits, and with clear concern for future generations and non-human life.

The researchers made several recommendations to address their findings including resource allocation which can be seen in Figure 2 below:

- placing an emphasis on intergenerational heart health in new research
- researchers and clinicians acting as a powerful voice in acknowledging the nature and gravity of the current heart health environment and its generational inequity
- honouring te Tiriti o Waitangi in our motu and promote Indigenous rights internationally
- adopting and promoting tangible, well-evidenced, co-beneficial strategies for inter-generational heart health such as the prioritisation of Mediterranean diets and active transport.

This research team has been encouraged to discuss their outcomes with the leaders of our currently funded IRMs as there may be synergy with intergenerational heart healthcare and dietary interventions.

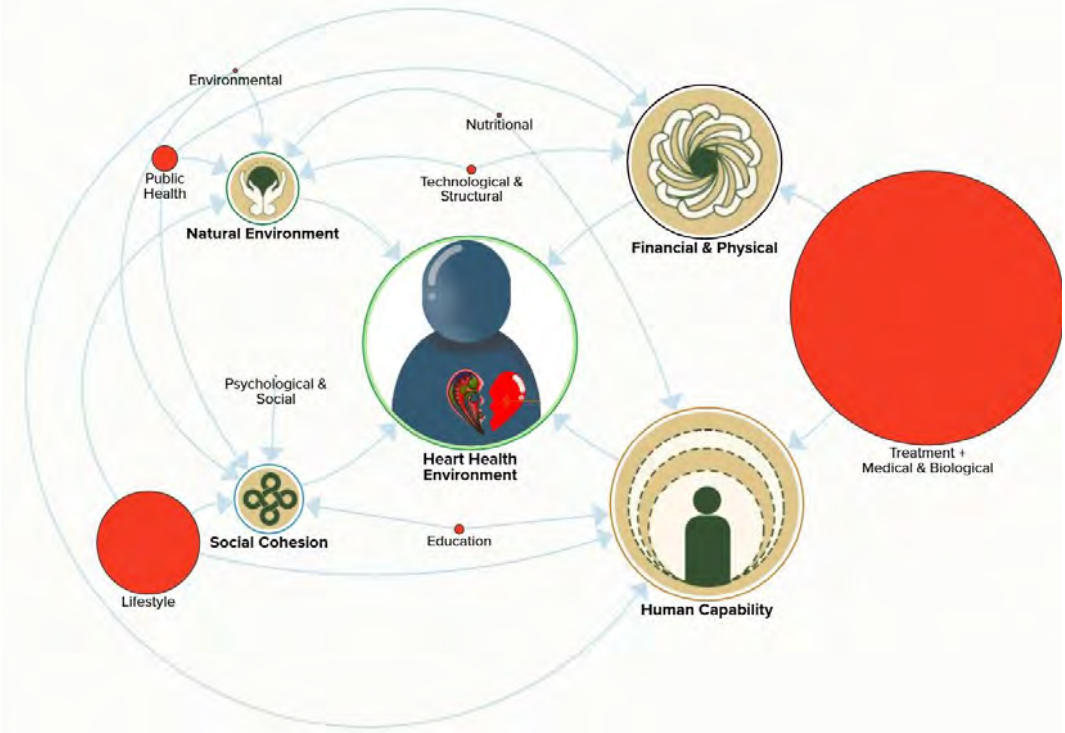


Figure 1. The current heart health environment prevailing in Aotearoa New Zealand, showing the interconnections between the nine categories, and based on the latest (2021) Living Standard Framework used by the New Zealand Government. Circle sizes are based on current allocation of resources.

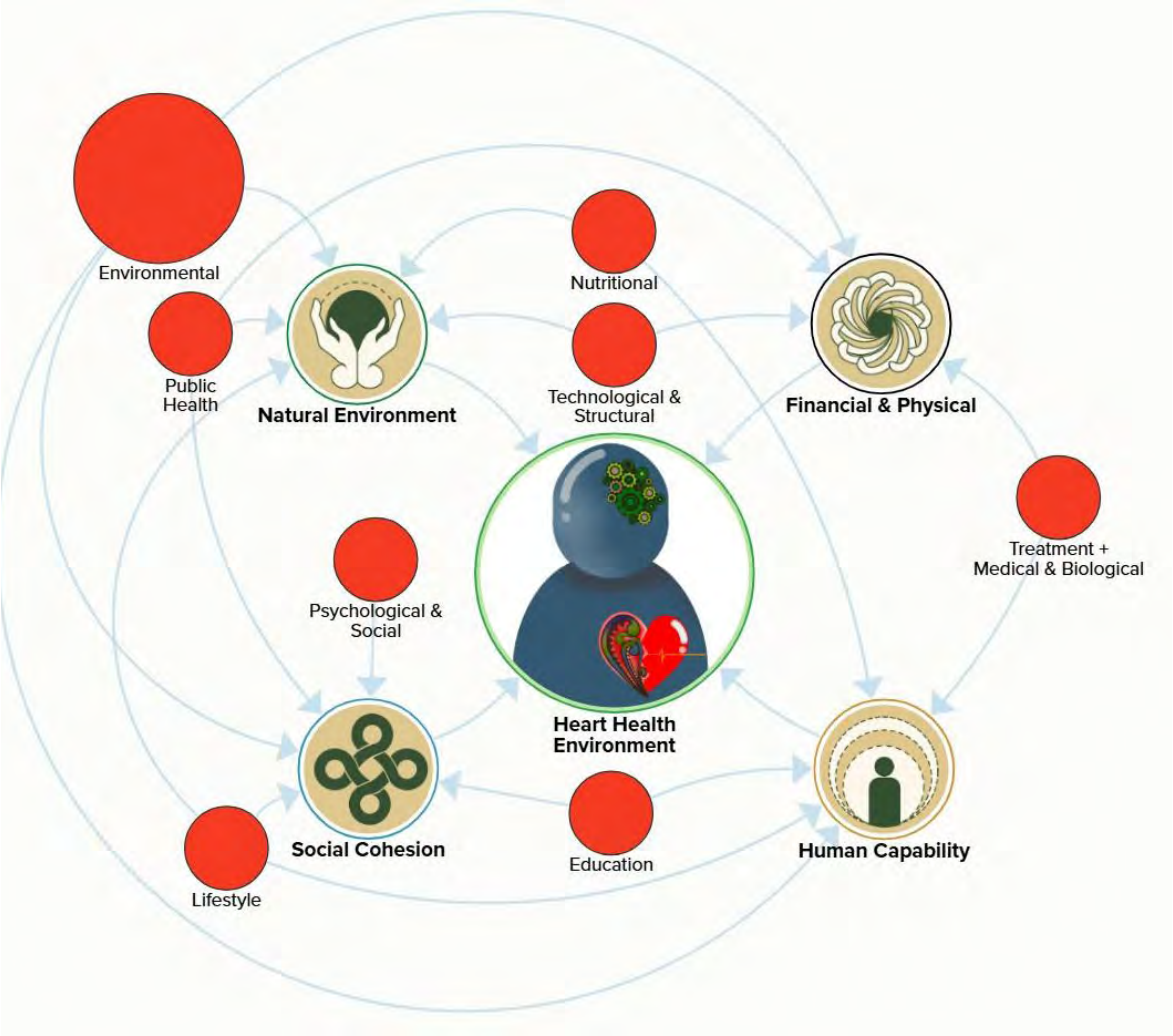


Figure 2. A potential future case, showing the interconnections between the heart health categories and how they determine the different elements of the Living Standard Framework (2021), as used by New Zealand Government) to create a more equitable and sustainable heart health environment. This Figure illustrates a more equity-rebalanced future that emphasises a shift in funding areas and research approaches towards more interdisciplinarity and intergenerational consciousness

Whakatupu Pitomata | Investing in the Future

Pūtahi Manawa provides the first formal opportunities for Māori and Pacific students to engage in research for improving heart health equity. We recognise that the future of heart health equity in Aotearoa New Zealand depends on the talent and creativity of young Māori and Pacific people. We provide students and early-career researchers with the skills, resources, mentorship, and cultural support they need to excel to become tomorrow's leaders. We remove traditional barriers, ensuring more equitable access to a career pathway in research for all. We deliver a range of activities and programmes at all levels, from primary school through to early career researchers, to encourage and develop a strong workforce of heart health researchers with a focus on increasing Māori and Pacific participation.

Heart Health Emerging Researchers Forum

This Forum aims to enable the development of a vibrant network of emerging researchers that is facilitating collaboration and helping to grow heart health research in Aotearoa New Zealand.

The annual *Heart Health Emerging Researchers Forum* was held on 13-14 June 2024 in Ōtatauhi | Christchurch at Tūranga Library. It was co-funded by Pūtahi Manawa and the National Heart Foundation. The one-day hui was attended by 80 emerging researchers (students, postdoctoral fellows, research fellows and senior research fellows) from a broad range of heart health disciplines.

Our panel for enacting kotahitanga in the community chaired by Dr Sandra Hanchard (far left) included (left to right) A/Prof. Bridget Dicker, Dr Allamanda Fa'atoese, Dr Wil Harrison and Mr Joseph Tyro.

The theme for 2024 was *Kotahitanga: Unity through a shared vision*, which builds upon the previous two themes of *Manaakitanga: Respect, Kindness and Support* (2023) and *Whakawhanaungatanga: Connections and Connectedness* (2022).

At the 2024 event Professor Martin Stiles (cardiac interventionalist, Waikato hospital), Stacey Neilson (chair of the Allied Health working group at Cardiac Society of Australian and NZ), and Lisa Wong (Pūtahi Manawa Research Engagement Manager) spoke about the importance of Allied Health and transdiscplinarity in research. Subsequently a panel discussion "Enacting Kotahitanga in the community", chaired by Dr Sandra Hanchard (Pūtahi Manawa and Heart Foundation Pacific Research Fellow) included:

- Dr Allamanda Fa'atoese (Samoa), Christchurch Heart Institute, University of Otago, Christchurch.
- Dr Bridget Dicker, Hato Hone St John, Auckland University of Technology.
- Dr Wil Harrison (Ngāti Porou, Rongowhakaata), Counties Manukau Health New Zealand | Te Whatu Ora.
- Mr Joseph Tyro (Ngāi Tahu, Te Ati Haunui-A-Pāpārangi, Ngāti Rangi), Principal Advisor, Health New Zealand | Te Whatu Ora.

Keynote speakers included: Joanne Looyen, Director of Science System Investment and Performance from the Ministry of Business, Innovation and Employment (MBIE) on Narrative CVs and Nicole Skews-Poole from The Disinformation Project that highlighted the rise of dis and mis information and how we can all protect ourselves, our projects and our colleagues.

Finally, a Bench to Bedside panel discussion was chaired by Pūtahi Manawa Research Fellow Dr Debbie Zhao with the following panelists:

- Dr Martin Stiles, Cardiology Health New Zealand | Te Whatu Ora Waikato, University of Auckland, Chair of CSANZ.
- Dr Ellen Woodcock, Research Fellow at the Māori Indigenous Health Institute, University of Otago, Christchurch.
- Dr Anna Pilbrow, Christchurch Heart Institute, University of Otago, Christchurch.

The 2024 Heart Health Forum Organising Rōpū was chaired by Dr Andree Pearson (University of Otago, Christchurch) with Pūtahi Manawa members: Lisa Wong, University of Auckland), Dr Michelle Munro (University of Otago) Dr Sandra Hanchard (University of Auckland) Erina Korohina (Centre for Heart Health), Dr Toan Pham (University of Auckland), Dr Brendon Roxburgh (University of Otago), Dr Abdallah Hasaballa (University of Auckland), Dr Debbie Zhao (University of Auckland), Dr Amelia Power (University of Auckland), Dr James Hewett (University of Canterbury) and Carlos Meza Alvarado (Massey University).

New and Current Pūtahi Manawa Fellowships

Dr Terina Raureti

University of Otago.
Project: Ōtaki awa: He manawa whenua
Award amount: $765,430
Awarded in 2024, begins 2025

Terina (Ngāti Raukawa ki te Tonga, Ngāti Rangitihi) is the inaugural Māori Fellow and her project is a call to action to connect whānau to their tupuna awa (ancestral river), the Ōtaki Awa (Ōtaki River), through participating in Kauora (a whānau created swimming kaupapa) to improve the heart health of whānau.

Dr Raureti says "The awa are the heart of our taiao (environment); our manawa whenua. Our manawa whenua in Ōtaki are the waterways and whakapapa of the Ōtaki Awa and the Waitohu Awa that flow through our whenua to sustain and nourish our whānau, hapū and iwi."

Terina prepping for her defence amongst her whānau ā-wairua and whānau taonga in the wharepiri of Te Pou-o-Tainui Marae. This was one of the first PhD oral defences to be undertaken in a marae.

Dr Debbie Zhao

Auckland Bioengineering Institute, University of Auckland
Project: Redefining reference ranges for heart health in Aotearoa
Award amount: $843,039
Awarded in 2023

The project integrates biophysical modelling and artificial intelligence to make cardiac magnetic imaging more efficient, accurate and accessible for Aotearoa New Zealand's population. For example, why would we use standards based on Europeans for Polynesian populations. Her research will redefine what is normal in terms of heart size and function for Māori and Pacific Peoples which will reduce the bias in outcomes and the waitlist for cardiac imaging. In collaboration with her Māori and Pacific team members, Dr Zhao has begun her research work by developing culturally tailored frameworks for both Māori and Pacific participants to ensure that there is a mutual understanding on what normal/healthy means for them.

Dr Sandra Hanchard

University of Auckland
Project: Equity-focused discharge planning for heart failure
Award amount Pūtahi Manawa: $429,965
Co-funding from National Heart Foundation: $192,930
Awarded in 2022

Sandra (Tonga) is our inaugural Pacific Fellow. This is a community-based research project to guide improvements in discharge planning for Māori and Pacific heart failure patients. This work is critical as many are discharged without appropriate guidance or support for ongoing management at home and can end up being readmitted to hospital. Sandra has presented the findings from her work to key audiences in 2024 including at the Healthier Lives Kōrero Tahi 2024 Symposium, Grand Round for Te Aka Whai Ora, Health New Zealand and to the Whānau, Consumer and Clinician Digital Council at Te Whatu Ora Health New Zealand. She has become an ambassador for Pacific heart health.

Dr Anna Ponnampalam

University of Auckland
Project: Improved targeted framework for gestational cardio metabolic management among Māori and Pacific women

Award amount: $571,156
Awarded in 2022

Advancing health equity in gestational diabetes in Māori communities. Gestational Diabetes is a common complication of pregnancy, with a potential lifelong predisposition to cardio-metabolic diseases in both the mother and child. The prevalence is disproportionately higher among Māori women compared to their European counterparts. The project aims to understand and address these health inequities. She is testing a range of dietary supplements in pre-clinical trials. Those that show the most promise, are being discussed with communities and their acceptability assessed before human trials will take place for the first time.

Scholarships

In 2024 we awarded our first ever doctoral and postgraduate scholarships. Doctoral students received a generous stipend of $35,000 per annum, $5,000 per annum for research experience and their tuition fees paid for the duration of the three-year degree. Masters and Bachelor (Hons) students received a $23,000 per annum stipend, $7,000 research expenses and their tuition fees paid.

Five doctoral scholarships have been awarded to students at University of Otago and University of Auckland - one Pacific scholarship, three open scholarships and one Māori scholarship.

Seven postgraduate scholarships have been awarded to students at University of Otago, University of Auckland and AUT - two Māori B(Hons) scholarships, two Pacific B(Hons) scholarships, one open B(Hons) scholarship, one Open Masters' scholarship and one Pacific Masters scholarship.

Doctoral scholarship awardees

Te Whetu Kerekere (Te Aitanga a Māhaki, Te Whānau a Kai, Ngāti Oneone)
Māori Doctoral Scholarship
Project title: Inherited heart disease in Māori whanau
Studying at University of Otago supervised by Professor Martin Kennedy
The research is being undertaken as part of the Integrated Research Module *Ō tātou ngākau, ō tātou ira, ō tātou kōrero / Our heart, our genes, our story*.

Taliah Su'a, (Samoa)
Pacific Doctoral Scholarship
Project Title: Group A streptococcal disease: acute rheumatic fever in Canterbury and invasive group A streptococcal infections in children living in Aotearoa.
Studying at University of Otago supervised by Prof. Tony Walls.

Tasha Burton
Open Doctoral Scholarship
Project Title: Intersecting Wisdom: Investigating the Cardiovascular Impact of Finnish Sauna Bathing through Māori, Finnish, and Western science perspectives.
Studying at University of Otago, supervised by Prof. Jim Cotter and Dr Anna Rolleston.

Hannah Lowe
Open Doctoral Scholarship
Project Title: Psychosocial stress, vascular dysfunction, and blood pressure reactivity to exercise testing.
Studying at University of Auckland, supervised by Assoc. Prof. James Fisher and Professor Julian Paton.

Courtney Brighouse
Open Doctoral Scholarship
Project Title: Unblocking the brain drain in hypertension and diabetes.
Studying at University of Auckland, supervised by Dr. Fiona McBryde
The research is being undertaken as part of the part of the Integrated Research Module - *Sweet Pressure: Improving outcomes for people with diabetes and high blood pressure in Aotearoa New Zealand.*

Masters / B(Hons) Scholarships

Noah Appleby (Te Aitanga-a-Māhaki)
Māori B(Hons) Scholarship
Project Title: Haumanu Hauora – a population-based cohort study of the impact of bariatric surgery on cardiovascular disease risk among all New Zealanders.
Studying at University of Auckland, supervised by Dr Jamie-Lee Rahiri.

Noah participated in our Kura Raumati Summer Research Programme during the 2023/24 summer and again in the 2024/25 summer, working with Dr Rahiri, and starts his Honours degree in 2025.

Elaijah Tuivaiti (Ngāti Rangiwewehi, Ngāti Whakaue, Taranaki, Samoa, Upolu: Savaia - Lefaga, Levi – Falelātai)
Māori B(Hons) Scholarship
Project Title: Haumanu Hauora: A population-based cohort study of all patients who have had bariatric surgery in Aotearoa New Zealand compared by ethnicity assessing cardiovascular disease risk burden and remission of CVD disease among all New Zealanders.

Studying at University of Auckland, supervised by Dr Jamie-Lee Rahiri.
Elijah completed a Kura Raumati summer research project with Dr Rahiri in 2024/25 and starts his Honour degree in 2025.

Serah 'Otukolo (Tongatapu & Ha'apai, Tonga)
Pacific B(Hons) Scholarship
Project Title: Super-resolution microscopy (STED) to analyse how the novel respiratory sinusarrythmia (RSA) pacemaker improves mitochondrial and cytoskeletal proteins in heart failure.

Studying at University of Auckland, supervised by Dr David Crossman.
Serah completed a summer research project with Dr Crossman in 2023/24 and received a Pūtahi Manawa Co-Directors' Support Fund award to continue her research part-time throughout 2024.

Kalani Partridge-Fruean, (Ngā Puhi, Samoa, Cook Islands - Atiu, Rarotonga)

Pacific Masters Scholarship
Project Title: Measuring Pulse Wave Velocity Using a New Approach of Bioimpedance Analysis.
Studying at AUT, supervised by Prof. Andrew Lowe.

Tausi Tausi, (Tuvalu, Kiribati)
Pacific B(Hons) Scholarship
Project Title: A Closer Look at Heart Failure: CK2 Phosphorylation and RyR2 Clusters.
Studying at University of Otago, supervised by Prof. Pete Jones.
Tausi completed a Pūtahi Manawa funded summer research project at Heart Otago during the 2023/24 summer and continued the work during the 2024/25 summer after completing his B(Hons) in 2024. He is planning to continue to doctoral studies.

Ella Keaney
Open B(Hons) Scholarship
Project Title: Sex Differences in Myocardial Function.
Studying at University of Otago, supervised by Assoc. Prof. Regis Lamberts
Our congratulations to Ella who completed her B(Hons) degree in 2024.

Sue Brett
Open Masters Scholarship
Project Title: Atrial fibrillation in Aotearoa New Zealand Wāhine
Studying at University of Auckland supervised by Prof. Johanna Montgomery
Sue has had a long career as a Cardiac Physiologist and is now taking time to pursue her interest in clinical research. She will be studying part-time over two years for her Masters degree while continuing her clinical work.

Summer research awards for undergraduate students

Pūtahi Manawa delivered two summer research programmes last summer:

- Fatu Malosi for Pacific students which ran for the first time in 2024.
- Kura Raumati for tauira Māori which began in 2023.

The programme gives undergraduate students a taste of heart health research in a culturally safe and responsive environment. Both programmes have a residential workshop before starting research and all students came back together at the end of the experience to present and celebrate their work. Students are assisted in preparing abstracts for upcoming conferences such as the Cardiology Society of Australia and New Zealand's indigenous heart health conference in Sydney in June 2025.

All supervisors are provided with Ako (teach/learm) webinars to support them in supervising Māori and Pacific summer research students.

Summer Research Programme Growth

2023/24 - 2024/25 year-on-year growth.

44% increase in the number of Māori students.

11 - Kura Raumati (Te Ara Poutama and Pūtahi Manawa)
9 - Pūhoro STEMM partnership
6 - Returning students

44%

45%

45% increase in applications.

Māori and open programmes in 2023/24 compared to two focused programmes: Māori and Pacific in 2024/25.

1400% increase in the number of Pacific students.

Inaugural Pacific summer research programme, Fatu Malosi.

1400%

$369 k

Total amount awarded.

Compared to $216,000 in 2023/24.

	Summer 2023/4	Summer 2024/5
Māori awards	18	26
Pacific awards	1	15
Other awards	5	0
Total awarded	24	41

There was a 44% increase in the number of Māori summer research awards in 2024 and a 1400% increase in Pacific summer research awards in 2024.

Of the Māori awards, nine students were funded through our partnership with Pūhoro STEMM, six were returning students, and 11 were through the Te Ara Poutama Kura Raumati initiative.

Fifteen awards went to Pacific students in the inaugural Pacific summer research programme, Fatu Malosi. One of those was a returning student.

Fatu Malosi

Fifteen Pacific students from the Universities of Auckland (6), Otago (6), Waikato (1), and Auckland University of Technology (1), took part in Pūtahi Manawa inaugural Pacific summer research programme, Fatu Malosi, which began with a fonotaga in November 2024 and finished with a celebration and student presentations in February 2025.

Fatu Malosi co-lead Dr Julie-Winter Smith (‘Alaki Fonua Pelehake and Fatai, Tongatapu, Tonga) says, “You can’t teach being Pacific, and it’s this unique perspective that we want to encourage in heart health research in Aotearoa.”

The students spent nine weeks working on their research project with their supervisors and Fatu Malosi staff to support them.

One student - Poyer Reihana-Finau (*Tonga*) said: «Fatu Malosi gave me the best summer experience I have had since leaving high school 4-5 years ago. This includes the research experience itself and the strong bonds that I was fortunate and blessed to have formed with my fellow Fatu Malosi peers. I felt culturally safe and empowered in a Pakeha-dominated space.”

Mele Ha’unga (Tonga, Masilamea Tongatapu, Fo’ui, Kolovai, Folaha, Vaini, Longoteme) commented: “Before Fatu Malosi I never considered research, ever. But it’s really opened up a window for me, just being able to see what research can actually do and how much of a difference it can make for our people and our communities.”

Fatu Malosi students with the Pacific Leadership Team at the programme celebration

Culturally and personally responsive supervision and mentorship are integral to the Fatu Malosi programme. Leading up to the beginning of the programme, Pacific and non-Pacific supervisors are provided with Ako series webinars on topics to support them in supervising Pacific students.

Supervisors share knowledge and receive it from their students. One supervisor from the Fatu Malosi programme said they gained a deeper cultural understanding and have been able to translate this immediately to enhance patient outcomes.

The inaugural cohort, who may not all have initially considered that research was for them, are now looking to the future. One hundred percent of students said that taking part in Fatu Malosi has fostered their interest to work in heart health or heart health research in the future: "Going into the kaupapa I did not expect for it to be such an eye-opening experience to the point where I am considering pursuing research after my undergrad, so not only did it give me a taste of heart health research but has also encouraged me to continue such study after my degree."

Investing in up-and-coming Pacific heart health researchers and health professionals is a clear and obvious solution for better heart health outcomes for Pacific People.

The nine-week internship programme has been a major success: Pūtahi Manawa, Co-director Pacific, Soteria Ieremia (Vaie'e, Saoluafata, Lepea and Faleasiu, Samoa) attended the fonotaga celebration and was inspired by the enthusiasm displayed by the student's presentations:

«They hold the key to shaping this landscape for the betterment and success of Pacific heart health and overall wellbeing for the future.»

'E fofo le alamea, le alamea'

Our solutions lie within our communities

Students talk about their Fatu Malosi experience https://youtu.be/GU5fAJMspUk

Fatu Malosi Awardees

Tausi Fusialofa Tausi (Tuvalu, Kiribati).
Project Title: A Closer Look at Heart Failure: CK2 Phosphorylation and RyR2 Clusters.
Supervised by: Professor Pete Jones, Dr Michelle Munro.
Recently completed a Bachelor of Science in Physiology (Honours). Will commence PhD study soon at the University of Otago.

Te Paea Ma'u (Kolomotu'a, Tongatapu; Vaimalō mo Masilamea, Vava'u, Tonga and Ngāti Maniapoto, Te Aitanga-ā-Māhaki, Ngāti Apakura).
Project title: Wahine experiences with atrial fibrillation in Aotearoa.
Supervised by: Professor Johanna Montgomery.
Studying First Year Bachelor of Science in Biomedical Science, University of Auckland.

Jaxson Murphy-Winterstein (Fasito'otai, Samoa).
Project title: Investigating the potential association of a genetic variant in the cardiac ryanodine receptor (RyR2) with diabetes.
Supervised by: Professor Pete Jones and Dr Megan Leask.
Recently completed a Bachelor of Biomedical Science. Will commence Bachelor of Biomedical Science (Honours) degree in 2025, University of Otago.

Mele Ha'unga (Masilamea, Hihifo, Folaha, Vaini, Tonga).

Project title: Gestational Diabetes and the experiences of Pacific women - exploring health disparities and cultural contexts. Supervised by: Dr Anna Ponnampalam, Dr Audrys Pauza, Dr Pratik Thakkar, & Dr Igor Felippe.
Recently completed a Bachelor in Science majoring in Physiology, University of Auckland.

Poyer Reihana-Finau (Neiafu, Tuanuku, Vava'u, Tonga).
Project title: Flower power to lower blood pressure in hypertension.
Supervised by: Dr Fiona McBryde and Professor Julian Paton.
Recently completed a Bachelor of Science in Anatomy. Will commence Bachelor of Physiotherapy in 2025, University of Otago.

Tangimaiala Ekueta (Funafuti, Niutao, Tuvalu).
Project title: Understanding the barriers for Māori & Pasifika patients in attending clinic appointments for Cardiac Ultrasound.

Supervised by: Georgina Dew, Helen Walsh, & Dr Andrew To.
Studying towards a Bachelor of Health Science, University of Auckland.

Ayla Ozbeger (Valuutai and Faleatiu, Samoa; Turkey).
Project title: Can a loss of 'hunger' hormone increase CVD in Pacific peoples?
Supervised by: Assoc. Professor James Fisher, Dr Ana Sayegh Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Auckland.

Haytham Aumua (Lepa, Vavau, Samoa).
Project title: Technologies that empower patients to manage their chronic cardiovascular conditions.
Supervised by: Professor Andrew Lowe.
Studying towards a Bachelor of Biomedical Science, University of Otago.

Sinclair McGaffin (Wallis and Futuna).
Project title: Measuring subjective well-being according to Pacific Models of Health.
Supervised by: Dr Debbie Zhao.
Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Auckland.

Irris Etches (Fiji, Rarotonga Cook Islands, Middle East).
Project title: Increasing community research literacy on cardiometabolic genetic research among Pacific peoples.
Supervised by: Dr Allamanda Faatoese
Studying towards a Bachelor of Science and a Bachelor of Arts in Agricultural Innovation and Computer Science, University of Otago.

Sebastian TuiSamoa (Vaovai, Luatuanu'u, Vailele, Valutai, Malaela (Upolu), Samoa).

Project title: Can a loss of 'hunger' hormone increase CVD in Pacific Peoples?
Supervised by: Assoc. Professor James Fisher, Dr Ana Sayegh
Recently completed a Bachelor of Science, University of Otago.

Jesse Winter ('Alaki Fonua Pelehake, Fatai, Matafonua, Tongatapu, Tonga; Daku, Fiji).
Project title: Technologies that empower patients to manage their chronic cardiovascular conditions.
Supervised by: Professor Andrew Lowe.
Studying towards a Bachelor of Health Science in Occupational Therapy, Auckland University of Technology.

Carmel Ah Chong (Le'auva'a, Saleimoa, Aleitpata, Samoa).
Project title: Heart health / cardiovascular risk after pregnancies complicated by diabetes and pre-eclampsia.
Supervised by: Dr Charlotte Oyston
Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Otago.

Emeline Manako (Masilamea, Taoa, Vava'u; Longolongo, Tuatakilangi, Kolomotu'a, Tongatapu, Tonga).
Project title: Gout content analysis on Tik Tok.
Supervised by: Dr Siobhan Tu'akoi & Dr Samuela 'Ofanoa
Studying towards a Bachelor of Health Sciences, University of Auckland.

Tebi Tabokaai (Kiribati).
Project title: Gout content analysis on Tik Tok.
Supervised by: Dr Siobhan Tu'akoi & Dr Samuela 'Ofanoa.
Studying towards a Bachelor of Health in Populations, University of Waikato.

Returning Student from 2023

Tausi Fusialofa Tausi (Tuvalu, Kiribati).
Project Title: A Closer Look at Heart Failure: CK2 Phosphorylation and RyR2 Clusters.
Supervised by: Professor Pete Jones, Dr Michelle Munro.
Recently completed a Bachelor of Science in Physiology (Honours). Will commence PhD study soon at the University of Otago.

Kura Raumati

Kura Raumati is grounded in Te Ao Māori with whakawhanaungatanga (relationship building) and a deep commitment to equitable heart health outcomes, inclusivity, and community-embedded research at the heart of the programme. The holistic summer research programme was the brainchild of Erina Korohina (Ngāti Porou), Principal Investigator of Te Ara Poutama, an integrated research module co-funded by Pūtahi Manawa and the Heart Foundation and hosted by Bay of Plenty's Centre for Health. Korohina said "This summer, our Kura Raumati tauira embraced the opportunity to dive deep into their research, exploring a diverse range of kaupapa, including the vital space of Māori heart health. It has been inspiring to witness not only the depth of their research but also the personal reflections they have shared about their internship journey."

Dr Karen Brewer, Pūtahi Manawa Co-Director Māori commended the students on their vision of Te Ao Māori in research. "We were impressed at the variety of research projects and their commitment to Tikanga and Hauora Māori."

Leading up to the beginning of the programme, two Ako series webinars were delivered aimed at supervisors, building upon webinar resources of the inaugural summer scholarship programme which supervisors could watch the recordings of this year.

Hau kainga (people of the marae), from local iwi Ngāti Porou, welcomed students, their whānau, and Kura Raumati staff to Waiparapara marae on 18 November, for a five-day wānanga where students could connect, upskill, and network with local health professionals, researchers, and the community. The group attended the Ngāti Porou Oranga research symposium on 20 November, at Pākirikiri marae. It was an incredible opportunity to connect with other researchers and learn about the latest findings that impact the health and well-being of their hosts, te iwi Ngāti Porou.

Six students awarded were returning students from last year's cohort and provided a tuakana (older sibling/ mentor) role for this year's new students. Kura Raumati

Pōwhiri for end of Kura Raumati and Fatu Malosi programes at Waipapa marae.

co-lead Erina Korohina (Ngāti Porou) observed, "Our Kura Raumati tauira from last year, who came to tautoko (support), were such an inspiration for those beginning their internship this year."

University of Auckland medical student Caleb Smith (Te Rūnanga o Ngāi Tahu) was at the wānanga and found it added significant value to his research project experience.

"Being immersed in a te reo Māori-speaking environment was meaningful and transformative. Having grown up in a predominantly Eurocentric space with little exposure to Māori culture, the Kura Raumati initial wānanga was one of the first times I was surrounded by the language so completely. While I had worked on Māori-focused research before, I had never experienced that level of immersion. In contrast to other experiences of attempting to embrace my Māoritanga and coming away feeling embarrassed, I felt truly connected and accepted in that environment.»

Co-Lead, Ms Erina Korohina stated that:

"The insights and passion they have brought to their work, particularly in understanding and addressing heart health inequities, are a taonga for our communities. Ka mau te wehi, e te whānau!"

Kura Raumati student Joshua Matenga speaking at the Pōwhiri for the Kura Raumati and Fatu Malosi Celebration

Kura Raumati Awardees

Caleb Smith (Te Rūnanga o Ngāi Tahu).
Project title: Say, Sing, Pray Hauora: A literature review of Ngāti Whātua Ōrākei mōteatea or karakia regarding Hauora.
Supervised by Rowena Dunn & Erina Korohina.
Studying towards a Bachelor of Medicine and Bachelor of Surgery (MBChB), University of Auckland.

Holly Kewene (Waikato-Tainui, Ngāti Hauā, Te Arawa, Ngāti Whakaue).
Project title: Sharing the Stories of our Whānau - Navigating Life with Heart Disease.
Supervised by Kataraina Davis & Erina Korohina.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Auckland.

Jade Keelan (Ngāti Porou).
Project title: A love letter from my pharmacist.
Supervised by Mariana Hudson & Tyler Grey.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Otago.

Jade Tau Manuel (Ngāti Pōrou, Ngā Puhi, Ngāti Tahu Ngāti Whaoa, Kai Tahu).
Project title: Hauora Manawa mō ngā Kaumātua me ngā Whānau.
Supervised by Dr Andree Pearson.
Studying towards a Bachelor of Pharmacy, University of Otago.

Jamie Rose Anderson (Ngati Ranginui).
Project title: Kete of Knowledge, a mobile app for Māori Heart Health.
Supervised by Dr Anna Rolleston & Erina Korohina.
Studying towards a Bachelor of Medicine, University of Otago.

Thaya Shaw (Waikato Tainui, Ngāti Kahungungu ki te Wairoa, Ngati Porou, Ngati Rongomawahine, Rongowhakaata).
Project title: Kete of Knowledge, a mobile app for Māori Heart Health.
Supervised by Dr Anna Rolleston & Erina Korohina.
Studying towards a Bachelor of Biomedical Sciences, University of Otago.

Joshua Matenga (Ngāti Toa Rangatira, Ngāpuhi, Waikato Tainui, Ngāti Porou, Kai Tahu, Ngāti Tama, Ngāti Kahungunu ki Wairarapa).
Project title: Kaupapa Māori Cardiac rehab programme.
Supervised by Anita Rangitutea.
Studying towards a Bachelor of Health Sciences, University of Auckland.

Kate Johnstone (Waikato Tainui - Ngāti Maniapoto).
Project title: Taiao to Tepu - tāmariki gardening project.
Supervised by Takiwai Russell Camp.
Studying towards a Bachelor of Māori Health Sciences, University of Otago.

Casey Akuhata Brown (Ngāti Porou, Rongowhakaata, Te Aitanga a Mahaki, Tamanuhiri, Ngāti Kahungunu).

Project title: Exploring Ngāti Porou Oranga's rangahau programme.
Supervised by Tyler Grey.
Studying towards a Bachelor of Oral Health, University of Otago.

Kaiah Arona (Ngāti Kahungunu ki Heretaunga, Ngāti Tuwharetoa).
Project title: Reimagining Dissemination: Utilising co-design and kaupapa Māori to create a dissemination outcome.
Supervised by Dr Jade Tamatea.
Studying towards a Bachelor of Health Science, University of Otago.

Marcus Hughes (Ngāti Maru, Te Atiawa).
Project title: Ngā manawa, Ngā whenua: interwoven pathways of heart and environmental health.
Supervised by Prof Jim Cotter & Dr Brendon Roxburgh.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Otago.

Maia Lockyer (Ngāti Kahungunu, Ngāti Porou, Rongomaiwahine).
Project title: Te ara whakamārama - A systematic review of our current state of health literacy in Aotearoa NZ and it's translation into our health outcomes.
Supervised by Assoc Prof Justine Camp.
Bachelor of Medicine, University of Otago.

Neave Burgess (Ngāruahine, Taranaki and Te Atiawa).
Project title: Advanced knowledge of heart health complications in diabetes.
Supervised by Assoc Prof Kim Mellor.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Auckland.

Ondre Hapuku-Lambert (Ngāti Kahungunu, Ngāti Raukawa, Tainui).
Project title: Understanding the barriers for Māori & Pasifika patients in attending clinic appointments for Cardiac Ultrasound.
Supervised by Helen Walsh & Georgina Dew.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Auckland.

Piri Tohu-Hapati (Ngāpuhi / Ngāti Hine / Te Orewai).
Project title: Mauri as a measure of heart health.
Supervised by Assoc Prof Justine Camp.
Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Otago.

Raukura Ruha Hiraka (Ngati Awa, Te Arawa, Tuwharetoa).
Project Title: Rongoā Māori use in everyday life.
Supervised by Dr Riripeti Haratuku.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Otago.

Shane Ormond (Ngāti Kahungunu, Ngāti Rongomaiwahine).
Project title: Completion of literature review on gestational diabetes.
Supervised by Dr Anna Ponnampalam & Erina Korohina.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Auckland.

Te Rangi Eruera Watts (Ngati whatua Orakei, Ngati Ranginui, Tuhoe, Tainui, Ngati Porou).
Project title: A Heartful of Intervention: A study of Hauora initiatives provided by Ngāti Whātua Ōrākei.
Supervised by Rowena Dunn & Erina Korohina.
Studying towards a Bachelor of Science, (Nursing), Auckland University of Technology.

Tori-Lee Brown (Ngāpuhi).
Project title: Exploring beliefs around access and barriers for rural/urban Maori and Pasifika aged 35-65 to CVD screening and management in Northland.
Supervised by Dr Aniva Lawrence.
Studying towards a Bachelor of Physiotherapy, University of Otago.

Elaijah Tuivaiti (Ngāti Rangiwewehi, Ngāti Whakaue, Taranaki, Samoa, Upolu: Savaia - Lefaga, Levi - Falelātai).
Project title: Haumanu Hauora: A population-based cohort study of all patients who have had bariatric surgery in Aotearoa New Zealand compared by ethnicity assessing cardiovascular disease risk burden and remission of CVD disease among all New Zealanders.

Supervised by Dr Jamie Lee Rahiri.
Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Auckland.

Returning students from 2023

Akuira Whaanga (Ngāti Ranginui, Ngāti Awa, Te Arawa, Tainui)

Project title: The importance of oral health on heart health. Supervised by Dr Karen Brewer & Sam Carrington.
Studying towards a Bachelor of Dental Surgery, University of Otago.

Danae Tait (Te Rarawa, Ngāpuhi).
Project title: VARIENZ cardiovascular risk profiles.
Supervised by Prof Rod Jackson, Prof Matire Harwood.
Studying towards a Certificate of Health Sciences, University of Auckland.

Nicola Stanton (Ngā Rauru, Te Atiawa).
Project title: Review of Kaupapa Māori cardiac services provided by Te Toi Ora ki Whaingaroa.
Supervised by Maine Tito & Dr Karen Brewer.
Studying towards a Bachelor of Health, University of Waikato.

Noah Appleby (Te Aitanga-a-Māhaki).
Project title: Bariatric surgery provision and outcomes for Aotearoa.
Supervised by Dr Jamie Lee Rahiri.
Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Auckland.

Simone Ada (Ngāpuhi, Ngāi Te Rangi).
Project title: Cardiothoracic surgical outcomes: A Māori perspective.
Supervised by Dr Jamie Lee Rahiri.
Studying towards a Bachelor of Medicine & Bachelor of Surgery, University of Otago.

Makayla Kahi (Ngāti Kauwhata, Ngāpuhi, Ngāti Kahungungu ki Wairarapa, Ngāti Toa Rangatira, Te Ati Hau).
Project title: Surgical Inequities.
Supervised by Dr Jamie Lee Rahiri.
Studying towards a Bachelor of Medicine and Bachelor of Surgery, University of Auckland.

Selected Undergraduate Student Achievements 2024

Simone Ada

Simone was awarded the Cure Kids New Investigator Award for her verbal presentation titled: Isolated Rheumatic Mitral Valve Disease in Aotearoa New Zealand: How far have we come? at the Paediatric Society of New Zealand | Te Kāhui Mātai Arotamariki o Aotearoa Annual Meeting 12-15 November 2024. Simone was one of three selected to present and she presented her summer research project from 2023/24. Simone returned in 2024 as part of the second Kura Raumati summer studentship.

Nicola Stanton

Nicola is one of three Braemar Charitable Trust 2024 Health Scholarship recipients of $10,000. https://www.braemartrust.co.nz/blog/post/139199/a-heart-set-on-a-healthier-future-for-maori.

Tausi Tausi

Tausi received the 2024 University of Otago Steven-Condliffe Award - Awarded to the Physiology student with the highest dissertation score (Valued at $500.00).

Elaijah Tuivaiti

Elaijah was appointed the 2025 Tumuaki Tuarua on the Te Oranga executive team in November 2024.

Naeve Burgess

Naeve was appointed the 2025 Tāmaki Makaurau Tuakana on the Te Oranga executive team in November 2024.

Maia Lockyer

Maia was appointed a NZMSA representative for 2025 on the Te Oranga executive team in November 2024.

Brooklyn Glanville-Rolleston (Ngai te Rangi and Ngāti Ranginui).

Brooklyn co-presented work from her summer research project, The Power of Pūrākau - Heart kids and their whānau shape our service, at the Cardiac Society of Australia and NZ Annual Scientific Meeting in Christchurch | Ōtautahi in June 2024. The travel was funded by Pūtahi Manawa which also allowed her to attend the Whare Tukutuku wānanga being held alongside the CSANZ meeting. Whare Tukutuku is a network of Māori and Pacific researchers and health professional working in heart health.

Noah Appleby

Presented a verbal presentation titled "Gutsy Moves: Shaping Bowel Health Equity in Te Tai Rāwhiti" at the Royal Australasian College of Surgeons 92nd Annual Scientific Congress in Ōtauahi, 6-10 May 2024.

Noah was the Māngai Māori Representative for the Auckland University Medical Students Association for 2024 and has been appointed the NZ Medical Students Association (NZMSA) Māngai as part of Te Oranga - Māori Medical Students Association (Te Oranga) executive team in November 2024 for 2025. Awarded a Pūtahi Manawa Postgraduate Scholarship for a B(Hons) degree at University of Auckland starting in 2025. Noah returned in 2024 as part of the second Kura Raumati summer studentship.

Maiea Mauriohooho (Ngāti Porou, Ngāti Kahungunu, Ngāti Raukawa)

Presented a verbal presentation titled "E kore hoki it te waewae tūtuki, ā, apā anō hei te ūpoko pakaru - a systematic review of neurosurgical disease for Māori" at the Royal Australasian College of Surgeons 92nd Annual Scientific Congress in Ōtauahi, 6-10 May 2024. (Funded by Pūtahi Manawa). Maiea also co-wrote a paper that was published in the ANZ Journal of Surgery in September 2024:

Mauriohooho, Maiea; Tuhoe, Jason, Harwood, Matire; Rahiri, Jamie-Lee, E kaua e hoki i te waewae tūtuki, ā, apā anō hei te ūpoko pakaru – a systematic review of neurosurgical disease and care for Māori in New Zealand, ANZ Journal of Surgery, 2024-12, Vol.94 (12), p.2111-2118, https://onlinelibrary.wiley.com/doi/10.1111/ans.19228.

Maiea said:

"Being part of the research group over the summer broadened my understanding of the role of research in healthcare. It opened my eyes to the vast opportunities in research and, more importantly, the crucial role it plays in contributing equitable health solutions for our Māori and Pasifika communities."

Maiea Mauriohooho and Noah Appleby with supervisor Jamie-Lee Rahiri (centre) at the RACS Congress

Co-Directors' Support Fund awards

The Co-Directors' Support Fund offers small amounts of funding support for activities not covered by the existing awards to Pūtahi Manawa members.

Dr Julie Winter-Smith, 'Alaki Fonua Pelehake and Fatai, Tongatapu, Tonga, University of Auckland.
Travel award to attend Summer School Course in Geographical Information Systems in Epidemiology in Italy
Award amount: $3,500 (partial funding)

Tyson Wijohn (Te Rarawa, Ngāpuhi, Ngai Tūhoe, Ngati Tahi-Ngati Whaoa).
University of Auckland.
Project Title: Long-term ethnicity-based comparative outcomes of patients undergoing the Fontan Procedure
Travel award to present his findings.
Award amount: $2,500

Gayatri Ganesh
University of Auckland.
Project Title: Cardiac Rehabilitation in Aotearoa | New Zealand - an evaluation of the benefits of the cardiac rehabilitation programme in Te Toka Tumai Auckland.
Award amount: $3,600 with matching funding from Te Pūnaha Matatini Centre of Research Excellence.

Outreach and Education with Schools

Pūhoro STEMM Academy

The Pūtahi Manawa Outreach and Education (OnE) team continued to work with Pūhoro STEMM Academy, a charity that is fostering an environment where ākonga (learners) develop a passion for science and pride in their Māoritanga. Throughout the year the team attended Pūhoro STEMM sessions across the country, providing engaging educational and interactive activities about the heart to encourage students to consider pathways into STEM subjects at University and heart research. Educational sessions for groups of Year 11 tauira (students) were held in Christchurch, Palmerston North, Whanganui, Horowhenua, Rotorua, Waikato, Hawkes Bay, South Auckland and Whangarei. Twenty to forty tauira attended in each region.

Pūhoro STEMM Year 11 tauira learning about heart function with the Pūtahi Manawa OnE team at AUT South Campus

Amanaki Stem Academy trip to Auckland

In April 2024, Pūtahi Manawa hosted nineteen Pacific high school students from nineteen Pacific students from Amanaki STEM Academy in Palmerston North for two days to learn about research, STEM careers and studying at university. The tour was organised by the Pūtahi Manawa Outreach and Education team and our Pacific Leadership Team Chair, Soteria Ieremia, with funding support from the CoRE. Soteria also organised the students' visit to Rocket Lab, Auckland Bioengineering Institute and the Fale Pasifika.

ASA students in one of the medical laboratories during their visit to the University of Auckland

Pūtahi Manawa at MOTAT STEM Expo

Pūtahi Manawa was invited to participate in the STEM Alliance Aotearoa event at the new science centre at MOTAT, Tāmaki Makaurau in July. The audience was primarily schoolteachers (~200 from across Aotearoa New Zealand) involved in STEM education with the intention to connect STEM education providers to classrooms.

Thank you to our volunteers and student helpers

We'd like to thank our researcher volunteers and student helpers for their hard work and support throughout the year. A special thanks goes to Francesca Higgins, our tireless laboratory technician, who has both organised our equipment and volunteered at most of our sessions throughout the year.

Researcher volunteers

Alice McDouall, Ben Watkin, Bhavya Arora, Brendon Roxburgh, Brittney Black, David Crossman, Debbie Zhao, Kate Hitpass, Nicola Scott, Sarah Appleby.

Student helpers

Acacia Tolley-Lopeti, Annabel Hii, Annette Fotu, Assina Te Paa-Kolio, Charlotte Gamble, Elijah Hende, Emeline Manako, Jayden Fatu Uili, Joshua Matenga, Nerony Evile, Oscar Chin, Punipuao Mariner, Serah 'Otukolo, Zoya Qureshi.

House of Science Heart Kits

Pūtahi Manawa has been working throughout 2024 with the House of Science (https://houseofscience.nz) to develop a resource kit on heart function and

heart health for primary and intermediate schools across the motu. Pūtahi Manawa researchers have assisted in designing the heart kit that contains five hands-on experiments. The kits are aligned with the NZ curriculum and are in both English and Te Reo. The activities can all be adapted to the age level of the children. A school can book a kit for two weeks, where it will be used by different classes in the school over that period. Each kit is typically used by 1,500 children per year and hundreds of schools. Test kits were piloted in three primary schools in 2024 and received very positive feedback from both students and teachers. Twenty kits sponsored by Pūtahi Manawa will be rolled out to schools in July 2025.

Feedback from teachers

"The students and teachers absolutely loved the learning from this kit. Even though the teachers were offered release time, they all stayed around as they were enjoying the activities and learning so much. The activities generated so many questions about the heart, blood, good health etc."

"I also had a dad come up to me excited, saying to me his daughter had come home and told him all about how her heart works. The teachers also commented about how the children had come back raving to them about what they had learnt."

Feedback from students

"I now want to be a doctor when I grow up."
(Teacher comment - for the tamariki at our school this is very powerful!!)

"My heart is amazing. It works like a big puzzle and has so many things happening inside me!"

Above: "The posters generated a huge amount of interest. There was a big student-led discussion about the right and left side of the heart and finally worked out by getting someone to lie on the ground next to the poster!"

Above: "It was good to reinforce the way the blood circulates through the lungs and back through the heart. I let the students run with the discussion and the debate was fantastic when they were deciding where to place the arrows."

Tausi Tausi embarks on a PhD to combat death from cardiac arrhythmia in Aotearoa

A cardiac arrhythmia is when the heart muscle contracts in an irregular way, an irregular heartbeat, and is the cardiac complication associated with the most deaths. The most common form of arrhythmia in Aotearoa is atrial fibrillation. Tausi Fusialofa Tausi (Tuvalu - Nanumaga, Vaitupu, and Kiribati - Tabiteua), a student at the University of Otago, is investigating how the spatial organisation of cardiac proteins affects how the heart contracts. His research could contribute to future treatments for cardiac arrhythmia, saving many lives. Tausi began a doctoral programme in April 2025.

Research wasn't something that Tausi thought he would ever do; his academic record showed that he struggled early in his degree and then took some time out. On returning to study, he did very well in his last year, but his early grades had already impacted his opportunities. Despite his grade point average (GPA), Tausi completed a Pūtahi Manawa summer research programme in 2023/24 and then went on to be the first Pūtahi Manawa Pacific Postgraduate scholarship completion in 2024 with a B(Hons) majoring in Physiology. Tausi received the 2024 University of Otago Steven-Condliffe Award – Awarded to the Physiology student with the highest dissertation score (valued at $500.00).

Tausi returned for a second year in 2024/25 as a summer research student, mentor and role model for the inaugural Fatu Malosi student cohort. Tausi's second summer research project built upon his B(Hons) thesis: A Closer Look at Heart Failure: CK2 Phosphorylation and RyR2 Clusters, supervised by Professor Pete Jones, Dr Michelle Munro and Dr Vanisha Mishra-Vakaoti.

"Primarily, Fatu Malosi gave me an opportunity to enhance my skills, which enables me to become a more proficient scientist. In the short span of 10 weeks, I learned about protein biochemistry and cell culture, which will serve as essential skills prior to a PhD programme. More importantly, aside from the science, one of my biggest lessons was that I can be 100% myself and still carry out research. Witnessing all of the presentations really made me proud to be brown and doing research, and it really reminded me of my "WHY"."

Pūtahi Manawa Operations manager, Linda Fotherby (Ngā Puhi) says that GPA requirements for University Māori and Pacific summer research awards need to be reviewed.

"Tausi's success is a perfect example that the standard University focus on GPA for assessing suitability for students to do postgraduate research is not fit for purpose for all students. Ongoing mentorship and support can be much more effective."

The postgraduate scholarship allowed him to take up an opportunity to travel to Europe to meet with his supervisor, Professor Pete Jones's collaborators. He spent a month at two renowned research labs: the Soeller Lab at the University of Bern in Switzerland and the Louch Lab at the Institute for Experimental Medical Research in Norway.

"Both the Soeller and Louch labs specialise in advanced super-resolution microscopy techniques to study RyR2 clusters and other cardiac proteins, which really piqued my interests. Although my time there was short, the discussions I had with the principal investigatorsand other lab members were incredibly enriching. These conversations went far beyond what I could have learned from publications alone, and I left feeling like I had gained valuable insights and a sense of belonging."

Looking further ahead, my long-term goal is to be in a position where I can help empower the next generation of Pacific Island youth to engage with scientific research."

Tausi sees his relationship with Pūtahi Manawa integral to his long-term goals for Pacific engagement.

"Working with funding bodies like Pūtahi Manawa, future research strategies and initiatives can be developed to collaborate closely with local iwi and communities. ...as this next chapter unfolds, I hope to continually work alongside Pūtahi Manawa and its vision for the future of heart health in Aotearoa, both as a student and potential colleague/partner."

Ngā Hononga Hou | Making Connections

Pūtahi Manawa brings communities together with research scientists, clinicians, and educators to disrupt the status quo and act against heart health inequities.

Pūtahi Manawa has identified and built trust with numerous Māori and Pacific communities across Aotearoa. This gives-Māori and Pacific People opportunities to participate in, and lead, heart research and heart health education and for co-designed collaborative research to be conducted. This year, we met communities where they are in-person events, attending large-scale cultural events and extended our online community to Facebook while growing our LinkedIn and Instagram followership. Streamlining engagement opportunities through our website and communicating on national issues in 2024 saw our membership continue to grow and be strongly aligned with our mission.

Our whakatauki (Māori proverb) and Muāgagana (Samoan proverb) speaks to the collaborative efforts of different groups working together to achieve a common desired outcome.

Mā pango, mā whero, ka oti te mahi.

Through black and red the work will be completed.

O le tele o sulu e maua ai figota

Through collaboration, the most difficult challenges can be overcome.

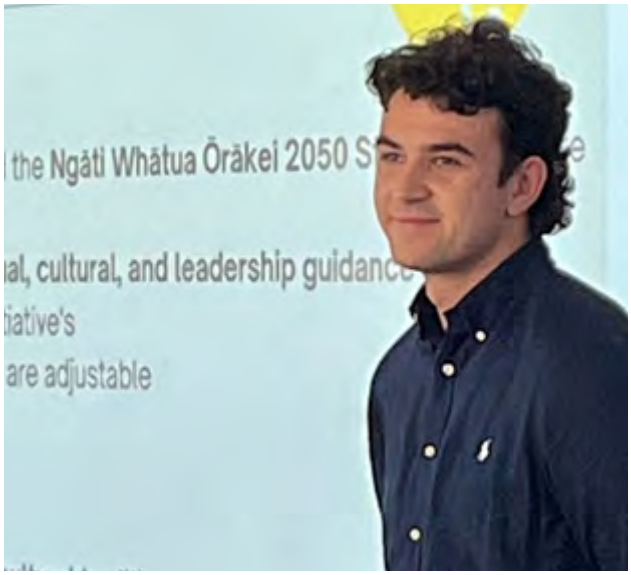
Ngāti Whātua Ōrākei

While many of our researchers and members belong to, or work closely with, iwi and hapu across the motu, it is vital that Pūtahi Manawa develops direct, enduring whanaungatanga (relationships) with iwi to realise our mission of heart health equity for Māori. We have begun this kaupapa by engaging with Ngāti Whātua Ōrākei, as they are the tangata whenua of Waitematā, the land on which our host institution Waipapa Taumata Rau | University of Auckland sits. Facilitated by our Pou Tikanga, Matua Joe Pihema, who is himself Ngāti Whātua Ōrākei, we had several kōrero with Ngāti Whātua Toi Ora (Health and Wellbeing) team members about what aspirations they had for heart health for their hapu and how we could support that.

Ngāti Whātua Ōrākei members at the celebration, Rowena Dunn front right.

Erina Korohina (Ngāti Porou) and Dr Anuj Bhargava worked with Rowena Dunn, Research Coordinator for Toi Ora, to develop two summer research projects that would lay the foundations for a larger research project by Ngāti Whātua. The students funded were:

A fifth year University of Auckland medial student, Caleb Smith, (Te Rūnanga o Ngāi Tahu) who completed his research project *Say, Sing, Pray Hauora: A literature review of Ngāti Whātua Ōrākei mōteatea or karakia regarding Hauora* over the



Caleb Smith

2024/25 summer. The review highlighted how the sacred karakia is deeply interconnected to Ngāti Whātua Ōrākei's strategic plan. More than a literature review, Smith was welcomed by iwi members as they shared their aspirations for his research and made new relationships.

A Heartful of Intervention: A study of Hauora initiatives provided by Ngāti Whātua Ōrākei was completed by Te Rangi Eruera Watts, (Ngāti Whātua Ōrākei, Ngati Ranginui, Tuhoe, Tainui, Ngati Porou), a nursing student at AUT. One significant finding was that whakapapa plays a crucial role in influencing the participation and ongoing involvement of kaumātua in the kaumātua kapa haka, potentially linking this to heart health.

Both students were supervised by Rowena Dunn & Erina Korohina. Ngāti Whātua Ōrākei kaumātua were at the celebration to tautoko the students' presentations.

Using the foundational work by the students, the Ngāti Whātua Toi Ora team are working on a research proposal focusing on iwi heart health for the iwi, which they plan to submit for Te Korowai Pūtahi Manawa funding in 2025. Conducting research projects like this is a new experience for the team, but with Ms Korohina's and Pūtahi Manawa's ongoing support, they are gaining confidence and learning new skills for an iwi-led, kaupapa Māori heart health research project grounded in the experiences and aspirations of Ngāti Whātua Ōrākei whānau.

The successful collaboration with Ngāti Whātua Ōrākei provides another, "business not as usual" research model that will guide Pūtahi Manawa in making more connections to achieve iwi, hapū, and whānau-led heart health aspirations to improve equity.

Pūtahi Manawa joined by our Pacific community, welcomes inaugural Co-Director Pacific

We welcomed our inaugural Co-Director Pacific - Ms Soteria Ieremia and our Pacific community with a celebration event at the University of Auckland Fale Pasifika, Waipapa Taumata Rau | The University of Auckland.

The invitation was extended to people across multiple disciplines to bring Pacific community leaders, health professionals, and experts together in the same room to celebrate who we are and how we can work together for better heart health outcomes for Pacific People.

Ms Soteria Ieremia (centre) with fellow Co-Directors, Prof. Julian Paton and Dr Karen Brewer at her welcome.

Guest speaker and Samoan cardiologist Asiata Professor Dr. Satupaitea Viali connected with Putahi Manawa for the first time and made a special trip to acknowledge this appointment and the strength of Pacific women in leadership. Professor Viali updated those present on his vital work in Samoa and across Oceania. He spent the next day in fono with the Pacific Leadership Team, solidifying a continued relationship with a common goal.

Soteria's brother, Neil Ieremia, special guest and Founder and Creative Director of internationally acclaimed dance company Black Grace, shared his experience of living with rheumatic heart disease through performance art.

Black Grace treated guests to an exclusive performance that powerfully articulated Neil's story through movement and spoken word - informed by his personal experiences and research publications on racism and lack of access to healthcare by Pacific Peoples.

Keeping guests on their toes and smiling was the vibrant STEM powerhouse Nu'uali'i Eteroa Lafaele, who went on to win 2025 Young New Zealander of the Year. Hailing from the "Creek" - Cannons Creek, Porirua, or PTown, Eteroa and Soteria share their roots and a common drive to support Pacific youth into STEM pathways.

Nu'uali'i Eteroa Lafaele introduces Prof. Satupaitea Viali

The Pūtahi Manawa aiga look forward to fostering a thriving community dedicated to heart health equity for Pacific peoples, driven by Tagata Moana and supported by our allies.

Black Grace dancers perform at the welcome for our Co-Director Pacific

Polyfest

Pūtahi Manawa aiga attended and contributed to our very first Polyfest event with awesome support from our University of Auckland based Pacific talavou faiaoga (students) with guidance from Pacific Leadership Team chair - Soteria Ieremia.

Student helper demonstrating blood pressure at PolyFest

It's the largest Māori and Pacific Polynesian festival in the world, with more than 70 high schools in attendance. The Pūtahi Manawa site engaged hundreds of students, parents and teachers through interactive hands-on science activities, ranging from heart models to exercise bikes and a heart pumping blood simulation game to expand horizons for Pacific youth in heart health education, heart science and research pathways.

Pasifika in the Bay

The Outreach and Education team attended Pasifika in the Bay (2 November 2024), an annual Pacific festival that brings together 35 local schools for a celebration of Pacific cultures. Pūtahi Manawa Research Fellow Dr Debbie Zhao and her Fatu Malosi summer research student, Sinclair McGaffin (Wallis Fortuna) spoke to our Pacific community about their research and harnessing technology to close the equity gap. Many festival goers, including Ezra Schuster, Director of Education and Public Service Lead the Ministry of Social Development stopped by to complete blood pressure checks, learn about heart disease and symptoms, and understand the work Pūtahi Manawa.

A Niu Dawn - The Guerrilla Collection

This was Pūtahi Manawa's first involvement in a Pacific Arts festival in West Auckland. 'A Niu Dawn', held in November 2024, focused on celebration and hope since the Dawn Raids. Mr Neil Ieremia ONZM (artistic director and CEO Black Grace) founded The Guerilla Collection in 2018 - a free arts festival that unites Pacific artists from across disciplines in collaboration with Black Grace dancers. Neil has a powerful story of growing up with Rheumatic fever, having had two open heart surgeries. He hopes that by inviting Pūtahi Manawa to take part in his arts festivals, he will expose the Centre to a wider Pacific audience and raise the profile of acute rheumatic fever and RHD amongst Pacific communities. This outreach was led by our Pacific Leadership with support from Professor Andrew Lowe's team and Pacific Immunologist Dr Chris Puliuvea from AUT and brought a steady flow of curious participants to our stand throughout the day. Both young and old were interested in how heart disease is impacting Pacific People, with many sharing their personal stories and signing up to be involved in our research.

Pasifika Medical Association

A collaboration between our Pacific Leadership Team and the Pasifika Medical Assocation (PMA) resulted in a Pūtahi Manawa session on Rheumatic Heart Disease (RHD) at the Pacific Medical Association's Conference in Wellington in November 2024.

The session, which included four presentations on RHD and one on our new Pacific summer research programme, Fatu Malosi, was chaired by PLT member, Dr Joshua Agnew. The presentations are listed in the table below.

Presenter	Presentation Title
Taliah Su'a	Acute rheumatic fever in Canterbury: The experiences of patients and whānau
Jyotishna Mani	Struggling to Thrive: The Experiences of Pregnant Women with Rheumatic Heart Disease in Fiji
Dr Adam Dennison	Te Maatai Manawa a Whaanau: Family Heart Echo Screening Study
Jessica Paka	First Degree Relative RHD echocardiographic screening in Fiji
Nuseta Hope	Fatu Malosi Summer Research Programme: An Opportunity to Build the Pipeline

Our growing online community

It is essential that we stay engaged with our online community and members to facilitate cross-discipline research opportunities, communicate our new findings and attract a community that is strongly aligned with our mission. At the end of 2024 we had 296 subscribers to our email communications, a new Facebook page and 505 online followers.

https://www.linkedin.com/company/putahi-manawa/

https://www.instagram.com/putahi.manawa/

https://www.facebook.com/putahimanawa/

Pacific Leadership Team members (left to right) Dr Joshua Agnew, Soteriea Ieremia and Dr Tua Taueetia-Su'a and Fatu Malosi Co-Lead Nuseta Hope at the Pasifika Medical Association Conference 2024.


PŪTAHI MANAWA
HEALTHY HEARTS FOR AOTEAROA NEW ZEALAND
A CENTRE OF RESEARCH EXCELLENCE
www.putahimanawa.ac.n

Kia Eke Ai te Kaupapa | Enabling Us for Excellence

Equity in heart health outcomes for Māori, Pacific Peoples and women can only be achieved if those that we want to impact are involved at all levels of Pūtahi Manawa.

We are proud of the diversity in our leadership and strive for equitable representation of Māori, Pacific and women on the Board. Our Māori Leadership Team is integral to maintaining our connection and grounding in the articles of Te Tiriti o Waitangi and ensuring our processes are tika and pono (principled). Our Pacific Leadership Team guide us to ensure that Pacific diversity is acknowledged and that our intentions and actions support the aspirations of Pacific Peoples.

The strength of Pūtahi Manawa lies in our diverse and interdisciplinary partnerships.

Directorate

Co-Director Māori - Dr Karen Brewer, (Whakatōhea, Ngai Te Rangi), University of Auckland

Co-Director Heart Specialist - Professor Julian Paton, University of Auckland

Co-Director Pacific - Soteria Ieremia, Vaie'e, Saoluafata, Lepea and Faleasiu, Samoa, Pacifc-i Ltd

Change to our Directorate

In 2024 we welcomed an additional Co-Director to the Directorate, Soteria Ieremia, as our inaugural Co-Director Pacific. Since its inception, Pūtahi Manawa has been richly led by two exceptional Co-Directors, of which one has been an important representative for strong leadership and voice of Māori in the advancement in heart health. Work towards the strategic plan for the second half of the CoRE's current term identified that an equally strong voice at a strategic and leadership level would greatly benefit our goal of heart health equity for Pacific Peoples. We are delighted that we were able to welcome Soteria Ieremia to the Directorate in June 2024.

The revised structure for Pūtahi Manawa is shown on page 60.

Co-Director Pacific, Soteria Ieremia

Ms Ieremia has been a member of Pūtahi Manawa since its inception. She was a contributor to our successful Pūtahi Manawa | Healthy Hearts for Aotearoa NZ CoRE bid application in 2019 and has been an active member of our Pacific Leadership Team and outreach and education activities since the CoRE began in 2021. Soteria brings a wealth of complimentary experience in community science engagement, STEM related outreach, science communication and engaging Pacific communities. Soteria is most well known for her work with The Kudos Science Awards and the Science Spinners programs.

She has established both national and international networks and connections that are focused on delivering equity-based STEM education with an impressive network of scientists, researchers, academics and educators from Crown Research and Tertiary institutes, Ministry of Education, as well as private and public science and technology organisations such as, Kiwinet, Rocket Lab and the MedTech Research Network. Her experience is an ideal complement to the existing expertise within the Pūtahi Manawa Directorate to support the leadership into this next phase of the CoRE.

Message from Soteria:

"The mission of Pūtahi Manawa not only aligns well with my career experience and aspirations, fuelled also by my purpose and passion to serve our Pacific community, but it has also played a very personal role while growing up in Aotearoa. At the age of five my youngest brother was diagnosed with rheumatic fever, sadly leading to rheumatic heart disease so I've experienced first-hand the struggles, fear and uncertainty within my own Pacific family.

"Coupled with my experience as a minority in the science, research and innovation space, through managing and delivering the purpose of the Kudos Science Trust, and the Waikato region's science excellence awards has given me valuable insight on how to navigate New Zealand's science and research eco-system. In particular, how to translate technical and complex science to lay audiences, media and high school students. My passion to share knowledge that empowers our vulnerable communities, in particular our Pacific and Māori aiga is what drives me to serve in this capacity.

"As Tangata Te Tiriti, I acknowledge Māori as Tangata Whenua and look forward to working in partnership to uphold all our obligations to Te Tiriti o Waitangi. Pacific Peoples and Māori have had a long and enduring shared history that spans centuries and across the Pacific. Naturally, we will continue to work in partnership for heart health equity for our peoples, and for Aotearoa."

Advisory Board

Mr Kent Gardner, (Chair)
CEO Evans Randall Investors

Professor Frank Bloomfield, (Ex officio)
Deputy Vice-Chancellor Research, University of Auckland

Professor Sue Crengle (Kāti Māmoe, Waitaha to Kāi Tahu)
General Practitioner, Professor, Public Health Physician, University of Otago,

Professor Palatasa (Tasa) Havea, ONZM (Vava'u, Tonga)
Dean Pacific, Pacific Success Office, Massey University.

Dr Mataroria Lyndon (Ngāti Hine, Ngāti Whātua, Waikato)
Senior Lecturer, School of Medicine, The University of Auckland
Board member, Te Tira Tū, Iwi Māori Partnership Board
Māori Leadership Team Co-Chair, Pūtahi Manawa.

Ms Sharon Shea, MNZM (Ngāti Ranginui, Ngāti Hauā, Ngāti Hine, Ngāti Hako)
Principal, Shea Pita & Associates Ltd.
CEO, Manawaroa Ltd.

Our Advisory Board continues to support and advise the Directorate and the Vice-Chancellor's delegate for our host institution, the University of Auckland. We thank the Board members for their continued service throughout 2024.

With the changes to the Directorate, the structure of our Board was reviewed during 2024. Although half of the current Board member are Māori, it was decided that a more formal Te Tiriti partnership model and additional Pacific representation would better serve the needs of the CoRE. From 2025 the Board will have the structure outlined below.

Board Structure

The Board structure will follow a Te Tiriti o Waitangi partnership model:

- The Board will be co-chaired by one Tangata Whenua (Māori person) and one Tangata Tiriti (non-Māori person).
- In addition to the Co-Chairs, there will be six members of the Board, three of whom will be Tangata Whenua and three Tangata Tiriti.

In addition:

- There will be at least two members of the Board who are of Indigenous Pacific descent.
- The Deputy Vice-Chancellor Research (DVCR) of the host institution (University of Auckland) or delegate will be an ex-officio member of the Board.

We look forward to welcoming a new Co-Chair Māori and Pacific board member in 2025.


PŪTAHI MA
HEALTHY HEARTS
AOTEAROA NEW ZE
Afio mai
Welcome

Pūtahi Manawa Structure

ADVISORY

ADVISORY

TERTIARY EDUCTION COMMISSION

REPORTS TO

HOST INSTITUTION (Vice-Chancellor)

ADVISES

Advisory Board

REPORTS TO

ADVISES

GOVERNANCE

REPORTS TO

International Panel

ADVISES

DIRECTORATE

Māori Co-Director | Heart Academic Co-Director | Pacific Co-Director

Strategic & Operations Oversight

SUPPORTS & ADVISES

Māori Leadership Team

SUPPORTS & ADVISES

Pacific Leadership Team

STRAGETY AND OPERATIONS OVERSIGHT

SUPPORTS & REPORTS TO

SUPPORTS & REPORTS TO

SUPPORTS & ADVISES

Funding Panel

OPERATIONS TEAM

Research Operations Manager

Admin Team | Comms | Pou Tikanga | Outreach Lead

SUPPORTS

Outreach and Education Team

Te Ahi mō Āpōpō (Early Career Researchers)

PŪTAHI MANAWA
HEALTHY HEARTS FOR AOTEAROA NEW ZEALAND

OPERATIONS

Pou Tikanga

The Pou Tikanga provides expertise on tikanga (Maori customs and protocols) ensuring cultural safety and practice across our operations and promoting Māori wellbeing.

Matua Joe Pihema (Ngāti Whātua Ōrākei)
Trustee, Taumata-a-Iwi - Auckland Museum, Senior Tikanga Advisor, Ngāti Whātua ki Tāmaki, Founder, Te Kawau Limited.

Māori Leadership Team

The team provides advice and support for the Co-Director Māori and the operations of the CoRE.

Dr Mataroria Lyndon (Co-Chair) (Ngāti Hine, Ngāti Whātua, Waikato)
Senior Lecturer, University of Auckland, Co-Founder and Clinical Director - Tend Health, Deputy Chair - Te Hiringa Hauora Health Promotion Agency.

Dr Karen Brewer (Co-Chair) (Whakatōhea, Ngai Te Rangi)
Co-Director Maori, Senior Lecturer, School of Psychology, University of Auckland

Matua Joe Pihema (Ngāti Whātua Ōrākei)
Pou Tikanga Pūtahi Manawa.

Professor Matire Harwood (Advisor) (Ngāpuhi)
Deputy Dean, Faculty of Medical and Health Sciences, University of Auckland; General Practitioner, Papakura Marae Health Clinic

Dr Wil Harrison (Ngāti Porou, Rongowhakaata)
Interventional Cardiologist, Te Whatu Ora Counties Manukau

Assoc. Prof. Justine Camp (Kāi Tahu, Kāti Mamoe, Waitaha)
Associate Dean (Māori), University of Otago.

Dr Anthony Jordan (Ngāti Wai)
Clinical Immunologist, Te Whatu Ora Te Toka Tumai Auckland

Dr Karaitiana Taiuru (Ngāi Tahu, Ngāti Toa and Ngāti Kahungunu)
Director, Taiuru and Associates

Ms Bren Tai-Rakena (Tainui)
Practice Manager - Tu Tonu Hauora

Ms Takiwai Russell-Camp (Ngāi Tahu)
Department of Medicine Kaiwhakatere, University of Otago

Dr Rāwiri Keenan (Te Atiawa, Taranaki)
GP, Senior Research Fellow, University of Otago

Mr Geremy Hema (Ngāti Paoa, Ngāpuhi)
Kaiarahi, University of Auckland

Māori Leadership Team Report

In 2024 the Māori Leadership Team (MLT) focused on two major projects. The first was developing Manawa Ora, the Pūtahi Manawa Māori strategy. We are grateful to Matua Joe Pihema, Pou tikanga for Pūtahi Manawa, for his leadership in this. Manawa Ora is included on the following page of this report.

The Māori Strategy Manawa Ora is based on the construct of the wharenui ancestral house and bears similar features to the Pūtahi Manawa Tohu, the pekapeka. The wharenui and the pekapeka both have two distinct sections (Tara-nui and Tara-iti of the wharenui) and contain key respiratory and circulatory systems, conceptually and physically, that are depended on by a larger system and network. Finally, the animated form of the pekapeka, particularly the eyes which are a sign of life and wellness is also crucial to the role and function of a wharenui. We are confident, this strategy Manawa Ora which is a distinctly Māori offering from a Māori world-view, provides a considered and unique pathway to wellbeing and abundance of life throughout our communities.

Manawa Ora Vision Statement

Tirohanga Whānui:

E ngana nei mātou, mā te rangahau kounga, te whakapiki ake i te manawa ora o te iwi e pai ake ai tō tatou hauora ki Aotearoa, ki tāwāhi anō hoki.

Vision Statement:

Through research excellence, we will strive towards equity in heart health for Māori to improve our well-being in Aotearoa New Zealand, and elsewhere.

The Manawa Ora strategy guided the second major project, the development of Te Korowai Pūtahi Manawa. Te Korowai Pūtahi Manawa is a funding round for kaupapa Māori research, placing emphasis on supporting Māori communities into heart health research. MLT will administer this fund, with a call for expressions of interest to go out early in 2025.

Manawa Ora – Māori Strategy

Kupu Whakataki

Kei tēnei rautaki ko te whare hei ariā e pai ai tā tātou whakaū me te whakakaha anō hoki i ngā mātāpono me ngā kōrero tuku iho ki ngā whāinga rautaki.

Within this strategy, the concept of a whare is utilised to bind and strengthen cultural philosophy and narrative to our strategic goals.

Te Kaupapa o Manawa Ora

Kaupapa: Ko Manawa Ora te ingoa o te rautaki nei, ā, ko ia anō hoki te ingoa o te whare e pupuri nei, e whakaruruhau nei i te mauri o te rautaki. Ka mutu, ko te tumanako mā Manawa Ora te manawa Māori e puta atu ai i ngā hēmanawatanga e patu nei ia, haere ake te wā.

Purpose: Manawa Ora is the name of this strategy and the name of the philosophical carved house that holds and shelters the life-force of this strategy. It is our belief this strategy will significantly improve Māori heart health going forward.

Tirohanga Whānui (Tekoteko)

Tirohanga Whānui: E ngana nei mātou, mā te rangahau kounga, te whakapiki ake i te manawa ora o te iwi e pai ake ai tō tatou hauora ki Aotearoa, ki tāwāhi anō hoki.

Vision Statement: Through research excellence, we will strive towards equity in heart health for Māori to improve our well-being in Aotearoa New Zealand, and elsewhere.

Tō Mātou Aronga (Kōruru)

Aronga: Nā te Māori, mā te Māori
Focus: By Māori, for Māori.

Context: Manawa Ora is a Māori Leadership Team (MLT) led strategy to guide Pūtahi Manawa thinking and key actions to maximise efficacy and reach within whānau and Māori communities.

Te Whainga nui o Manawa Ora (Tāhūhū)

Whāinga nui: Kia noho ō tātou whānau Māori ki te puku o ā tātou mahi katoa.

Key Objective: That our Māori communities and whānau be located at the core of all aspects of our work.

Ngā Pou Matua o Te Whare Pūtahi Manawa

Pou Mua: The Pou Mua is the post that stands on the porch beneath the tekoteko. It faces outwards and greets our visitors and guests. The Pou Mua focusses on our strategic relationships and networks such as universities, iwi health providers and the Heart Foundation.

Pou Tāhu: The Pou Tāhu is the post that stands on the inside of the doorway and holds up on end of the main ridge pole. The Pou Tāhu was traditionally used to help lift the ridge pole into position during construction. This pou focusses on capacity building in general and includes capacity building of researchers and clinicians around heart health.

Poutokomanawa: The Pou Tokomanawa is a place of high importance and value that elevates the 'heart' of the house. This can be seen as the people's aspirations and goals. This pou focusses on the creation of value, impact, significance or meaning such as key research findings that improve prevention, approaches, procedures, and/or treatment.

Poutuarongo: The Poutuarongo was a place where tohunga would commune with the ao wairua and meet to undertake wānanga regarding matters of mana, tinorangatiratanga, identity and culture. This pou focusses on the protection and maintenance of our kaupapa Māori agency and authority. This includes the strengthening of Te Tiriti o Waitangi within our governance structure.

Ngā Wāriu o Te Whare Pūtahi Manawa

Values: These are the current values of Pūtahi Manawa and are reflected in the rafters (heke) of the whare. The heke are connected to the Tāhūhū (Key Objective) and provide guidance to our daily thinking and behaviours.

Toitoi Manawa	Encourage and inspire
Tānga Manawa	Feeling safe
Manawa Popore	Being considerate
Manawa Whānau	Team and stakeholders working together
Manawa Tina	Being decisive
Manawa Rahi	Being resilient
Manawa Ora	Being strong through connections
Puna Manawa	Our source of our being

Te Tiriti o Waitangi (Tūāpapa)

Tūāpapa
Ko te Tiriti o Waitangi te takapau wharenui i whānau ai tō tātou whenua hou nei a Aotearoa New Zealand me ōna uri, a tangata whenua rāua ko tangata tiriti. Waihoki, koia tēnei ko te tūāpapa e tū nei te kāwanatanga hei hoa mahitahi me te Māori e puta ai te ihu Māori i ngā hēmanawatanga o te wā.

Foundation
The Tiriti o Waitangi is the sacred mat upon which our modern-day country Aotearoa New Zealand was born, including its two peoples; tangata whenua and tangata tiriti. Furthermore, it is the foundation upon which the Government exists as a partner for Māori to ensure Māori are able to progress and flourish.

Pou	Strategy
Pou Mua Strategic relationships and networks	Nurture and grow our relationships within Aotearoa and with Indigenous groups internationally, including: • Māori communities • Māori members of Pūtahi Manawa • Kaimahi Māori with clinical and research roles in heart health • Māori health providers • Māori education organisations • Non-Māori allies • Aboriginal and Torres Strait Islander kaimahi with clinical and research roles in heart health in Australia • Indigenous groups globally
Pou Tāhu Capacity building	Increase Māori research capacity, capability and confidence in heart health by: • Supporting early career Māori researchers • Supporting Māori clinicians to engage in research • Increasing the number of qualified Māori supervisors and supporting them in their role with Māori student researchers • Connecting with trusted allies who can tautoko Māori students and researchers • Nurturing kairangahau Māori through an integrated summer studentship programme • Funding scholarships for Māori postgraduate students conducting heart health research, and pursuing ways to make them accessible to aspiring kairangahau Māori • Working with community groups to create, and fund, translational research projects through which local kairangahau develop research expertise
Poutokomanawa Creation of value, impact, significance or meaning	Fund high quality kaupapa Māori research and ensure this is carried out in a timely manner to achieve equity in heart health. Ensure that all Pūtahi Manawa research involving Māori is culturally safe and equity-focused. • Embed Kaupapa Māori research approaches within the CoRE • Identify and address research priorities and activities that contribute to equity in Māori CVD outcomes • Demonstrate how to perform effective community-based research using kaupapa Māori methodologies for improving heart health equity so that our processes become accepted nationally and adopted in other health areas • Deliver on the equity-focused outcomes within the existing outcomes framework
Poutuarongo Protection and maintenance of our kaupapa Māori agency and authority	Kaupapa Māori agency and authority are protected within Pūtahi Manawa governance and operations as well as within relevant research funded by Pūtahi Manawa. Decisions about Māori matters, including how to allocate funding for Māori research, are made by Māori, under the leadership of the Māori Leadership Team and Co-Director, with the guidance of the Poutikanga

Pacific Leadership Team

The team provides advice and support for the Co-Director Pacific and the operations of the CoRE.

Ms Soteria Ieremia (Chair) (Vaie'e, Saoluafata, Lepea and Faleasiu, Samoa)
Pūtahi Manawa Co-Director Pacific, Pacific Leadership Team Chair, CEO, The Kudos Science Trust. Director, Pacific-i Ltd

Dr Allamanda Faatoese (Samoa, Tuvalu)
Research Fellow, Christchurch Heart Institute; Associate Dean (Pacific) Strategic, School of Biomedical Sciences, University of Otago

Professor Daryl Schwenke (Alamagoto, Samoa)
Professor, Biomedical Sciences, University of Otago

Dr Joshua Agnew (Oire Niako, Mangaia, Aiutaki, Cook Islands)
Paediatrician, Tauranga Hospital

Dr Julie Winter-Smith ('Alaki Fonua Pelehake and Fatai, Tongatapu, Tonga)
Professional Teaching Fellow, University of Auckland

Dr Monica Liva (Mali, Samoa and Vaea/Avatele, Niue)
General Practitioner, Turuki Health Care

Dr Simone Watkins (Mo'ototua, Sāmoa)
Paediatrician, Senior Lecturer, Paediatrics, Child and Youth Health, University of Auckland; Senior Registrar, Health New Zealand, Te Tai Tokerau Northland

Dr Tua Taueetia-Su'a (Samoa)
Senior Research Fellow, Public policy & primary health care researcher, University of Auckland

Professor Sir Collin Tukuitonga KNZM (Advisor) (Alofi, Niue)
Associate Dean Pacific, Director, Centre for Pacific and Global Health, University of Auckland, Pacific Leadership Team advisor.

Pacific Leadership Team Report

Under the inaugural appointment of the Co-Director Pacific, new Pacific Leadership Team (PLT) members were appointed in July 2024. This boosted the membership from 3 to 7 members creating a much-needed pool of Pacific expertise across clinical, scientific, research and community.

A Pacific strategy was then implemented as the guiding document aligned with the goals and purpose of Pūtahi Manawa. See the Pacific Leadership Team's Strategic Plan on page 68.

The inaugural Co-Director Pacific and team Welcome at the Fale in October 2024, elevated the Pūtahi Manawa Pacific focus and created national visibility of Pacific leadership within the CoRE. The Pacific network was then established and commencement of a valuable Pacific database under construction. This was a significant priority to ensure national coverage for key Pacific leaders, researchers, health organisations and community, encouraging them to participate, engage and stay informed of the work for Pacific to improve heart health equity.

Focus was then directed to this network for Expressions of Interest for a Pacific IRM. This led to several interview sessions with the Pacific Leadership Team to establish suitable applicants working in the field of Rheumatic Heart Disease. Selected candidates were invited to submit a full proposal in December 2024, which closed on 21 February 2025.

In November 2024 the Co-Director Pacific and several PLT members attended the annual Pacific Medical Association (PMA) conference in Christchurch. PLT member Dr Josh Agnew led our 'Pūtahi Manawa' Pacific Heart Health lunchtime sessions featuring Pacific and international heart health researchers who presented their research to a full hall of delegates on both days. Fatu Malosi was also presented during our sessions. Not only did we receive invaluable feedback, but we were also able to build our Pacific network further.

This network now includes international and national leaders, such as Professor Asiata Dr Satupaitea Viali - Vice chancellor and President, Oceania University of Medicine, Moanaroa Pacific Research Network, Te Poutoko ora a Kiwa, BBM Motivation, The Cause Collective, Pacific Medical Association (PMA), Etu Pasifika, The Fono, Aniva Pacific Nurses Network, Pūmanawa, The Royal General Practitioners of NZ - Pacific Chapter, Vaka Tautua, Pacific Data Sovereignty Network and several Pacific Community groups and Health Centres throughout Aotearoa. This list continues to grow with Pacific researchers, academics and educators.

The Fatu Malosi student internship programme was supported by PLT, with ongoing interactions to ensure Pacific students receive the full benefit of such programmes established by the CoRE.

Pacific Leadership has provided important guidance on Pacific matters across the CoRE, working alongside some of the IRMs. They continue to set their direction and focus on the delivery of the Pacific strategy, acknowledging this will require resourcing. A new position has therefore been developed to support the Co-Director Pacific/Pacific Chair and PLT to carry out the work intended.

The foundation work carried out by PLT in the first five months since the appointment of the new Co-Director Pacific has been imperative for the success of the CoRE. Relationships built on Pacific values including respect and reciprocity will generate meaningful outcomes that are key to the success of Pacific and Pūtahi Manawa.

Finally, we acknowledge and thank our outgoing PLT members, Dr Corina Grey, Dr Amio Matenga-Ikihele and Professor Dianne Sika-Paotonu.

"O le Tele o Sulu e Maua ai Figota" (Samoan):

"Through collaboration the most difficult challenges can be overcome".

STRATEGIC PLAN | PACIFIC LEADERSHIP TEAM | 2025 to 2028

VISION

TO REDUCE PACIFIC HEART HEALTH INEQUITIES AND GROW THE PACIFIC HEALTH WORKFORCE TO IMPROVE PACIFIC HEART HEALTH OUTCOMES

PURPOSE

To protect, enhance and positively impact Pacific Peoples heart health through research excellence

OBJECTIVES

1. To ensure Pacific/Pacific Peoples/Pasifika (Diversity of communities and knowledge) are represented across Pūtahi Manawa Healthy Hearts Aotearoa NZ structure and functions to lead the CoRE for Pacific Heart Health.
2. Capacity and Capability: Develop pathways for Fatu Malosi and Pacific students to progress in heart health research to build the workforce, including pathways for more Pacific cardiologists.
3. Establish PLT processes:
   - High Quality Care: Connect the evidence to primary care/GPs to deliver what our communities deserve.
   - Launch a central Pacific Heart health platform through the life course.
   - Embed Pacific values, world views and methodologies within Pūtahi Manawa to protect Pasifika workforce and community.
4. Foster and support Pacific Heart Health Research excellence through establishing a genuine and purposeful Pacific funding strategy.
5. Connect Pacific research to inform policy and affect system change.

OUTCOMES

1. Establishment of the first Pacific Heart Health Centre in Aotearoa and the Pacific region.
2. Run the first annual Pacific Heart Health Symposium in Aotearoa including the Pacific region.
3. Establish and grow a collaborative and cohesive global network of Pacific partners, including researchers, clinicians, scientists and innovators to improve Pacific heart health equity.
4. Engagement with Pacific community to enact translational science and research and identify gaps across the heart health landscape.
5. Increased number of Pacific researchers.
6. Adequate renumeration for Pacific researchers.
7. Leadership to change policy, systems and barriers that obstruct Pacific advancement in Heart Health.
8. Create a pathway for GPs/Nurses in research and foster research opportunities.

VALUES

By Pacific, for Pacific Guided by the Fonofale Pacific Healthcare model, supported by four pou	**Pou Fa'aleagaaga** (Spiritual Wellbeing)	**Pou Fa'aletino** (Physical Wellbeing)	**Pou Mafaufau** (Mental wellbeing)	**Pou Isimea** (Other aspects of wellbeing)	**Te Tiriti O Waitangi** Acknowledge Māori as tangata whenua and committed to Te Tiriti.

Funding Panel Co-Chairs

Dr Anna Pilbrow, Senior Research Fellow, Christchurch Heart Institute, University of Otago and Deputy Head of Department for Medicine, University of Otago (Christchurch).

Dr Anna Pilbrow continues to co-lead the funding panels for Pūtahi Manawa.

Dr Sereana Naepi (Nakida, Natasiri, Fiji), Lecturer, School of Sociology, University of Auckland.

Dr Sereana Naepi joined us in 2024 from the School of Sociology, University of Auckland. Dr Naepi's expertise and research is in higher education, Pacific research methodologies, racism, decolonisation and Pacific communities' lived experiences in Aotearoa NZ. Her expertise in these areas is invaluable on our panel to ensure the research we fund truly embodies our funding principles.

We thank outgoing Funding Panel Co-Chair, Dr Corina Grey, for her work Co-Chairing our funding panel last year. Dr Grey's work at the Ministry for Pacific Peoples has left her with no time for the Co-Chair role. We wish Dr Grey all the best for the future, it has been an honour to have her Co-Chairing our panel.

Operations Team

Research Operations Manager – Linda Fotherby (Ngā Puhi, Airihi, Ingarihi)

Research Engagement Manager – Lisa Wong

Pou Tikanga (part-time) – Matua Joe Pihema (Ngāti Whātua Ōrākei)

Senior Research Operations Co-ordinator – Mei Bray

Research Operations Co-ordinator and Fatu Malosi Co-Lead – Nuseta Hope (Tuvalu - Funafuti and Nukulaelae, Tokelau - Atafu and Fakaofo and Samoa – Saleimoa)

Marketing and Communications Advisor – Tracey Kellett (Ngā Puhi, Pākehā)

Outreach and Engagement Lead (part-time) – Dr Anuj Bhargava

Kura Raumati Co-Lead (part-time) – Erina Korohina (Ngāti Porou)

Fatu Malosi Co-Lead (part-time) – Dr Julie Winter-Smith ('Alaki Fonua Pelehake and Fatai, Tongatapu, Tonga)

Our operations team has grown during 2024 to ensure we have the capacity to deliver the CoRE's strategic objectives. Our Research Operations Coordinator, Nuseta Hope, is now also co-leading our inaugural Pacific summer research programme, Fatu Malosi. We also welcomed four new members to the team and bid a temporary farewell to our Research Engagement Manager, Lisa Wong.

Mei Bray, Senior Research Operations Coordinator

We were very lucky to have Mei join our team in April 2024. Mei came to us from the School of Medical Sciences, where she was a Research Programme Coordinator. Mei has a wealth of experience in research support and with assisting researchers in both the pre-award and post-award spaces. Mei's main role for the Centre is to support our research funding administration through the whole life cycle, from requests for proposals, through the application process, awarding and contracting, to administrative support for our funded projects.

Tracey Kellett, Marketing and Communications Advisor

Tracey joined us in September 2024 as our inaugural Marketing and Communications Advisor. Tracey comes from a background in nutrition and health communications in the charity and NGO space.

Introduction from Tracey:
Ko Ngā Puhi me Pakeha ōku iwi
Ko Te Pōpoto toku hapū
I whānau mai au i Tūranga, I'm from the East coast of Te-Ika-a-Māui and reside in Tāmaki Makaurau. My experience as a registered nutritionist working in Māori health with whānau/aiga and long-term conditions has given me insight into the profound impacts of the health and social inequities in Aotearoa and a deep appreciation of the urgent need for a "business not as usual" approach to health.

I exist in this whenua because of a long-standing partnership agreement between Tangata Whenua and Tangata Tiriti and I'm committed to upholding the obligations of Te Tiriti whilst serving our Māori and Pacific communities.

Erina Korohina, Kura Raumati Co-Lead

Erina is an experienced researcher and registered nutritionist based at the Centre for Health in Tauranga. She leads one of our flagship Integrated Research Module projects, Te Ara Poutama. As part of this work, Erina and her team developed the Kura Raumati Māori summer research programme. Erina opened the Kura Raumati programme to Pūtahi Manawa's Māori summer research students, and joined the Pūtahi Manawa operations team to co-lead the programme with our Outreach Lead, Dr Bhargava. After a successful inaugural programme during the 2023/24 summer, Erina has co-led an even larger programme in 2024/25.

Dr Julie Winter-Smith, Fatu Malosi Co-Lead

Dr Winter-Smith is a professional teaching fellow at the University of Auckland and long-standing member of our Pacific Leadership Team. She completed her doctoral degree during 2024 for her research on "The epidemiology of cardiovascular disease among Pacific peoples in Aotearoa New Zealand". Julie joined the operations team in April 2024 as co-lead for our inaugural Pacific Summer Research programme, Fatu Malosi. Julie's excellent partnership with Nuseta has led to the successful completion of the Fatu Malosi programme over the 2024/25 summer period. Julie and Nuseta will continue to co-lead this programme for the 2025/6 summer.

Au revoir Lisa Wong

Our wonderful and much-loved Research Engagement Manager, Lisa Wong, has left us for a period to take up a secondment in Research Engagement within the University of Auckland's Communications and Engagement team from October 2024. We all miss her terribly; she has had such a seminal role in the development of Pūtahi Manawa and building the connections between us. We know Lisa will rise to the challenges of her new role and we wish her all the best for this career development opportunity.

Āpitihanga 1: Ngā Tohu Me Ngā Whiwhinganui | Appendix 1: Member Awards And Achievements

Professor Tasa Havea

Tasa Havea, Dean Pacific, Massey University and Pūtahi Manawa Board member, has been made a founding fellow of the new Pacific Academy of Sciences. The Pacific Academy will serve as a platform for Pacific scholars, creating a collective voice to address the pressing environmental and social challenges facing the region. It seeks to empower local scientists and Indigenous communities, recognising their unique knowledge and perspectives.

Dr Jamie-Lee Rahiri

Dr Jamie-Lee Rahiri (Ngāti Porou, Ngāti Whātua, Te Atihaunui-a-Pāpārangi), Pūtahi Manawa member and Kura Raumati supervisor, received a University of Auckland Early Career Research Excellence award for her work towards fairer policies and pathways to surgery for Māori communities.

Associate Professor Andrew Reynolds

Andrew Reynolds, Pūtahi Manawa Primary Investigator, was awarded a University of Otago Early Career Awards for Distinction in Research for his outstanding research achievements. Dr Reynolds' research focuses on lifestyle risk factors for non-communicable diseases like diabetes and heart disease. Dr Reynolds has also been named as the University of Otago 'Best New Supervisor of the Year'.

Professor Matire Harwood

Matire Harwood (Ngāpuhi, Ngāti Hine, Ngāti Rangi ki Moerewa), Pūtahi Manawa Primary Investigator and Māori Leadership Team member, was awarded the King's Service Medal this year for her pursuit of better health for Māori and her work during the Covid-19 pandemic. Matire has also been appointed as Deputy Dean of the Faculty of Medical and Health Sciences at Auckland University

Professor Julian Paton

Julian Paton, Pūtahi Manawa Co-Director, was awarded the prestigious University of Auckland's Gluckman Medal for his contributions to heart research. Professor Paton has made seminal contributions to the understanding of heart disease and heart failure and, more recently, has applied his discoveries to the development of an innovative pacemaker to be used to reverse the process of heart failure. Professor Paton was also one of two inauguaral recipients of the Partridge Laureate programme award.

Professor Rod Jackson

Rod Jackson was elected to the Academy of the Royal Society Te Apārangi as a Ngā Ahurei a Te Apārangi Fellow for his work in advancing the field of epidemiology and undertaking world-class epidemiological research.

Associate Professor Justine Camp

Justine Camp (Kāi Tahu, Kāti Mamoe, Waitaha), Pūtahi Manawa Māori Leadership Team member, has been appointed as the inaugural Associate Pro Vice Chancellor Māori at the University of Otago. Pro-Vice-Chancellor Health Sciences, Associate Professor Megan Gibbons at the University of Otago said, "As a strong wāhine Māori with a focus on improving health outcomes for her people, [Justine] is well placed to support us all on our journey. [Dr Camp] will guide our aspirations as we work to become a Te Tiriti-led University."

Associate Professor Justine Camp

Matua Joe Pihema

Pūtahi Manawa Pou Tikanga, Joe Pihema (Ngāti Whātua), was appointed to the senior leadership position of Poumatua (Head of Kaupapa Māori) at Auckland Art Gallery. As Poumatua, Pihema will be responsible for progressing the Gallery's commitment to supporting and promoting toi Māori, uplifting tikanga practices and māutauranga Māori, and enhancing engagement with Kaupapa Māori partners and communities.

Professor Martin Stiles

Martin Stiles was elected as Chair of the New Zealand Committee of the Cardiac Society of Australia and New Zealand.

Academic promotions

Congratulations to our researchers who received promotions to Professor or Associate Professor in 2024.

Promotion to Professor

Azam Ali, University of Otago

Sir Collin Tukuitonga, University of Auckland

Martin Stiles, University of Auckland

Matire Harwood, University of Auckland

Rajesh Katare, University of Otago

Susan Wells, University of Auckland

Promotion to Associate Professor

Anneka Anderson, University of Auckland

Sereana Naepi, University of Auckland

Susannah Smith, University of Canterbury

Āpitihanga 2: Ngā Mema O Pūtahi Manawa | Appendix 2: Pūtahi Manawa members

NAME	ORGANISATION
RESEARCHERS	
Allamanda Faatoese	University of Otago
Amelia Power	University of Auckland
Ana Sayegh	University of Auckland
Andree Pearson	University of Otago
Andrew Lowe	AUT
Andrew Reynolds	University of Otago
Anna Pilbrow	University of Otago
Anna Ponnampalam	University of Auckland
Anna Rolleston	The Centre for Health
Anneka Anderson	University of Auckland
Azam Ali	University of Otago
Barry Palmer	Massey University
Brendon Roxburgh	University of Otago
Bridget Dicker	Hato Hone St John
Bruce Smaill	University of Auckland
Carlos Meza	Massey University
Carol Bussey	University of Auckland
Carolyn Barrett	University of Auckland
Cassie Withey-Rila	University of Otago
Chris Bullen	University of Auckland
Chris Charles	University of Otago
Chris Pemberton	University of Otago
Collin Tukuitonga	University of Auckland
Cristin Print	University of Auckland
Daryl Schwenke	University of Otago
David Crossman	University of Auckland
Debbie Zhao	University of Auckland
Ekta Dahiya	AUT
Ellen Woodcock	University of Otago
Erina Korohina	The Centre for Health

NAME	ORGANISATION
Evie Templeton	University of Otago
Fiona McBryde	University of Auckland
Gael Mearns	AUT
Gerry Devlin	Heart Foundation
Gonzalo Maso Talou	University of Auckland
Greg Jones	University of Otago
Helen Eyles	University of Auckland
Ivan Sammut	University of Otago
James Fisher	University of Auckland
James Hewett	University of Canterbury
Janice Chew-Harris	University of Otago
Janine Paynter	University of Auckland
Jichao Zhao	University of Auckland
Jillian Cornish	University of Auckland
Jim Cotter	University of Otago
Joanne Harrison	University of Otago
Joel Rindelaub	University of Auckland
Johanna Montgomery	University of Auckland
Julia Shanks	University of Auckland
Julian Paton	University of Auckland
Julie Winter-Smith	University of Auckland
Justine Camp	University of Otago
Karaitiana Taiuru	Taiuru & Associates Ltd
Karen Brewer	University of Auckland
Kataraina Davis	Heart Foundation
Kate Thomas	University of Otago
Katrina Poppe	University of Auckland
Kenneth Tran	University of Auckland
Kim Mellor	University of Auckland
Kylie Short	University of Canterbury
Larry Chamley	University of Auckland
Lorraine Skelton	Te Whatu Ora
Lynley Lewis	University of Otago
Marcus Ground	
Marie-Louise Ward	University of Auckland
Mark Trew	University of Auckland

NAME	ORGANISATION
Martyn Nash	University of Auckland
Megan Leask	University of Otago
Michael Kingsley	University of Auckland
Michael Williams	University of Otago
Michelle Brett	Hato Hone St John
Michelle Munro	University of Otago
Mridula Pachen	University of Auckland
Nic Daniels	University of Otago
Nicola Scott	University of Otago
Nikki Earle	University of Auckland
Olivia Harrison	University of Otago
Pete Jones	University of Otago
Polona Le Quesne Stabej	University of Auckland
Regis Lamberts	University of Otago
Rod Jackson	University of Auckland
Rohit Ramchandra	University of Auckland
Rory Miller	University of Otago
Sandra Hanchard	University of Auckland
Sandy Lau	University of Auckland
Sarah Appleby	University of Otago
Sarah Harris	University of Otago
Sarah Penney	AUT
Sean Coffey	University of Otago
Shanthi Ameratunga	University of Auckland
Silmara Gusso	University of Auckland
Simon Malpas	University of Auckland
Simone Macmil	University of Otago
Simone Watkins	University of Auckland
Susan Wells	University of Auckland
Suzanne Pitama	University of Otago
Takiwai Russell-Camp	University of Otago
Taria Tane	University of Auckland
Tonja Emans	University of Auckland
Zoe Ward	University of Auckland
Daniel Cornfeld	Mātai Medical Research Institute
Susannah Smith	University of Canterbury

NAME	ORGANISATION
Tracie Mafileo	Massey University
Adam Dennison	Te Whatu Ora
Ajay Iyengar	Te Whatu Ora
Andrew Kerr	Te Whatu Ora
Manar Khashram	Te Whatu Ora
Mark Greenslade	Te Whatu Ora
Martin Stiles	Te Whatu Ora
Matire Harwood	University of Auckland
Nigel Wilson	Te Whatu Ora
Nishith Patel	Te Whatu Ora
Robert Doughty	University of Auckland
Kava Fuavao	University of Auckland
Jyotishna Mani	University of Auckland
Sam Gibbs	University of Otago
Simone Cree	University of Auckland
OTHER MEMBERS	
Misty Edmondz	Iwi United Engaged
Soteria Ieriemia	Pacific-i Ltd
Clare O'Donnell	Te Whatu Ora
Corina Grey	Ministry of Pacific Peoples
Gareth Mackin	Te Whatu Ora
Jithendra Somaratne	Te Whatu Ora
Mark Richards	Te Whatu Ora
Mataroria Lyndon	University of Auckland
Nigel Lever	Te Whatu Ora
Sarah Fairley	Te Whatu Ora
Stacey Neilson	Te Whatu Ora
Steve Waqanivavalagi	Te Whatu Ora
AFFILIATE MEMBERS	
Anuj Bhargava	University of Auckland
Carlton Irving	Ngā Ringa Ngaio Whakaora
Anne-Marie Jackson	Rehutai

Āpitihanga 3: Pūrongo-ā-pūtea | Appendix 3: Financial report

	ACTUALS
Funding Received	
Tertiary Education Commission grant	$5,400,000
Surplus carried forward	$9,276,079
Total funding received	**$14,676,079**
Expenditure	
Salaries Funded by CoRE	**$1,804,000**
Other Costs	
Overheads	$1,285,000
Project costs	$1,985,000
Travel	$234,000
Postgraduate students	$7,000
Equipment depreciation/rental	0
Subcontractor(s) specified	0
Extraordinary expenditure	0
Total other costs	**$3,511,000**
Total expenditure	**$5,315,000**
Net surplus/(deficit)	**$9,361,000**

Note: While project-to-life cash surplus is high, with the new budget proposed for the next four years, the spend rate will increase significantly in FY25 and FY26 with the aim to use of the surplus by the end of 2026.

Āpitihanga 4: Ngā Whakatairanga | Appendix 4: In the media

A number of our members featured in the news media during 2024 either for their work or by contributing their expertise to debates on health and equity in Aotearoa NZ.

Dr Simone Watkins comments on the Government's proposed review of the Māori and Pacific Admissions Scheme for medical and health students. https://www.stuff.co.nz/nz-news/350148940/review-maori-pacific-doctor-pathway-unnecessary-use-resources-academics-say

Dr Mataroria Lyndon and Sir Collin Tukuitonga offer their insights on the obesity crisis in the documentary *Heavyweight with Dave Letele: Tipping the Scales.* https://www.facebook.com/UniofAkl/posts/two-university-of-auckland-academics-star-in-documentary-on-obesity-on-tvnz-seni/1034152238758114/

Dr Karen Brewer, Dr Mataroria Lyndon and Dr Sandra Hanchard present at Grand Round, The Grand Round: Pathways to health equity and cultural safety at Te Whatu Ora. https://www.tewhatuora.govt.nz/corporate-information/news-and-updates/httpswww-teakawhaiora-nzen-nznewsthe-grand-round-pathways-to-health-equity-and-cultural-safety

Dr Sereana Naepi leads an international Indigenous women research cohort to complete special edition of the Knowledge Makers Journal - ""Indigenous Women, Indigenous Peoples' Food & Knowledge Systems, and Climate Action". www.fao.org/indigenous-peoples/news/detail/International-Indigenous-Women-Research-Cohort-Completes-Special-Edition-of-the-Knowledge-Makers-Journal-Special-Edition-Indigenous-Women-Indigenous-Peoples-Food-Knowledge-Systems-and-Climate-Action-/en

Dr Simone Watkins writes an opinion piece for Newsroom. https://newsroom.co.nz/2024/03/31/one-way-out-of-an-inequitable-health-system/

Coverage of the Pūtahi Manawa sponsored trip of 19 Pacific students from Amanaki Stem Academy to Auckland to learn about the opportunities in STEM subjects.
www.auckland.ac.nz/en/news/2024/05/01/pacific-high-school-students-hit-the-road-to-university.html
https://www.mpp.govt.nz/news-and-events/news-from-2/academy-continues-to-inspire-next-generation-of-stem-enthusiasts/

Dr Karen Brewer talks to Waatea News about Manawataki Fatu Fatu, a major study in the heart health care. https://waateanews.com/2024/06/12/karen-brewer-co-director-maori-at-putahi-manawa-healthy-hearts/

Dr Simone Watkins writes for Newsroom on "Levelling the playing field for Indigenous people and ethnic minorities". https://newsroom.co.nz/2024/07/10/levelling-the-playing-field-for-indigenous-people-and-ethnic-minorities/

Dr Martin Stiles is interviewed on Radio NZ about the Government's proposed health targets and cuts to back-office staff. https://www.rnz.co.nz/national/programmes/saturday/audio/2018955524/dr-martin-stiles-on-health-targets

Professor Rod Jackson "Just being a tiny bit racist is enough" on E-tangata. An extract from his essay for Leave Your Big Boots at the Door, *17 Pākehā discuss racism against Māori in Aotearoa, and what they're doing to prevent it.* https://e-tangata.co.nz/reflections/just-being-a-tiny-bit-racist-is-enough/

Dr Sereana Naepi comments on cuts to science funding in a Radio NZ article "Asleep at the wheel': Science group calls on Minister to step up over issues in sector". https://www.rnz.co.nz/news/political/534889/asleep-at-the-wheel-science-group-calls-on-minister-to-step-up-over-issues-in-sector

Sir Collin Tukuitonga on the launch of the Pacific Islands Report on Building Resilient Health Systems. https://samoanewshub.com/2024/11/27/resilient-health-systems-in-the-pacific-sir-collin-tukuitonga/

Matua Joe Pihema on kapa haka groups who are mobilising to draft submissions on the government's proposed Treaty Principles Bill. https://www.1news.co.nz/2024/12/11/kapa-haka-mobilise-to-submit-on-treaty-principles-bill/

Associate Professor Bridget Dicker writes for The Conversation about a new emergency procedure for cardiac arrests in NZ that aims to save more lives. https://theconversation.com/a-new-emergency-procedure-for-cardiac-arrests-aims-to-save-more-lives-heres-how-it-works-221979

Āpitihanga 5: Ngā Tānga Tiketike | Appendix 5: Publication highlights

This is a selection of 63 publications from 265 total publications reported by our members.

AUTHORS	JOURNAL NAME	ARTICLE TITLE	VOLUME	PAGES
Abolins-Thompson H, Henare KL, Simonson B, Chaffin M, Ellinor PT, Henry C, Haimona M, Aitken J, Parai T, Elkington B, Rongo M, Danielson KM, Leask MP	Frontiers in Research Metrics and Analytics	Culturally responsive strategies and practical considerations for live tissue studies in Māori participant cohorts	9	1468400
Aitken-Buck HM, Moore MK, Bingham KT, Coffey S, Tse RD, Lamberts RR	Forensic Science, Medicine and Pathology	Association of epicardial adipose tissue volume with heart weight in post-mortem cases	-	-
Ashton JE, Prince B, Sands GB, Argent L, Anderson M, Smith J, Tedoldi A, Ahmad AM, Baddeley D, Pereira A, Lever N, Ramanathan T, Smaill B, Montgomery JM	Journal of Physiology	Electrophysiology and 3D-imaging reveal properties of human intracardiac neurons and increased excitability with atrial fibrillation	-	-
Boeddinghaus J, Doudesis D, Lopez-Ayala P, Lee KK, Koechlin L, Wildi K, Nestelberger T, Borer R, Miró Ò, Martin-Sanchez FJ, Strebel I, Rubini Giménez M, Keller DI, Christ M, Bularga A, Li Z, Ferry AV, Tuck C, Anand A, Gray A, Mills NL, Mueller C; CoDE-ACS and APACE Investigators	Circulation	Machine Learning for Myocardial Infarction Compared With Guideline-Recommended Diagnostic Pathways	149(14)	1090-1101
Bray JE, Grasner JT, Nolan JP, Iwami T, Ong MEH, Finn J, Perkins GD	Circulation	Cardiac arrest and cardiopulmonary resuscitation outcome reports: 2024 update of the Utstein Out-of-Hospital Cardiac Arrest Registry Template	150(9)	e203-e223
Brewer KM, Taueetia-Su'a T, Hanchard S, Vaka S, Ameratunga S, Tane T, Harwood M	Australian and New Zealand Journal of Public Health	Māori and Pacific families' experiences and perspectives of cardiovascular care; A qualitative study.	48(3)	100149
C Wong, H.F. Tse, E.K. Choi, T.F. Chao, D Inou, K Poppe, E Tan, Y Yuniadi, E Fadreguilan, S Johar, N.Y. Chan, N Namboodiri, S.M. Hossain, H He, R Chantrarat, A.R. Adb Ghani, N Davakhuu, N.E.W. New, G Irfan, R.R. Minh, R Gunawardena, P Sanders	Nature Rev Cardiol	The burden of atrial fibrillation in the Asia Pacific region	-	-
Chan DZ, Doughty RN, Lund M, Easton A, Poppe KK, Kaur D, Sinclair L, Chirnside J, Malone C, McGrinder H, McLachlan A, Scott J, Roberts J, Wasywich C, Devlin G, Harwood M, Wells S, Harrison W, Kerr AJ	N Z Med J	ANZACS-QI Heart Failure Registry: a new approach using age-stratified sampling of hospital discharges to guide quality improvement (ANZACS-QI 79)	137(1599)	88-102
Chandel, T., Miranda, V., Lowe, A., & Lee, T. C.	Technologies	Blood pressure measurement device accuracy evaluation: Statistical considerations with an implementation in R	12(4)	-
Chang JW-H, Chen S, Hamilton C, Shanks J, Pachen M, Pauza A, George B, Ramchandra R	Am J Physiol Heart Circ Physiol	Characterization of a novel ovine model of hypertensive heart failure with preserved ejection fraction	327(6)	H1490-H1502
Chew-Harris J, Frampton C, Kuan WS, Ibrahim I, Appleby S, Chan SP, Li S, Liew OW, Adamson P, Troughton R, Chong JPC, Tan LL, Lin W, Ooi SBS, Richards AM, Pemberton CJ	Int. J. Cardiol.	Prognostic performance of soluble urokinase plasminogen activator receptor in Asian and Western patients with acute breathlessness	-	-
Dharmaprani D, Tiver K, Salarishahrbabaki S, Jenkins EV, Chapman D, Strong C, Quah JX, Ortonchev I, Oloughlin L, Mitchell L, Tung M, Waheed D, Stoya N, Aguilar M, Niederer SA, Roney CH, Nash MP, Clayton RH, Nattel S, Ganesan AN	Circulation: Arrhythmia and Electrophysiology	Observable atrial and ventricular fibrillation episode durations are conformant with a power law based on system size and spatial synchronization.	17(7)	e012684
Dicker B, Beck B, Smith K, Nehme Z, Bernard S	American Journal of Emergency Medicine	Impact of ambulance response times on survival in out-of-hospital cardiac arrest	72	102004
Dicker B, Smith K, Beck B, Pearson J, Tjelmeland I, Raatiniemi L, Grasner JT	Journal of the American Heart Association	Understanding the impact of bystander defibrillation in out-of-hospital cardiac arrest across international resuscitation registries	13(4)	e030177
Dillon JR, Zhao D, Babarenda Gamage TP, Quill GM, Wang VY, Edwards NC, Sutton TM, Lowe BS, Legget ME, Doughty RN, Young AA, Nash MP	Lecture Notes in Computer Science	Automated Segmentation of the Right Ventricle from 3D Echocardiography Using Labels from Cardiac Magnetic Resonance Imaging.	14507	119-129

AUTHORS	JOURNAL NAME	ARTICLE TITLE	VOLUME	PAGES
Doughty R N, Devlin G, Wong S, et al.	N Z Med J	2023 Position Statement on Improving Management for Patients with Heart Failure in Aotearoa New Zealand.	137	93-9
Earle NJ, Doughty RN, Devlin G, White H, Riddell C, Choi Y, Kerr AJ, Poppe KK	Eur Heart J Acute Cardiovasc Care	Sex differences in outcomes after acute coronary syndrome vary with age: A New Zealand national study	13(3)	284-292
Earle NJ, Winbo A, Crawford J,...Stiles MK,...Skinner JR	Circ Heart Fail	Genetic Testing Yield and Clinical Characteristics of Hypertrophic Cardiomyopathy in Understudied Ethnic Groups: Insights from a New Zealand National Registry	17	e010970
Emans, T.W., Moraes, D.J.A., Ben-Tal, A., Barrett, C.J., Paton, J.F.R., McBryde, F.D.	Hypertension	The Forgotten Circulation: Reduced mesenteric venous capacitance in hypertensive rats is improved by decreasing sympathetic activity	81(4)	823-835
Feng, Y., Lau, S., Chen, Q., Oyston, C., Groom, K., Barrett, C.J., Chamley, L.W.	Am J Obstet Gynecol	Normotensive placental extracellular vesicles provide long-term protection against hypertension and cardiovascular disease	23	350.e1-24
Gee W, Yang JY, Gentles T, Bastin S, Iyengar AJ, Chen J, Han DY, Cordina R, Verrall C, Jefferies C; Australian and New Zealand Fontan Registry	Int J Cardiol Congenit Heart Dis	Segmental MRI pituitary and hypothalamus volumes post Fontan: An analysis of the Australian and New Zealand Fontan registry	18	100549
Gibson, R., Lowe, H., Korohina, E., & Rolleston, A.	Frontiers in Sleep	Māori perspectives on sleep and aging	3	1410856
Gomes S, Mackay S, Gerritsen S, Eyles H.	Journal of Nutritional Science	The development of sodium reduction targets for New Zealand fast-foods and a comparison with the current sodium contents of products	19	13:e41
Greif R, Bray JE, Djärv T, Drennan IR, Liley HG, Ng KC, Morrison LJ	Circulation	2024 International consensus on cardiopulmonary resuscitation and emergency cardiovascular care science with treatment recommendations	150(24)	e580-e687
Groenewald A, Zhang L, Power AS	J Physiol	HFrEF and HFpEF: are mitochondria at the heart of the matter?	-	-
Habecker BA, Bers DM, Birren S, Chang R, Herring N, Kay MW, Lii D, Mendelowitz D, Mongillo M, Montgomery JM, Ripplinger CM, Tampakakis E, Winbo A, Zaglia T, Zeltner N, Paterson DJ	Journal of Physiology	White paper: Molecular and Cellular Neurocardiology in Heart Disease	-	-
Hanchard S, Brewer KM, Taueetia-Su'a T, Vaka S, Ameratunga S, Tane T, Grey C	The New Zealand Medical Journal	Navigating the long journey of heart failure—experiences of Māori and Pacific peoples.	137(1603)	25-32
Harwood M, Dicker B, Kool B, Reid P	Advances in Health Sciences Education	Indigenous perspectives on prehospital emergency care: A scoping review	29(4)	789-804
Herring N, Ajijola OA, Foreman RD, Gourine AV, Green AL, Osborn JW, Paterson DJ, Paton JFR, Ripplinger CM, Smith C, Vrabec T, Wang H-J, Zucker IH, and Ardell JL.	Journal of Physiology	White Paper: Neurocardiology - translational advancements and potential.	-	-
Kamsani SH, Emami M, Young GD,...Stiles MK,...Sanders P	Heart Rhythm	First-in-human experience of high-energy ElectroPulse pulsed field ablation: Acute results for pulmonary veins and posterior wall isolation	-	-
Krstic AM, Jones TLM, Power AS, Ward M-L	Biomedicines	The Monocrotaline Rat Model of Right Heart Disease Induced by Pulmonary Artery Hypertension.	12(9)	1944
Langridge FC, Paynter J, Ghebreab L, et al.	BMC Public Health	A study of Samoan, Tongan, Cook Island Māori, and Niuean infant care practices in the Growing Up in New Zealand study	24	166
Lim ETA, Jardine D, Frampton C, Pemberton C, Troughton R, Roake J, Adib Khanafer	J Vasc. Res.	Sympathetic nerve activity following Acute Type B Aortic Dissection: a pilot study	28	Jan-14
M Roman, J Miksza, F Lai, S Sze, K Poppe, R.N. Doughty, I.B. Squire, G Murphy	Eur Heart J	Revascularisation is associated with short- and long-term survival benefits in people with Acute Coronary Syndrome at intermediate and high risk of frailty	-	-
Major, T.J., Takei, R., Matsuo, H., Leask, M.P. et al.	Nature Genetics	A genome-wide association analysis reveals new pathogenic pathways in gout	-	-
Marshall PW, Benatar JR, Hennessy A, Lindbom T, Gallagher C, Khan-Niazi I, et al.	International Journal of Nursing Studies	Long-term patient outcomes from a multidisciplinary cardiac rehabilitation programme with integrated nurse specialist support: A retrospective cohort study.	161	104945
Matenga-Ikihele A, Fa'alili-Fidow J, Tiakia D, et al.	Journal of Primary Health Care	Respiratory research with Māori and Pacific children living in Aotearoa, New Zealand: A systematic review and narrative synthesis	-	(in press)
Mellor KM, Varma U, Koutsifeli P, Daniels LJ, Benson VL, Annandale M, Li X, Nursalim Y, Janssens JV, Weeks KL, Powell KL, O'Brien TJ, Katare R, Ritchie RH, Bell JR, Gottlieb RA, Delbridge LMD.	J. Mol. Cell. Cardiol.	Myocardial glycophagy flux dysregulation and glycogen accumulation characterize diabetic cardiomyopathy	189	83-89

AUTHORS	JOURNAL NAME	ARTICLE TITLE	VOLUME	PAGES
Meng S, Al-Kaisey AM, Parameswaran R, Sunderland N, Budgett DM, Kistler PM, Smaill BH, Kalman JM	JACC Clin Electrophys	Pulmonary veins function as echo chambers in persistent atrial fibrillation: Circuitous reentry generates outgoing wavefronts	-	-
Moore MK, Jones GT, McCormick SM, Williams MJA, Coffey S	Eur J Prev Cardiol	Association between lipoprotein(a), LPA genetic risk score, aortic valve disease and subsequent major adverse cardiovascular events	31	1303-11
Munro, M.L., Gonano, L.A.	Circulation Research	On the mend: Atrial tubulogenesis after tachypacing-induced heart failure	135(7)	755-757
O'Neill, M, Ng, C., Aizawa, T, ... Earle NJ, et al.	Circulation	Multiplexed Assays of Variant Effect and Automated Patch-clamping Improve KCNH2-LQTS Variant Classification and Cardiac Event Risk Stratification	-	-
Paterson MA, Pilbrow AP, Frampton CH, Cameron VA, Troughton RW, Pemberton CJ, Lund M, Devlin GP, Richards AM, Doughty RN, Palmer BR	European Journal of Heart Failure	Plasma soluble fms-like tyrosine kinase-1, placental growth factor, and vascular endothelial growth factor system gene variants as predictors of survival in heart failure.	26(8)	1804-13
Penney S, Dicker B, Harwood M	Journal of Primary Health Care	Cultural safety in paramedic practice: Experiences of Māori and their whānau who have received acute pre-hospital care for cardiac symptoms from paramedics	16(2)	180-189
Pirker T, Keys T, Byers M, Gall E, Frampton C, Montecillo J, Pham T, Adamson P, Richards AM, Pemberton CJ, Chew-Harris J	Circ. Res.	Novel cardioprotection by soluble urokinase plasminogen activator receptor (suPAR) in myocardial ischaemia-reperfusion injury	-	-
Plunkett MJ, Sayegh ALC, McWilliams TJ, Sithamparanathan S, Paton JFR, Fisher JP	European Respiratory Journal	Peripheral chemoreflex suppression improves ventilatory efficiency and exercise duration in pulmonary arterial hypertension patients with elevated peripheral chemoreflex sensitivity.	64(1)	2400307
Rademaker MT, Scott NJA, Charles CJ, Richards AM	Journal of the American College of Cardiology: Heart Failure	Combined inhibition of phosphodiesterases 5 and 9 in experimental heart failure	12	100-113
Rahmani M, Pham T, Crossman DJ, Tran K, Taberner AJ, Han JC	Scientific Reports	Sex differences in cardiac energetics in the rat ventricular muscle	14(1)	31242
Sandiford P, Poppe KK, Grey C, et al.	Heart, Lung & Circulation	The Prevalence and Management of Atrial Fibrillation in New Zealand Māori Detected through an Abdominal Aortic Aneurysm Screening Program.	-	-
Sayegh AC, Plunkett MJ, Babbage T, Dawes M, Paton JFR, Fisher JP	J Physiol	Peripheral chemoreflex restrains skeletal muscle blood flow during exercise in participants with treated hypertension.	-	-
Scott NJA, Charles CJ, Prickett TCR, Frampton CM, Richards AM, Rademaker MT	Journal of the American Heart Association	Phosphodiesterase 9-inhibition combined with valsartan and with sacubitril/valsartan in experimental ovine heart failure	-	-
Short, K., Shanks, J., Crabtree, S.	PROSPERO	Exploring Women's Heart Health in Aotearoa New Zealand: A Comprehensive Rapid Review	-	CRD42024600029
Teramoto K, Tay WT, Tromp J, et al.	Journal of the American Heart Association	Longitudinal NT-proBNP: Associations With Echocardiographic Changes and Outcomes in Heart Failure.	13(9)	e032254
Trigg J., Rich J., Williams E., Baker A., Bauld L., Borland R., et al.	Drug and Alcohol Review	A qualitative study of using nicotine products for smoking cessation after discharge from residential drug and alcohol treatment in Australia	43	5:1116-1131
Waqanivavalagi S, Gerneke D, Ground M, Cornish J, Milsom P	Heart Lung and Circulation	Microcomputerised Tomography of Biological Scaffolds for Cardiac Surgery: Development of a Novel Imaging Methodology.	33	s2610
Warnakulasuriya T, George B, Lever N, Ramchandra R.	Clin Auton Res	Mechanical circulatory support reduces renal sympathetic nerve activity in an ovine model of acute myocardial infarction	-	In Press, 2024 Nov 27
Watkins S, Gentles T., Percival T., Brown R., Sadler L., Ward K., Gorinski R., Crengle S., Stein-de Laat M., Cloete E., Bloomfield F.H.	BMC Health Services Research	Parent and healthcare professional experiences of critical congenital heart disease in New Zealand to advance health equity.		
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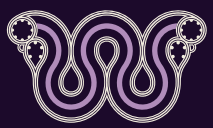

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