

Annual Report Pūrongo ā-Tau 2020

For the year ended 30 June 2020

Presented to the House of Representatives pursuant to Section 38 of the Health Research Council Act 1990 and Section 150(3) of the Crown Entities Act 2004

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Foreword from our chair

Kupu Takamua Nā te Heamana

The unprecedented global outbreak of SARS-COV-2 - the virus causing the illness COVID-19 - showed why investment in health research is so vital to society. Within weeks of the outbreak in early 2020, the international research community had responded, identifying the virus, sequencing its DNA and developing vaccines for trial.

Here in New Zealand, the Health Research Council of New Zealand (HRC) and the Ministry of Health immediately partnered to offer millions in funding to respond to the COVID-19 threat and strengthen our country's response to emerging infectious disease threats. Despite only having a couple of weeks' notice, the HRC received 67 applications for our COVID-19 rapid response funding call and were able to fund 13 projects, some of which were able to inform the government's response to the outbreak within months. A huge thank you to our health research community for their amazing response to this call. The effects of this outbreak will last for many years to come, and we know that we will need research to provide sound evidence of the effectiveness of our responses and interventions if we are to be prepared for future infectious disease outbreaks.

It's been a significant year for health research in New Zealand for other reasons, too. In late 2019 we, together with the Ministry of Health and Ministry of Business, Innovation and Employment, launched the New Zealand Health Research Prioritisation Framework after widespread consulation with New Zealanders. This framework will drive New Zealand health research investment decisions from now until 2027, ensuring that research efforts accross the country are aligned and designed to address areas of highest need.

We have already begun the process of aligning our Health Delivery Investment Round to this Framework. In December 2019, we launched phase 1 of the roll out of our new health delivery research funding opportunities to enable a broader range of clinical and non-clinical health professionals to engage in health delivery research.

Our new Health Sector Research Collaboration Grants attracted great interest from district health boards across the country keen to increase their engagement in health delivery research. We look forward to extending this pilot in the future to other health providers, including primary care and community, and Māori and Pacific providers.

In February 2020, Ngāti Whātua invited HRC staff to Örākei Marae to welcome our new Chief Executive, Professor Sunny Collings. With the COVID-19 outbreak gathering momentum at the time, Sunny had little time to aquaint herself with her new job; however, she has done a remarkable job getting up to speed in trying circumstances. Her extensive clinical, research and leadership skills, and her deep commitment to advancing Maori and Pacific health, will help guide the HRC as we maintain an unwavering focus on improving the health of all New Zealanders and reducing long-standing inequalities in health.

This Annual Report is the last against our Statement of Intent 2017-2021. We are proud of our accomplishments over this period and look forward to making an even greater contribution in line with our refreshed aspirations for 2021 onwards.

Finally, this year the HRC celebrates 30 years of being a leader in health research in New Zealand. Over this time, we are proud to have supported research that has saved thousands of lives - from the New Zealand Cot Death Prevention Programme that halved mortality rates in two years to producing the world's first vaccine against Streptococcus pyogenes, one of the bacteria which causes scarlet fever and rheumatic fever - the research we fund is making a difference.



From our chief executive Nā tō mātou Tumu Whakarae

It is my great pleasure to present the HRC's Annual Report 2020, my first as chief executive.

My journey at the HRC began in a whirlwind. Just one week into the role, I attended the World Health Organization conference in Geneva to discuss the international research response to COVID-19. On my return, the HRC and Ministry of Health worked with urgency to get a COVID-19 rapid response funding call out to our health research community.

I was incredibly proud of the way HRC staff rallied around to develop this rapid response call in record time. A task that would normally take many months was condensed into mere weeks. New HRC assessment processes also had to be developed at pace as the COVID-19 crisis deepened, all the while maintaining our extremely high standards for funding excellent research and quality assurance. I am also immensely grateful for the way in which HRC staff and assessing committee members adapted to such tight timelines and new ways of working remotely in the midst of a nationwide lockdown. Our collective response to this crisis gives me confidence that we can generate the knowledge needed to respond to future crises faster than ever before.

This year we have also ramped up our commitment to advancing Māori health and improving health equity - both key goals for the government under the New Zealand Health Research Prioritisation Framework and ones that underpin all that we do.

In August 2019, we introduced new Māori Health Advancement criterion for research proposals in recognition that all health research, to varying degrees, can tangibly improve Maori health and wellbeing and reduce inequities. The new criterion was first introduced for our 2020 Programme funding round and will in time be rolled out for all HRC funding opportunities. To support researchers in describing how their proposed research fits within the criterion, we also produced new Maori Health Advancement Guidelines. The results in this year's annual report show that we have a great base to build upon when it comes to achieving health equity in Aotearoa.

In closing, I feel honoured to be leading an organisation where the staff are so passionate about providing the best level of service they can to help New Zealand become a world-leading health research system.

Ngā mihi.



Professor Sunny Collings HRC Chief Executive







Ā mātou mahi

We are here to improve the health and wellbeing of all New Zealanders through our investment in highquality, high-value research that delivers far-reaching impact within the health and science landscape.

The Minister of Health is responsible for the HRC and appoints the 10-member governing Council. Parliament appropriates funding for the HRC through Vote Research, Science and Technology, which is administered by the Minister of Science, Research and Innovation.

The Health Research Council Act 1990 established a number of key statutory functions, including the following:

- · Advising the Minister of Health on national health research policy
- · Advising on health research priorities for New Zealand
- · Initiating and supporting health research
- Fostering the recruitment, training and retention of health researchers in New Zealand
- · Maintaining a safe and ethical health research environment, including ensuring the safety of large clinical trials.

Together with the Ministry of Health and Ministry of Business, Innovation and Employment, the HRC has a leading role in implementing New Zealand's first unified set of health research priorities. In addition, each year the Minister of Health and Minister of Research, Science and Innovation set out what areas they would like the HRC to focus on. In 2019–2020, we were asked to focus on some key areas for the government, including:

- Excellence: focusing on high quality, excellent research
- · Equity and diversity: addressing inequity, embracing diversity, and promoting an inclusive society
- · Impact: funding research with the potential for high-impact and a strong line of sight to the eventual benefits for society

- Connection: initiating and strengthening collaborations that leverage international science and innovation that will benefit New Zealand
- · Leadership: strengthening our leadership role in the health research sector and fostering a strong and diverse research workforce
- · 'One Health': working to develop strong multi-sectoral collaborations to achieve optimal health outcomes for people, animals and the environment
- System-wide approaches: working closely with the Ministry of Health and district health boards to strengthen system-wide approaches to health research
- National Science Challenges: continuing to support the work of the National Science Challenges and aligning with those of relevance
- The New Zealand Health Research Strategy: promoting and implementing the New Zealand Health Research Strategy across the health sector.

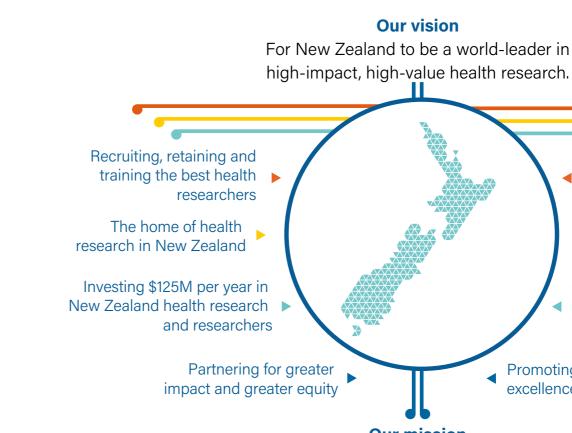
In this Annual Report, we focus on highlighting what we have achieved in these key areas

Investing in excellence, innovation and impact

We invest in research that improves the quality, costeffectiveness and sustainability of New Zealand's health system, and contributes to disease prevention and living well. We balance high-risk novel research (which contributes to our knowledge banks and has the potential to be disruptive) with the type of research that brings tangible and direct benefits to New Zealanders. We also provide leadership to the health research sector and partner with ministries, non-government and philanthropic organisations to maximise the impact of our investment.

The research that we fund falls under one of four key research investment streams:

· Health and Wellbeing - preventing illness and injury and reducing the burden on our health system. Keeping New Zealanders healthy and independent for longer is the major focus, but highly innovative research on how the human body functions in health and disease is also supported, often leading to new diagnostics, drug targets or medical technologies (approximately 35% of annual investment)



To ensure our health research system is a great place for researchers to do work that tangibly improves health and wellbeing for the people who need it most, both now and in the future.

- Improving Outcomes for Acute and Chronic Conditions – understanding prevention, diagnosis and management of acute and chronic conditions, particularly those causing the greatest burden for New Zealanders (approximately 35-40% of annual investment)
- New Zealand Health Delivery building a better, more efficient and cost-effective health system through research evidence (approximately 20% of annual investment)
- Rangahau Hauora Māori Improving Māori health outcomes and quality of life by building the knowledge and skills needed to reduce health disparities and realise the benefits of Māori paradigms and traditional knowledge for all New Zealanders (approximately 10% of annual investment).

Identifying research of greatest benefit to New Zealand

We run a fair, transparent and robust peer-review process that meets international standards of best practice. This involves a number of committees, including science

Prioritising research that makes a real difference to **New Zealanders**

Powering innovation

Connecting researchers across institutional and national boundaries

Promoting research excellence and impact

Our mission

assessing committees, and engages about 550 national and international reviewers to ensure we fund research of high quality, led by researchers with the capability to deliver research that will provide the greatest benefits to New Zealand. The research we fund must meet ethical approval from an ethics committee accredited by the HRC Ethics Committee, before commencing.

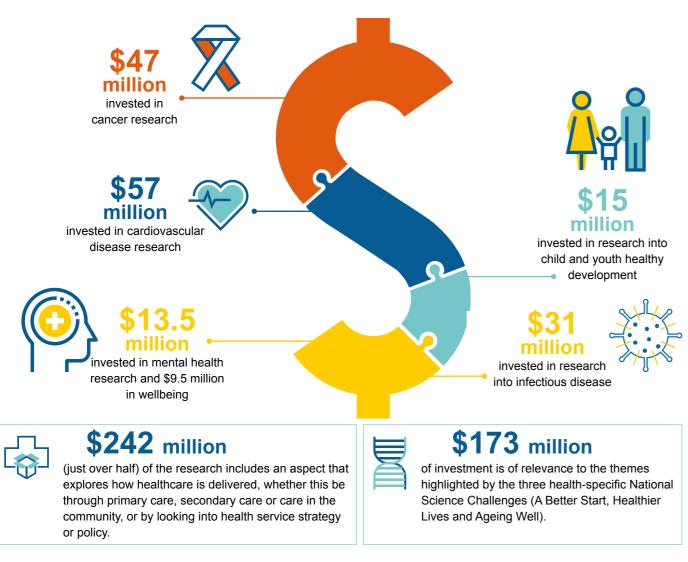
Strengthening the workforce

The HRC plays a key role in developing and sustaining New Zealand's health research workforce. At any given time, our funding supports more than 3500 research or training positions across the country. Our funding enables researchers at all stages of their careers to pursue innovative, meaningful research of international merit and of benefit to New Zealanders.

We're also committed to funding and training Māori and Pacific health researchers, so they can take the lead in addressing issues affecting Maori and Pacific communities now and into the future. See page 36 for more information about the HRC's support of the health research workforce in 2019/20.

2019–2020 in brief: Highlights summary

Investing in excellent research focused on New Zealanders' pressing health needs*



Making an impact both nationally and globally



*This investment profile represents the total approved budget for all Programmes and Projects that received an HRC funding payment in the year 2019-2020

PEPTIC trial shows that avoiding the use of proton pump inhibitors (PPIs) for stress ulcer prophylaxis might prevent a quarter of a million deaths globally in the next 10 years. (See page 35)

Clinical trial of 2000 New Zealand women with low bone density leads to a global rethink of how to prevent fractures, with some countries already modifying their treatment guidelines. (See page 25)

Use of a combination inhaler (rather than two separate inhalers - a preventative and a reliever) is shown to reduce the risk of a severe asthma attack by half in high-risk patients as well as those with mild asthma. This could result in the biggest shift in asthma treatment over the past 25 years. (See page 24)

Taking the lead by rapidly responding to health crises



Study begins to help those directly affected by the 2019 Mosque attacks in Christchurch after the HRC fast-tracks funding. (See page 20)

Strengthening system-wide approaches to health research



Release of the New Zealand Health Research Prioritisation Framework, in partnership with the Ministry of Health and Ministry of Business, Innovation and Employment, to maximise the benefits of health research for New Zealanders.

Addressing inequity and promoting diversity



Almost half of HRC-funded Programmes and Projects classified as contributing to Māori and Pacific health equity.



Interim results from project to improve outcomes for whanau with poorly-controlled diabetes shows significant positive changes for the patients enrolled. (See page 24)

Supporting innovation and excellence



non-healing wounds. (See page 31)

(See page 31)

New technology can replace several ophthalmic imaging modalities and enable affordable, portable delivery of vision-care at remote or lower socioeconomic communities. (See page 41)



The HRC and Ministry of Health announce \$3.8 million for 13 studies to help combat the **COVID-19 outbreak and future** infectious diseases after an urgent funding call is put out in late February 2020. (See page 18 and 22)



New Health Research Delivery funding round launched, including a new Health Research Sector Collaboration Grant pilot, initially involving six district health boards. (See page 44)



New criterion introduced for HRC funding applications to recognise a proposal's potential for advancing Māori health.

\$3.92 million awarded to Pacific research in our 2019 funding rounds, and more than \$2.5 million awarded

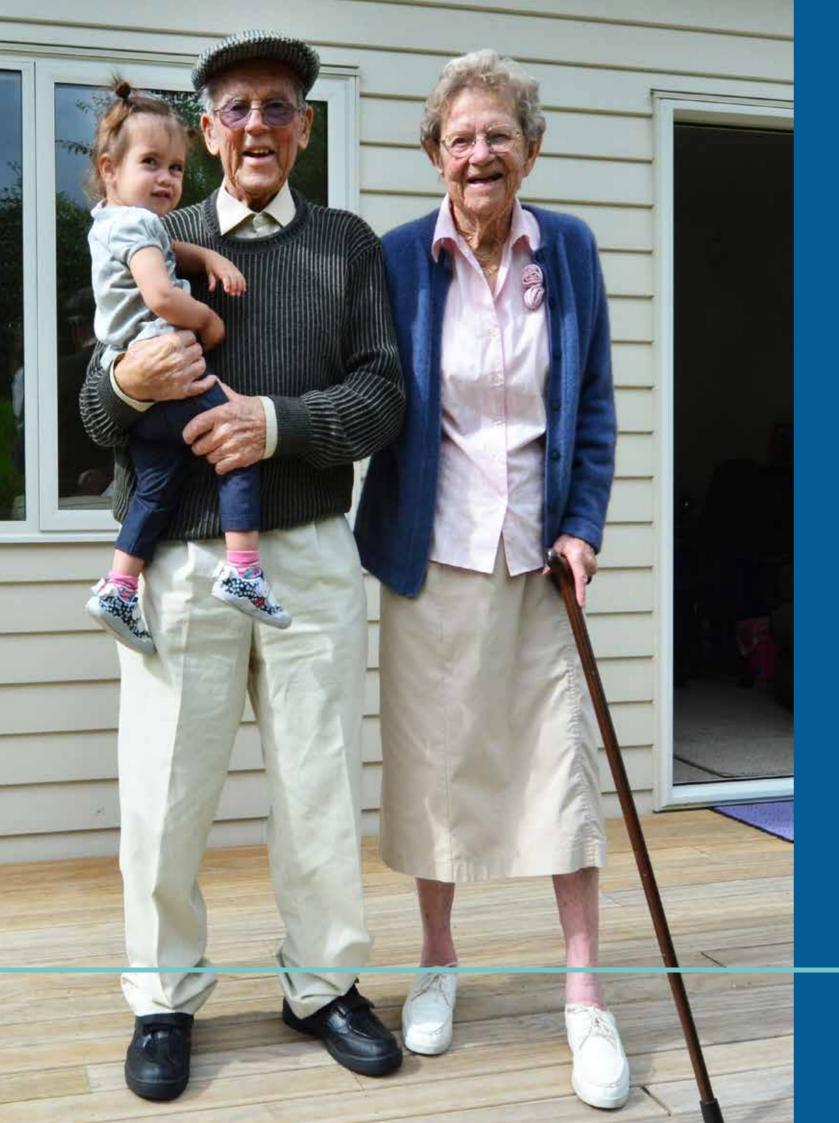


to Pacific researchers through our 2020 Career development awards, the highest ever awarded.

The first comprehensive national survey looking at health inequities and social determinants of health for trans and non-binary people in New Zealand is lauded as 'groundbreaking'. (See page 28)

Research uses patented surgical gel technology to enable the growth of fully functioning vascularised skin, offering hope for the treatment of chronic or

Project generates an accurate live cell culture model of Huntington's disease that will help identify and develop new drugs to treat the disease.



Part 2: Delivering on our Key Decision Drivers

Wāhanga 2: He whakatutuki Whāinga Whakatau Matua

Delivering on our Key Decision Drivers He whakatutuki Whāinga Whakatau Matua

Our performance framework enables us to set targets and to better understand our challenges and opportunities - all of which helps us make good decisions about where to focus investment or grow necessary capacity and capability.

The HRC has continued operating throughout COVID-19 pandemic restrictions by introducing a flexible working location policy and moving all our meetings and processes online. We understand the challenges that HRC-funded researchers have been facing due to limited access to their workplace, restricted travel, changing guarantine protocols and problems accessing reagents or other materials. Pandemic restrictions meant that recruitment for clinical trials and other studies greatly slowed, work with communities was interrupted, access to labs was restricted and overseas researchers have been unable to take up positions in New Zealand. Some valuable research samples have been lost. To support researchers, we have granted a high number of non-financial contract variations this year and extended deadlines, which has had implications for HRC budget projections. We have also run two rapid-response funding rounds for research on COVID-19 in 2020. Where the COVID-19 pandemic has changed circumstances or affected our performance, we have noted it in the relevant parts of this report. We continually measure and monitor our performance to test how well we are delivering against the priorities of government and our Council.

Our drivers

Everything that we do as an organisation is driven by our three strategic drivers. These Key Decision Drivers, as we call them, underpin all of the HRC's investment decisions. They are:



Driver 1 Making a difference

New knowledge with clear pathways to impact for health and economic gain.



Driver 2 Stimulating growth Building a healthy research

ecosystem with the people, capacity, skills and opportunities that we need for a healthier, more prosperous future.



Driver 3 Increasing engagement and connection

Adding value to realise our collective potential

Under each driver, we have set different focus areas for our efforts. These focus areas provide the framework for how we report on our performance in this Annual Report.

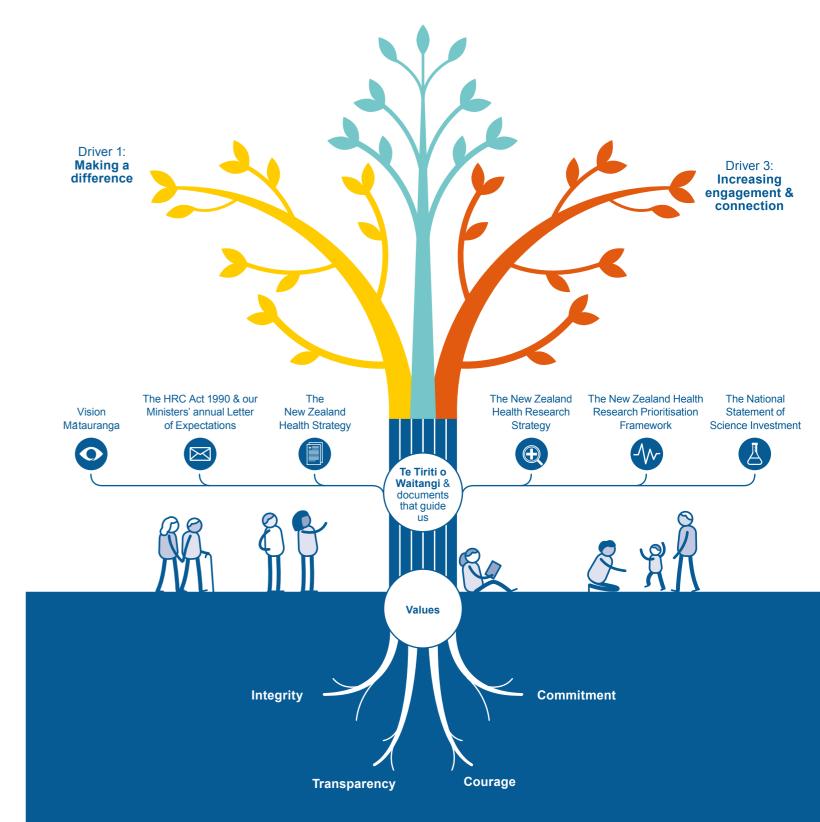
We have divided the following pages into three sections, one section for each driver. We have then described what we have achieved in 2019-2020 for the focus areas that come under each of the drivers, providing highlights from the year and some more indepth case studies

At the end of each section, we have outlined the key performance indicators for each driver. These indicators help us to measure our progress in delivering on our Key Decision Drivers throughout the year. Where we are tracking our progress towards targets in 2020, these are targets set in our Statement of Intent, some of which are carried forward in our workplan outlined in our new Statement of Intent for 2020 to 2024.

The HRC's Key Decision Drivers

Our aspiration: Every New Zealander enjoys equitable improvements in health and wellbeing because of evidence and innovations from our world-leading health research system.

> Driver 2: Stimulating growth



Drivers overview



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Driver 1: Making a difference

New knowledge with clear pathways to impact for health and economic gain.







Fund excellent research with high potential for national and international impact



Focus on achieving health equity



Support highly innovative and transformative research



Driver 2: Stimulating growth

Building a healthy research ecosystem with the people, capacity, skills and opportunities that we need for a healthier, more prosperous future.



Develop a strong and enduring health research and innovation system where New Zealand research teams thrive



Sustain a skilled and diverse health research workforce, identifying and addressing crucial gaps in capacity, building people and creating opportunities



Expedite economic returns from health research





research collaborations

of health research

Driver 3: Increasing engagement and connection

Adding value to realise our collective potential.

Strengthen our strategic leadership role - coordination, connection and alignment across the system

Build international partnerships and increase opportunities for New Zealand researchers to engage with large international

Communicate clearly with all our stakeholders, sharing the latest discoveries and promoting the benefit, value, and impact





Driver 1: Making a difference

Whakaawenga 1: Kia whanake ai

Making a difference to people's lives is the end goal of everything that we do. The research we fund has an influence on individuals, families, whanau and communities in New Zealand. It brings health and wellbeing benefits, as well as social, economic, cultural and environmental benefits.



Focus 1: Invest in research that meets the current and future health needs of New Zealanders

The HRC continues to fund research into the health issues that are important to New Zealanders. Recent years have seen a significant investment into research to improve mental health and wellbeing, with over \$33 million invested in mental health research and capacity-building between 2015 and 2019. The 2019 funding round also marked a strong year for research into child and youth healthy development, underpinning the government's commitment to the health and wellbeing of our young, as well as for infectious disease, neurology and cancer.

In February 2020, we launched a new HRC Consolidator Grant to support mid-career researchers who have made progress towards being a principal investigator in health research. We received 12 applications in this first round and awarded five grants for a total investment of \$3.0 million. These grants will investigate a variety of significant health issues, including the earlier detection of foetal growth restriction; new treatments for mood disorders; and further development of vaccine adjuvants.

Increasingly, there is a need for the HRC to respond to urgent health needs. In February 2020, we announced the start of a study funded by the HRC to help those directly affected by the Mosque attacks in Christchurch in March 2019. The coronavirus outbreak that began in late 2019/ early 2020 also shows how important it is to have a broad and strong health research workforce, so that we can respond to existing, nascent and unforseen threats to human health. After an urgent funding call, the HRC and the Ministry of Health announced \$3.8 million in funding in April 2020 for 13 studies to help combat the outbreak and prepare New Zealand for future infectious diseases. In early August 2020 we released details of a further \$8.3 million in HRC funding for a new COVID-19 call, with a focus on equity, resilience and recovery. We expect to have more rapid-response demands in the future, and will be formalising an optimised process that generates the knowledge needed as fast as possible.



million infectious disease

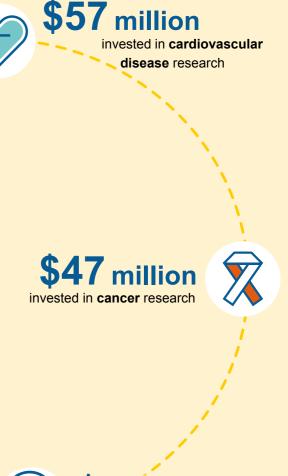
5 million invested in research into child and youth healthy development

\$242 million

(just over half) of the research includes an aspect that explores how healthcare is delivered, whether this be through primary care, secondary care or care in the community, or by looking into health service strategy or policy.

*This investment profile represents the total approved budget for all Programmes and Projects that received an HRC funding payment in the year 2019-2020.

Highlights for Focus 1 from 2019-2020:





3.5 million invested in mental health, and \$9.5 million in wellbeing

\$173 million

of investment is of relevance to the themes highlighted by the three health-specific National Science Challenges (A Better Start, Healthier Lives and Ageing Well).



Case studies for Focus 1

Taking a 'One Health' focus to safeguard drinking water from infectious pathogens



ESR's Dr Liping Pang (second from left) at Invercargill Water Treatment Plant with Phillip MacDonald (left) and Richard Adams (second right) from Invercargill City Council, and University of Otago PhD student Annabelle Tham

Highly infectious pathogens that are frequently present in our environmental waters pose major health concerns. For example, Cryptosporidium and norovirus cause acute gastroenteritis in all age groups, while rotavirus and adenovirus are the leading causes of childhood gastroenteritis.

Dr Liping Pang of ESR (Institute of Environmental Science & Research Ltd) recently led an HRC-funded study to look at new ways of assessing the risk of waterbourne infections from drinking water supplies. This is one example of HRC funding addressing issues that directly impact New Zealanders' everyday lives.

Results reported in 2020 show that the innovative surrogate technology developed – and tested in real-world pilot trials using rapid sand filtration systems and pointof-use domestic filters – will help water suppliers and communities gain a much better understanding of how effective different water filtration systems are at removing protozoan Cryptosporidium spp. The research team also tested 10 different types of commonly used pointof-use domestic filters to see how effective they were at removing rotavirus, norovirus and adenovirus.

The experimental results from the above studies were incorporated into quantitative microbial risk assessments. The team then identified health-risk scenarios and provided recommendations for improving water treatment performance to better safeguard public health. Leading a rapid response to help those directly affected by mosque attacks



Dr Ruqayya Sulaiman-Hill (left) and Associate Professor Caroline Bell

Following the tragedy of the mosque attacks in Christchurch on 15 March 2019, the HRC approached Canterbury District Health Board (CDHB) and the universities of Otago and Canterbury about fast-tracking HRC funding of research to help those directly affected. An expert team comprised of clinical researchers from all three organisations was then formed, led by clinical psychiatrist Associate Professor Caroline Bell and Dr Rugayya Sulaiman-Hill, both of whom have had key roles in planning the CDHB's psychological health response to the attacks. The Muslim community was integral to developing the successful research proposal and they will continue to be closely involved at all stages of the research, which began in early 2020. The team have been very keen for the study to continue in the COVID-19 environment, and, in order to do this, are working on conducting interviews online with those affected.

Imams Alabi Lateef Zikrullah and Gamal Fouda from the two mosques targeted in the attacks (Linwood Mosque and Masjid Al Noor Mosque respectively) have endorsed the study and will help advise the research team on any issues that may arise, along with a reference group made up of a diverse range of people from the wider Muslim community in Christchurch. This study will develop culturally informed practices for helping traumatised groups in different phases of recovery and build an important resource for Muslim and migrant and refugee mental health services in New Zealand.





Highlights for Focus 1 from 2019-2020: **HRC-funded** research

Saving lives in the ICU

Multinational clinical trial of antibiotic administration in intensive care units underway, led by Dr Shay McGuinness, to show if changing the way that antibiotics are administered helps to reduce the 6 million deaths per year worldwide due to infection-induced organ failure.

Revolutionising treatment of hypertension

Professor Julian Paton begins a nearly \$5 million Programme to look at a new way to control high blood pressure, a condition affecting one-third of adult New Zealanders and disproportionately more Māori and Pacific people.

Global praise for longitudinal studies

International experts have described the Dunedin Multidisciplinary Health and Development Study and the Christchurch Health and Development Study as the best designed and most informative epidemiological studies showing the life-course consequences of cannabis use and misuse. The studies' researchers shared some of the world's richest sources of information about cannabis use to support an evidence-informed approach when New Zealanders voted on whether to legalise the recreational use of cannabis in October 2020.

Exploring sewers for antibiotic-resistant superbugs

2020 Explorer Grant recipient Associate Professor Siouxsie Wiles is delving into Auckland's sewer network to quantify and map levels of antibiotic resistance in the community, allowing researchers to estimate levels of resistance in healthy, asymptomatic individuals as well as in those who are unwell. Samples of hospital effluent will be compared to samples from wastewater treatment plants serving 'healthy' communities without a primary care facility in the catchment area. This is one of three studies funded in 2019-2020 to address the urgent global problem of antimicrobial resistance.

Better outcomes in renal failure

A multinational trial looking at whether lowering phosphate levels in the blood of people on dialysis improves cardiovascular health and reduces mortality rates.

One health approach to climate change

In November 2019, Associate Professor Simon Hales began his HRC-funded Project to quantify the relationships between extreme rainfall events associated with climate change and waterborne enteric infections. The study will define parameters for water regulators, including local climate thresholds for use in early warning systems and national maps of community vulnerability.





Combatting COVID-19

Promising treatments for critically ill **COVID-19** patients

Dr Colin McArthur was funded to lead a randomised clinical trial of potential treatments in critically ill COVID-19 patients. The study builds on an existing randomised care units worldwide, including 10 sites in New Zealand. pre-designed to adapt when a pandemic occurred.

Hydroxychloroguine as a preventative treatment for COVID-19

Professor Richard Beasley and team were funded for a randomised clinical trial to evaluate the role of hydroxychloroquine for COVID-19 prophylaxis in fronttrial evaluating multiple treatments for severe pneumonia line healthcare workers. Because of the emerging lack of ('REMAP-CAP') that is currently active in over 70 intensive evidence of efficacy for hydroxychloroquine in COVID-19 treatment, this study will not proceed beyond the trial The wider trial was already funded by the HRC and was set-up phase. Completing the set-up phase will put the researchers in a position to reinitiate a healthcare worker prophylaxis study in the future, should this be needed, using an alternative medication to hydroxychloroquine.

Reducing the need for ventilators

Another randomised clinical trial (Australasian COVID-19 Trial or 'ASCOT'), led in New Zealand by Middlemore Hospital clinical microbiologist and infectious diseases physician Dr Susan Morpeth, is to test potential COVID-19 treatments in people unwell enough to need admission to hospital, but not so unwell that they need intensive care. The study will be carried out at multiple sites across Australia and New Zealand to see which treatment. or combination of treatments. will reduce the risk of needing ventilatory support or death among COVID-19 patients.



Focus 2: Fund excellent research with high potential for national and international impact

For research to have the best chance of making a difference to New Zealanders, we ask research applicants to think about maximising the potential impact of their work right from the planning stages of their research. In 2019-2020, we strengthened our ability to determine the pathway to impact. One of the ways in which we have done this is by introducing a new research impact criterion that will help us, and the researchers we fund, keep a clear line of sight to impact. We are also introducing voluntary reporting of research outputs and outcomes at two-years and five-years after our contracts end to help us better establish the ongoing reach and impact of the research we have funded.

The HRC is committed to growing New Zealand's already strong reputation as a site for clinical trials and strengthening health-sector participation in research as set out in the New Zealand Health Research Strategy. 2019-2020 was a strong year for clinical research, with the HRC funding nine potentially transformative clinical trials. A majority of these were multinational in nature and leveraged clinical trial networks and collaborations, underpinning the HRC's role in connecting New Zealand researchers to the global frontier of clinical research. In July 2020, we also signed up to the World Health Organization's Joint Statement on Public Disclosure of Results from Clinical Trials, which will help us guide New Zealand on best practice expectations for clinical trials.



Massive impact as research changes the way asthma is managed



Professor Richard Beasley

Professor Richard Beasley, Wellington Regional Hospital physician and Medical Research Institute of New Zealand director, has had a huge impact on managing and treating asthma. In October 2019, this was recognised when he received the HRC's Beaven Medal for excellence in translational research at the Royal Society Te Apārangi Honours event.

Professor Beasley began his research career as an HRC research fellow in the United Kingdom some 40 years ago, and he has continued to receive HRC funding since then due to the exceptional quality and impact of his research on improving the health of many New Zealanders. His research over the decades first led to the withdrawal of the medicine fenoterol from New Zealand and the withdrawal of preservatives used in nebuliser solutions to treat asthma. He has also worked closely with Māori communities to improve the management of asthma. His research in the past year is expected to have another major impact on asthma treatment in New Zealand and internationally. His team found that the use of a combination inhaler (rather than two separate inhalers - a preventative and a reliever) reduced the risk of a severe asthma attack by half in high-risk patients. The results of a follow-up study released in May 2019 found the same results in patients with mild asthma, something that could result in the biggest shift in asthma treatment over the past 25 years.

Successful intervention for whānau with diabetes set to be scaled up



Dr Matire Harwood (right) with members of the Mana Tū team

Interim results from a pilot project to improve outcomes for whanau with poorly controlled diabetes show significant positive changes. As a result, district health boards and the Ministry of Health are looking to scale up this intervention across other geographic locations and long-term conditions.

Dr Matire Harwood (Ngāpuhi), the HRC's 2019 Te Tohu Rapuora award recipient for her outstanding leadership and contribution to Maori health, has been leading the \$2.4 million pilot project involving 400 patients. The HRC-funded 'Mana Tū' project deploys clinicians called kaimanaaki in general practices across Auckland and Northland. The emphasis is on helping those people living with the greatest burden of type-2 diabetes to stay well - Māori, Pacific peoples and those living in neighbourhoods of deprivation. This is achieved through better engagement with health and social services/ networks, a desire to take charge of diabetes as a whānau (through self-management, improved nutrition and physical activity), and improved cultural safety and health literacy delivered by healthcare services.

Spearheading a global rethink of how to prevent fractures



Dr Anne Horne (centre) with other members of the bone research team

Fifty per cent of women have a fracture between menopause and the time of death, and 80 per cent of these fractures occur in women with low bone density (osteopenia). Thanks to ground-breaking HRC-funded research, the number of older women presenting with fractures could be halved.

Distinguished Professor Ian Reid, Dr Anne Horne and their team at the University of Auckland published their findings in the New England Medical Journal in December 2018.

The team were presented with the HRC's Liley Medal at the 2019 Royal Society Te Apārangi Research Honours for their significant medical breakthrough, which has led to a global rethink of how to prevent fractures in older people. Their paper showed that giving the drug zoledronate to older women who have low bone density could reduce fractures in this group by between 35 and 50 per cent, depending on the type of fracture. The team's HRC-funded study involved a six-year clinical trial of 2000 New Zealand women with low bone density.

Giving zoledronate to this group of women every 18 months to two years could significantly reduce New Zealand's total fracture burden. The team also found that the women who took zoledronate reduced their chances of having a heart attack or getting cancer by about onethird.

The study attracted a lot of attention in 2019 and has been followed by several further publications that provide greater details of the fracture, cardiac and cancer effects of the intervention. The effectiveness in fracture prevention appears to be broadly distributed across all the women in the study, and not just in the elderly, those with lower bone density or with a previous history of fractures. Two groups in Europe are designing trials to replicate these findings, and a further study is underway in the United States to confirm the mortality reduction effects of zoledronate. A number of countries are considering modifying their treatment guidelines to incorporate these data. This has already happened in Scotland, and is under consideration in Sweden and New Zealand, among others.



Focus 3: Focus on achieving health equity

Reducing the impact of inequity and socioeconomic determinants on health – and ultimately achieving health equity – is a priority for all the HRC's investments. It is also a major focus area for us under the New Zealand Health Research Strategy. A strong focus on health equity is at the heart of how the HRC can make a difference. We are committed to honouring Te Tiriti o Waitangi in all that we do and investing in research that has a strong focus on helping achieve health equity for Māori and Pacific peoples across their life-course. We also are focused on supporting a diverse and inclusive health research workforce and system.

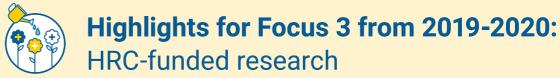
As part of our ongoing work in this area, we introduced a new criterion to HRC funding applications in August 2019 – one that recognises a proposal's potential for advancing Māori health. The new criterion was first introduced in our 2020

Programme funding round which opened in August 2019, followed by our 2021 Projects, Feasibility Study and Emerging Researcher First Grants in June 2020. It will subsequently be rolled out to all HRC funding opportunities. Accompanying this, we produced new Māori Health Advancement Guidelines to support health researchers to design and develop research projects and programmes that will advance Māori health. In early 2020, we also appointed a Health Equity Policy Advisor and created a Director of Equity, Māori and Pacific Health Research position within our Executive Leadership Team to help us do what we can to tackle the country's health inequities.



We are committed to honouring Te Tiriti o Waitangi in all that we do.





Achieving equity for Māori and Pacific peoples

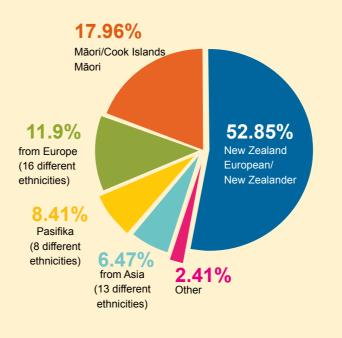
Half of HRC-funded Programmes and Projects supported in the 2019-2020 financial year were classified as contributing to health equity (of any kind) and 48% as contributing to Maori and Pacific health equity.

Māori researchers leading the way

Twelve per cent of 2019 funding round investment - a total of \$10.4 million – was ring-fenced for Māori-led research through our Rangahau Hauora Māori research investment stream. Nearly one-third of all Projects in the 2019 funding round included, or were led by, Māori health researchers and had significant Māori participation.

Embracing ethnic diversity

The top five ethnicities that first named investigators on HRC contracts self-identified with in 2019-2020 were:



In total, 50 different ethnicities were represented.*

*These figures also reflect people who identify with multiple ethnicities. Only New Zealand residents are eligible for HRC funding. Source: HRC Gateway, period 30 June 2019 - 30 June 2020 (generated on 9 July 2020).

Reaching out to those with special or unmet health needs

The percentage of funded Programme and Project proposals that address unmet health needs, where treatments do not reach certain segments of the population, doubled in 2019 as a share of budget allocation from 15 per cent to 31 per cent. A fifth of HRC Programmes and Projects had a specific focus on improving health and wellbeing for our children, youth, elderly or people with disabilities.

Pacific research riding high

\$3.92 million was awarded to Pacific research in our 2019 funding rounds.

The total amount funded to Pacific researchers through our 2020 Career Development Awards (Pacific Health Career Development Awards and Pacific Emerging Researcher First Grants) of more than \$2.5 million was the highest ever awarded.

Promoting an inclusive society

HRC funding has supported research into transgender health (The New Zealand Transgender Health Survey) and the wellbeing of Māori LGBTIQ+ (The Honour Project Aotearoa). See page 28 for more information.

Improving gender balance

Female representation on the HRC's 17 science assessing committees increased to 51 per cent in 2020 compared to 47 per cent in 2018 and 49 per cent in 2019. In our 2019 Projects and Programmes funding rounds, 42.8 per cent of funded researchers were female.





Case studies for Focus 3

Reducing inequities for Pasifika awaiting weight-loss surgery



Pacific peoples in New Zealand have the highest drop-out rate for weight loss or bariatric surgery despite being the most affected by obesity-related health conditions.

University of Auckland Pacific emerging researcher Dr Tamasin

Dr Tamasin Taylor

Taylor, of Samoan heritage, received a 2019 HRC Sir Thomas Davis Health Research Fellowship to test if a Pacific-led, pre-surgery support initiative could assist in turning this around, to improve Pacific patient retention rates and treatment outcomes.

Pacific patients are more likely to be disadvantaged as many face greater structural barriers within hospital programmes and significant social and economic barriers, says Dr Taylor. Clinical environments and an underrepresentation of Pacific staff are also particular barriers to developing emotional safety, trust and acceptance of the surgery process with patients and their families.

In collaboration with the Auckland City Hospital bariatric surgery team, which is led by the head surgeon Mr Grant Beban, Dr Taylor is developing a Pacific-led, preoperative support group for Pacific patients referred to their programme. As a point of difference, the development and running of the Pacific-led support programme will have substantial participation from former successful Pacific bariatric surgery patients.

This new fellowship follows on from Dr Taylor's HRCfunded Pacific postdoctoral research, completed in early 2020, which has identified the systemic, social and economic barriers New Zealand's Pacific patients face when they are referred to publicly funded bariatric surgery programmes.

Supporting our diverse Rainbow communities



In September 2019, the results were released of the first comprehensive national survey to collect quantitative and qualitative data on health inequities and social determinants of health for trans and non-binary people living in New Zealand. Funded through an HRC Emerging Researcher First Grant to Dr Jaimie Veale of the University of Waikato, the findings of The New Zealand Transgender Health Survey - 'Counting Ourselves' illustrate the stark contrast and health inequities between trans and non-binary people and the general population. Of special concern are the areas of mental health and wellbeing, including the very high rates of psychological distress and suicide attempts within these communities.

This research involved a community advisory group and community organisations at every stage. It was acknowledged as ground-breaking in a media release by the Cross-party Parliamentary Rainbow Network and has been used to inform the Government's Homelessness Action Plan and policies at the Department of Internal Affairs and Statistics New Zealand.

The Honour Project Aotearoa study findings, reported in December 2019, provide important information about the health and wellbeing of takatāpui (Māori LGBTIQ+), and insights into how health services can better serve this community. It is the first kaupapa Māori study of takatāpui health and wellbeing led by principal investigators that are takatāpui and who are supported by a team of eight Māori researchers, six of whom identify as takatāpui, and a group of five advisors all of whom identify as takatāpui or two-spirit. Findings from this study will be disseminated post the COVID-19 pandemic.

Understanding child health inequalities to help affect change

A new way of measuring and tracking children's overall development and health in the preschool period shows there is a significant relationship between socioeconomic disadvantage and our children's health and developmental outcomes.

This research supports previous research emphasising the importance of the 'first 1000 days' for child development and health, and stresses how alleviating socio-economic deprivation is critical to reducing inequities in early developmental health outcomes to give every child the best start in life.

Early life environments and experiences have enduring effects on later outcomes; however, there are significant health and developmental disparities evident even by the time children reach school-entry age.

Using data from the Growing up in New Zealand longitudinal study, paediatric fellow Dr Jin Russell undertook an HRC Clinical Research Training Fellowship to help identify pathways to better health, particularly for underprivileged children.

As part of her research, Dr Russell developed a new way of measuring and tracking children's overall development and health in the preschool period. She created three indexes of overall health and development using information from interviews with mothers and their children at 9 months, 2 years and 4.5 years old. The indexes provide a "snapshot in time" of a child's overall health and development across three domains: physical health and motor development; socio-emotional and behavioural functioning; and language, cognitive and learning functioning. By identifying children with the highest and lowest 15 per cent of scores, she was able to investigate how socio-economic status before birth relates to children's outcomes.

Her study findings, reported in 2020, show that there is a significant relationship between socioeconomic disadvantage and children's health and developmental outcomes. Large gaps in the number of children with one, two or more developmental differences and strengths were found,

starting from when the



Dr Jin Russel

children were 2 years old. These differences were still present when the children were 4.5 years old. By tracking the children's index scores over time, the study found that children from more underprivileged backgrounds before birth were more likely to follow a sub-optimal overall developmental and health trajectory.





Focus 4: Support highly innovative and transformative research

The HRC initiates and supports health research that generates new knowledge, solutions and innovations, with both short-term and long-term impact. Our Explorer Grants are an example of cutting-edge, higher-risk investment through which we attract and fund transformative research ideas with the potential for major impact on healthcare. In 2019, we allocated five times as many Explorer Grants (15) as our first Explorer Grant funding round in 2013 (3), and in our 2020 Explorer Grants funding round announced in May 2020, we supported a record 17 researchers to a combined total of \$2.55 million.

We have been working hard on strengthening the innovation pathway so that promising research findings make their way to the next users and end-users of health research, to help translate those findings into everyday practices and services that benefit New Zealanders. Our 'Pathway to Impact model' sets out a chain of linked steps to describe how benefits can be generated at various points of the research journey, and helps researchers prepare for (and respond to) opportunities for maximising impact as their research progresses.

The 2019 Project and Programme funding rounds signalled a shift towards the use of precision medicine techniques, with several contracts focusing on novel genomic approaches to risk stratification and personalised treatment. The funding rounds also highlighted New Zealand's ability to leverage artificial intelligence (AI) to develop transformational health innovations.



Highlights for Focus 4 from 2019-2020: **HRC-funded** research

Growth in translational research

The number of 2019 Project and Programme research contracts identified as translational - progressing from one stage of the research pipeline to the next - was the highest of the previous five years at 78 per cent.

Kiwi ingenuity alive and well

In the HRC's 2019 Project funding round, there was a strong focus on health innovation, with around 71 per cent of Projects classified as having the potential to generate value through innovation.





Creating a 'living dressing' for wounds has huge potential impact for patients



Dr Jaydee Cabral next to the bioprinter

New bioprinting technology has meant it is now possible to grow fully functioning and vascularised skin, which could potentially serve as a "living dressing" in a clinical setting and completely heal once chronic or non-healing wounds. Such a breakthrough would significantly improve a patient's quality of life and independence and reduce healthcare costs.

The effective treatment of chronic and non-healing wounds such as diabetic foot ulcers and pressure ulcers in elderly or other immune-compromised patients poses a big challenge for clinicians worldwide. Researchers have been looking to three-dimensional (3D) bioprinting of human skin for the solution; however, to date, they have not been able to successfully create vascularisation (growth of blood cells) in the bioprinted tissue.

University of Otago biomedical engineer Dr Jaydee Cabral, an HRC Explorer Grant recipient, and her team have been able to overcome this problem by modifying their patented surgical gel technology to create novel 3D bioprinted constructs that include "vessels" made from a biopolymer lined with cells. This technology, reported in March 2020, has enabled the growth of fully functioning, vascularised skin. The 3D constructs can safely deliver adult stem cells in vitro, meaning they could potentially return regenerative capability to areas where this capability had been lost, i.e. treating non-healing or chronic wounds. An in vitro wound healing study has shown a two-fold increase in healing rate when treated with the team's living dressing compared to an untreated control.

Innovative approach to understanding Huntington's disease

Professor Bronwen Connor

Huntington's disease is an inherited neurological disorder, which can lead to extensive loss of control over bodily movement along with dementia and premature death.

An HRC Project grant had enabled the development of a new technology that allows researchers to directly convert skin cells from patients with Huntington's disease into immature brain cells, and then into the type of neurons that are selectively lost in Huntington's disease. This allows them to study live human brain cells and potentially identify new drug targets for treating Huntington's disease.

In March 2020, Professor Bronwen Connor and her team at the University of Auckland's Centre for Brain Research reported on their development. The team showed that neurons generated from the skin cells of patients with Huntington's disease exhibited the same pathological characteristics as affected neurons from the Huntington's disease brain. The project has generated an accurate live cell culture model of Huntington's disease that will help identify and develop new drugs to treat the disease.

Key performance indicators for Driver 1

Invest in research that meets the current and future health needs of New Zealanders

Establishment of national health research priorities

Actual 2019/20: Achieved

The HRC, the Ministry of Health and Ministry for Business, Innovation and Employment published the national Health Research Prioritisation Framework in December 2019. Since that time, the HRC has been working on aligning all HRC policy and processes with the Framework. Significant changes have been made with the revision of our Health Delivery Funding round to better align with Research and Infrastructure Aims for Domain 2 of the Framework. Further changes will be introduced as a result of the alignment work completed over the course of 2020. We have communicated both the priorities and our intended response to stakeholders and the wider health research sector. However, the pandemic response to COVID-19 has delayed the roadshows that we intended to hold in April as part of that process.

Baseline 2018/19: Not measured

() Target for 2019/20:

Change the HRC's policy and processes to reflect new priorities and widely communicate priorities to stakeholders and the wider health research sector.

(O) Target for 2020/21:

We will have established national health research priorities, communicated these priorities to the wider health research sector and aligned our investment signals to clearly reflect them.

We have made significant changes to our processes and will implement further changes over the next two annual funding rounds.



Focus on achieving health equity

Number of current HRC contracts with a focus on understanding and reducing inequity in health outcomes

Actual 2019/20: Achieved | 139 contracts

Baseline 2018/19: 115

(O) Target for 2019/20: 60-80

(This range covers our expected result, but a higher number of contracts addressing health equity is a desirable outcome.)

(O) Target for 2020/21:

We will have formed a cross-sectoral government partnership aimed at gaining the evidence required to effectively tackle inequity and its adverse health consequences.

We have already achieved our target for 2021, as several of our current partnerships meet this aim*.

*These include our partnership with ACC to achieve equity for ageing Māori; our partnership with PHARMAC to achieve equitable access to medicines; and our 2020 Breast Cancer Research in New Zealand and 2020 National Breast Cancer Register Reguests for Proposals, both of which ask for proposals focusing on equity of access to treatment and improved health outcomes for communities disproportionally affected by breast cancer in New Zealand, particularly Māori and Pacific peoples.

Driver 2: Stimulating growth Whakaawenga 2: He Whakahihiko i te whanaketanga

The HRC builds and fosters research careers so New Zealand has the skills and people needed to address current and future health challenges. We support our most promising emerging researchers, engage frontline clinicians in research, and help develop health research champions.

By supporting and growing the capacity of our health research workforce, we can help generate health innovations that will improve treatment for New Zealanders and boost the economy. We have a crucial role in ensuring that the health research system in New Zealand thrives. As part of this, we provide regulatory functions and advice to government that keeps the system ethical and safe, and support world-class applied and fundamental research that addresses important knowledge needs and fuels innovations across all disciplines.



Focus 1: Develop a strong and enduring health research and innovation system where New Zealand research teams thrive

We invest in excellent research in all settings (laboratories, communities, hospitals, primary care) that is innovative, well-designed, impactful, and ethical. To achieve this and ensure we fund research of high quality, led by researchers with the capacity to deliver, we run a fair, transparent, and robust peer-review process that meets international standards of best practice. This involves several committees, including science assessing committees, which may be multidisciplinary or comprised of expertise in particular research fields. In 2019-2020, this process involved the engagement of 552 reviewers, including 399 (72.3 per cent) international reviewers from more than 30 different countries. The research we fund must also meet ethical approval from an ethics committee accredited by the HRC Ethics Committee, before commencing.

Providing long-term investment helps New Zealand's health research teams continue to grow great ideas and thrive. Two ways in which we do this are through our support of longitudinal studies and independent health research organisations.



Longitudinal studies are extremely valuable resources for researchers, health professionals and policymakers who can use the findings to understand what drives health and health inequalities in different groups of people, and build on this knowledge to make scientific breakthroughs that improve health. In 2019-2020, we continued our longstanding support for four important longitudinal studies that span decades: The Dunedin Multidisciplinary Study; the Christchurch Health and Development Study; Growing up in New Zealand; and the Pacific Islands Family Study. These studies look beyond the present to consider the intergenerational impacts of inequitable access to healthcare and other major issues on families and communities.

We also invested \$5.8 million in 2019-2020 to fund the following independent research organisations of national importance: the Malaghan Institute of Medical Research (Wellington), the Medical Research Institute of New Zealand (Wellington), Te Atawhai o Te Ao: Independent Maori Institute for Environment & Health (Whanganui), and Whakauae Research Services (Whanganui). Since 2014, we have invested a total of nearly \$45 million in these organisations, which are making major health, economic, social, and environmental contributions to New Zealand with the help of this long-term stable funding.



Highlights for Focus 1 from 2019-2020: HRC-funded research

Ensuring ethics and safety are paramount

Our statutory Ethics Committee, which plays a pivotal role in ensuring New Zealand health research is ethical and safe, approved 17 other ethics committees to carry out ethics reviews (13 Institutional Ethics Committees and four Health and Disability Ethics Committees). The committee also supported two students to work with a research team over their summer break on a current ethical issue in health research.

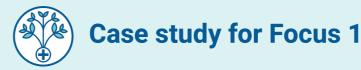
Approving clinical trials involving the use of a new medicine

Our Standing Committee on Therapeutic Trials reviewed 118 trial applications for safety and efficacy. Sixty-nine of these trials were approved without comment; 32 approved with comment; 12 were initially not approved pending further clarification/improvement; and 5 trial applications were not approved. The average approval time was 9.5 days.

Independent monitoring of clinical trials

Our Data Monitoring Core Committee (DMCC), which provides objective, independent monitoring of clinical trials in New Zealand, monitored 11 clinical trials initiated by HRC researchers that focused on a diverse range of areas, including preventing common infections during early infancy, the impact of fish oil in pregnancy, a programme for people with dementia to prevent falls in care homes, and testing of a urate-lowering therapy for erosive gout. For each trial that the DMCC agrees to monitor, the DMCC establishes a trial-specific Data Monitoring Committee. As 10 of the clinical trials being monitored were brought forward from previous years, only one new trial-specific Data Monitoring Committee was established in 2019-2020.





System-wide connections help produce an abundance of internationally impactful research



Dr Paul Young, lead investigator on both the PEPTIC and ICU-ROX trials

The Medical Research Institute of New Zealand (MRINZ) is one of four independent research organisations that the HRC has provided specific funding support for since 2014. In 2019, MRINZ investigators were lead authors on two of the highest impact publications in the field of intensive care medicine published over this period, both reporting research funded by the HRC.

The first paper reported the potential cause of tens of thousands of deaths a year in developed countries alone. Patients in the intensive care units are often given medicines to prevent them from developing stress ulcers. The research showed that the choice of preventative medicine (prophylaxis) used was crucial. The 'proton pump inhibitors (PPIs) vs. histamine receptor blockers (H2RBs) for Ulcer Prophylaxis Therapy in the Intensive Care Unit (PEPTIC)' trial is comparing strategies of stress ulcer prophylaxis in patients on ventilators.

With 26,828 participants, the PEPTIC trial was the largest clinical trial ever conducted in intensive care medicine and provided very precise estimates of the treatment outcomes and risks. The researchers estimated that avoiding use of PPIs for stress ulcer prophylaxis might prevent a quarter of a million deaths globally in the next 10 years. This equates to one life saved for less than \$2 invested by the HRC.

The second trial was the 'ICU randomised oxygen therapy (ICU-ROX) trial'. ICU-ROX was a phase 2 trial that compared the liberal use of oxygen with conservative use of oxygen in patients requiring life support. The trial was published in the New England Journal of Medicine and also resulted in a series of secondary publications in Intensive Care Medicine, which is the highest impact critical care journal. The most important outcome from the ICU-ROX trial was that it has paved the way for a 40,000 participant trial of oxygen therapy in ICU, which is being conducted in 10 countries around the world and led by MRINZ with support from the HRC.



Focus 2: Sustain a skilled and diverse health research workforce, identifying and addressing crucial gaps in capacity, building people and creating opportunities

We support the growth and capability of New Zealand's health research workforce by nurturing new talent, developing skills and supporting careers. In 2019-2020 our HRC workforce included 1485 health professionals, of which 1165 were practicing - nearly a third of the total HRC workforce. Clinicians were from the fields of medicine, nursing, physiotherapy, pharmacy, clinical psychology, occupational therapy and many others. This high number is the result of concerted efforts by the HRC for over a decade to create research and training opportunities for those delivering healthcare in New Zealand.

Through our Career Development Awards, we run the only dedicated programme of health research training for Māori and Pacific peoples, with funding for different stages of their careers. These targeted awards are essential to support an inclusive, diverse health research workforce that will help promote health equity and build skills within groups that are best placed to identify and address their own specific health needs. Our role in developing and sustaining a strong health research workforce is one of the four actions we are responsible for leading under the New Zealand Health Research Strategy.



Supporting the health research workforce

The 722 HRC contracts current on 30 June 2020 provided 3726 research or training positions for health researchers, 90% of whom were based in New Zealand. This large HRC research workforce was extremely well qualified, with 70% of lead investigators already holding a PhD or equivalent qualification, and a further 5% enrolled to complete one.

A fifth of first named investigators on all contract types were Māori (including Career Development Awards). Overall, 16% of research positions were held by Māori investigators or students (606 positions). The Pacific research workforce on HRC contracts was considerably smaller at 215 positions, 6% of the total workforce. While Pacific capacity levels are low, there are twice as many Pacific investigators and students in the HRC workforce since we last published figures in 2015/16 - when the figure was 3%

HRC 2019 Te Tohu Rapuora medal recipient Dr Matire Harwood and whānau at her graduation



Highlights for Focus 2 from 2019-2020: HRC-funded research

Leading the development of a strong and diverse workforce

In 2019-2020, the HRC awarded a total of \$15.9 million to 76 researchers in clinical and academic roles through our Career Development Awards, including those specifically targeting Māori and Pacific researchers.

Promoting our future Māori health research leaders

For our 2020 Māori Health Career

Development Awards, we supported 17 Māori health researchers to a total of nearly \$1.4 million, and two emerging researchers in our 2020 Rangahau Hauora Māori research stream (total investment of \$419,551).

Large increase in support for Pacific researchers

Twenty-five Pacific researchers were granted scholarships, summer studentships and postdoctoral fellowships with more than 50 per cent of proposals received successfully funded.



Engaging our frontline clinicians

Eleven Clinical Research Training Fellowships, two Clinical Practitioner Research Fellowships and one Foxley Fellowship were awarded in our 2020 Career Development Awards funding round to enable clinicians at the frontline of health services to pursue research opportunities. In addition to our Career Development Awards, over half of all HRC research contracts included a practicing clinician based at a district health board or primary health organisation.

Supporting our best and brightest

Eight prestigious Sir Charles Hercus Health Research Fellowships worth a total of more than \$4.5 million were awarded to outstanding emerging researchers, including \$575,742 to Dr Jie Zhang from the University of Auckland to develop adult stem cell treatments for corneal endothelial diseases. This was up from six awarded in 2018-2019.

Plugging the mid-career gap in support

The new HRC Consolidator Grants for mid-career researchers (see page 18) aim to give health researchers an additional opportunity to access funding at a stage of their careers when securing grants becomes increasingly challenging.

Female research workforce closes in on 50%

Three-quarters of 2019 Project and Programme contracts were transdisciplinary in nature, and 47 per cent were led by female researchers compared with 27.6 per cent in 2012.



Fostering Pacific research careers



Associate Professor El-Shadan (Dan) Tautolo

The Pacific Islands Families (PIF) Study, which commenced in 2000 at Middlemore Hospital in South Auckland, follows a birth cohort of 1398 Pacific children and their parents over their lives and within their family environment. Consultation within Pacific communities contributed to the development of this multidisciplinary project, emerging at a time when Pacific peoples were not adequately represented in the evidence base.

The PIF study, founded by Professor Janis Paterson at Auckland University of Technology, aims to address this knowledge gap by providing Pacific-specific evidence for strategic recommendations to improve the health and wellbeing of Pacific children and families, and shape and influence health policies and practice decision-making to address the social disparities our Pacific communities face in New Zealand.

Alongside addressing health and wellbeing outcomes for the Pacific community, this longitudinal, multidisciplinary programme of research has also proved to be a thriving hub for building capacity and capability of Pacific Island researchers and has created a strong platform for Pacific Island health research in New Zealand.

The PIF study provides an effective model for supporting and nurturing Pacific researchers throughout their career, and has established a space for researchers to grow and belong. One example of this can be seen in the study's current Director, Associate Professor El-Shadan (Dan) Tautolo. Born and raised in South Auckland with Samoan and Cook Island heritage, Associate Professor Tautolo first received funding in 2004 with an HRC Summer Studentship. With continued HRC support, Associate Professor Tautolo cultivated his academic career within the PIF study, through PhD and postdoctoral research grants and onwards to leading several large research grants, including two HRC Project grants as principal investigator. In 2016, he was welcomed on to the HRC Pacific Health Research Committee.

PIF research findings on physical activity, food patterns, diabetes risk factors and the physical, social, built and family environment within which these children live their lives has informed both policy and practice:

- · PIF researchers work with the Pacific Heartbeat team of the Heart Foundation to deliver a Ministry of Health-funded, and AUT-delivered, Level 4 Certificate in Pacific Nutrition.
- · PIF findings have continuously informed the curriculum to train those who work in the Pacific community on solutions to improve the health of Pacific peoples.

As part of the Pacific Islands Food and Nutrition (PIFN) Action Group, PIF researchers are working with the City Mission to lead the development of a monograph on the lived experiences of food poverty and food insecurity for Pacific people for the Child Poverty Action Group. The (PIFN) Action Group includes representation from the Heart Foundation, the Stroke Foundation and ProCare.

The HRC is currently funding research projects looking into the impact of hearing loss and respiratory health among Pacific youth as extensions of the PIF study. Both studies are due for completion in 2021.

Northland nurse's study to help increase Māori nursing numbers

The Māori nursing population has remained static over the past 30 to 40 years at 6 to 7 per cent, well below the 16.5 per cent of Māori in the general population. This will be compounded by the predicted severe nursing shortage of up to 15,000 nurses within the next five years as the baby boomers start to retire.

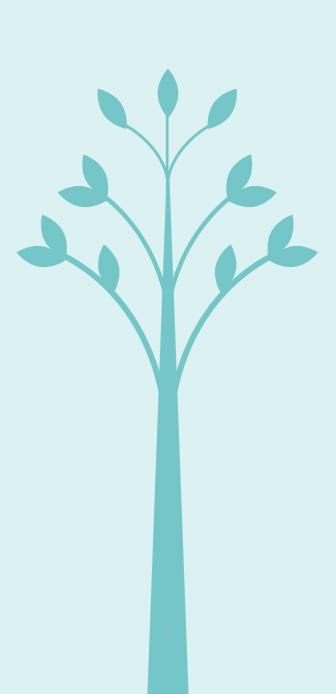


Whangarei mental health Pipi Barton nurse and nursing educator

Phillipa (Pipi) Barton (Ngāti Hikairo/Te Rohe Pōtae) is determined to help make the journey into nursing an easier one for Māori after being awarded a 2020 HRC Māori Health Research PhD Scholarship to develop strategies to improve Māori recruitment and retention into nursing.

Miss Barton says after overcoming the challenges that are often experienced by Maori entering tertiary education, Māori nurses are then confronted with the reality of working in an environment that frequently conflicts with their own personal beliefs and values. For her HRC scholarship, Miss Barton will interview Māori nursing students, registered nurses and key stakeholders to identify the barriers to recruiting and retaining Māori students in undergraduate nursing programmes and explore the issues that might contribute to a culturally unsafe working environment for Māori registered nurses.

The study, which is based at Auckland University of Technology, follows on from Miss Barton's Master's research on Māori experiences of hospitalisation and her research project at Northtec (Tai Tokerau Wānanga) looking at the recruitment and retention of Māori nurse educators into undergraduate nursing programmes. It has received an enthusiastic response from many quarters, including the Northland District Health Board who have indicated that they hope the findings may influence their workforce development strategy.





Focus 3: Identify and expedite economic returns from health research investment

Generating health innovations that will improve health outcomes and boost the economy is an important aspect of how we make a difference through research. We are fortunate in New Zealand to have government and tertiary agencies that are skilled at realising the commercial benefits of health research and innovation. The HRC is working hard to actively increase system connectivity and coordination with these agencies to strengthen the early stages of the health innovation pipeline and to further support researchers' engagement through commercialisation, as an important pathway to impact.

We have been actively collaborating with Kiwi Innovation Network Ltd (KiwiNet), Return on Science (collectively called the Commercialisation Partner Network) and university Technology Transfer Offices to co-design a pilot referral process that alerts these commercialisation agencies to HRC-funded research with commercial potential.

We have a crucial role in ensuring that the health research system in New Zealand thrives.



Highlights for Focus 3 from 2019-2020: **HRC-funded** research

Strengthening collaborations to aid innovation

The HRC, Technology Transfer Offices and the Commercialisation Partner Network are working in new ways together to support HRC-funded researchers along the early stages of the health innovation pipeline.

In 2019-2020, the HRC referred 10 HRC Explorer Grant projects identified as having commercial potential on to Technology Transfer Offices, more than three times our original target.



In collaboration with Technology Transfer Offices and the Commercialisation Partner Network, we are piloting a way of sharing the progress of the pilot projects and

teams, and the support they may receive from secondary agencies. This will greatly improve system connectivity and coordination and the HRC's visibility of later stages of the innovation pipeline.



A fast and cheap early diagnosis of vision impairment to reduce inequalities



Dr Ehsan Vaghefi (front) and team

Clinical screening for most common causes of blindness (uncorrected refraction, cataract, glaucoma, and macular degeneration) is extremely expensive, mainly due to the many imaging modalities used and the time it takes to perform a comprehensive clinical eye exam.

HRC Explorer Grant recipient Dr Ehsan Vaghefi and colleagues from the Auckland Bioengineering Institute have developed two novel laser-based imaging modalities and a comprehensive visualisation platform called Optical Laser Biometry (OLB). This new technology can replace several ophthalmic imaging modalities and enables affordable, portable delivery of vision-care at remote or lower socio-economic communities, potentially reducing



inequalities in this field considerably. Their project is part of the commercialisation pilot between the HRC, Technology Transfer Offices and the Commercialisation Partner Network.

Dr Vaghefi and his research team have made significant progress towards the commercialisation of this technology in 2019-2020, with several patents now secured with the support of Auckland UniServices Ltd. This includes a patent for a 'virtual eye' for clinical assessment, which has been tested by clinicians and patients at Auckland's Greenlane Eye Clinic. The team have also partnered with a community health care provider in South Auckland who looks after more than 30 schools in the region with mainly Maori and Pasifika students. They are planning to facilitate a school screening programme with this provider using the OLB technology. A clinical trial of the technology is due to begin later in 2020, depending on the COVID-19 situation. If successful, this technology will join the pipeline of ophthalmic diagnostic tools currently commercialised under the University of Auckland's spin-out company Toku Eyes, which is supported by the University of Auckland Inventors' Fund and Return on Science.





Technology developed by researchers from the Centre for Translational Cancer Research at the University of Otago with HRC funding, has been commercialised through their NZX-listed spin-off biotech company, Pacific Edge Ltd, of which Professor Parry Guilford is chief scientific officer.

In 2011 the company launched their diagnostic testing kit for bladder cancer. Cxbladder, which has been rolled out across New Zealand district health boards and has recently been launched into the Singapore and North American market.

Bladder cancer was previously largely diagnosed using a highly-invasive and expensive endoscopic procedure. Cxbladder is a non-invasive laboratory test which is conducted on urine samples and consistently outperforms competing products. The ease of use of this new technology and focus on early detection is saving lives around the world.

2020 has been a particularly good year for the company. Shares rose 230 per cent with the recent announcement of the commercial deal to supply Cxbladder tests to the American non-profit healthcare provider Kaiser Permanante. Kaiser is one of the largest non-profit healthcare providers in the United States (US), with over 12 million members. It operates 39 hospitals and employs approximately 23,000 physicians.

In the financial year 2019/20, US operating revenue increased by 15 per cent on the previous year, a figure likely to be exceeded in 2021 as demand from Kaiser Permanante grows. Other highlights in early 2020 have been the inclusion in the National Comprehensive Cancer Network (NCCN) guidelines in the US and increased adoption and commercial use by New Zealand's public healthcare providers.

In the US, the outbreak of COVID-19 in early 2020 led to an increase in the use of Pacific Edge's in-home sampling solution as healthcare providers and urologists looked to telemedicine to streamline patient care.

Note: this project is not part of the commercialisation pilot





Sustain a skilled and diverse health research workforce. identifying and addressing crucial gaps in capacity, building people and creating opportunities

Percentage of recipients of an HRC Māori Career Development Award who have made a career progression through an HRC-funded opportunity in the past five years.

Actual 2019/20: Achieved | 58%

Maseline 2018/19: 55%

Target for 2019/20: 50-70%

() Target for 2020/21:

We will have completed an in-depth survey of all recipients of an HRC Māori Health Career Development opportunity since 1990, published our findings, and used what we have learned to improve and refine our Māori health career development programme. Planning for this survey is underway.



Identify & expedite economic returns from health research

Number of HRC contracts with commercial potential referred to secondary agencies.

Actual 2019/20: Achieved We referred 10 projects to Technology Transfer Offices¹.



Baseline 2018/19: 11



(O) Target for 2019/20: 3

(Target for 2020/21:

We will have devised a system for alerting commercialisation entities to discoveries with potential, and have referred 5-10 HRC contracts through this system.

¹ Technology Transfer Offices help researchers within their organisation to translate research outcomes into intellectual property and commercial products.





Increasing engagement and connection

Whakaawenga 3: He whakapiki i te hononga ā-tangata

The HRC plays a leading role in coordinating, connecting and aligning the efforts of the New Zealand health research sector. We partner with other funders, government agencies and charities to deliver targeted pieces of health research for New Zealand. Our international partnerships are also crucial, helping increase opportunities for New Zealand researchers to engage with the global research community.



Focus 1: Strengthen our strategic leadership role – coordination, connection and alignment across the system

To ensure that every dollar invested is addressing issues that matter to New Zealanders, the HRC has worked with the Ministry of Health and the Ministry of Business, Innovation and Employment to set a Prioritisation Framework that applies to all publiclyfunded health research in New Zealand. We have already made significant progress in aligning our New Zealand Health Delivery Research funding stream with this framework. In December 2019, we launched our redesigned Health Delivery Research Investment Round. This round supports research that will directly contribute to improvements in health delivery by informing decisions or changes to policy, practice, services or systems in the New Zealand health and disability sector. This new round seeks to achieve some bold goals for New Zealand health delivery research, including improving health equity, advancing Māori health, and increasing health sector participation in research.

Our new Health Delivery Research funding opportunities are being implemented in several phases. The four new funding opportunities currently available in Phase 1 are as follows:

- Health Delivery Research Activation Grant
- · Health Delivery Research Project Grant
- Health Delivery Research Career Development
 Award
- Health Sector Research Collaboration Grant (DHB pilot).

In March 2020, the HRC made some changes to the Phase 1 funding opportunities in response to COVID-19. These changes aimed to ensure that health sector researchers could participate in the round, while not restricting valuable health delivery research from progressing where researchers were ready and able to start. As such, the HRC extended the deadlines of all the available grants by several months. Additionally, we made changes to some parts of the assessment processes for these funding opportunities to make sure that robust assessment processes could be undertaken within the COVID-19 public health measures. The initial response to Phase 1 was significant, research investment is suitable for a broad range of with 58 applications received for Health Delivery contexts, such as size, geographical location and Research Project Grants, 38 for the first stream of health delivery research starting point. Health Delivery Research Activation Grants, and 13 registrations from District Health Boards (DHBs) Several new approaches to investment, including for the Health Sector Collaborations Grant. This new grant types and new assessment processes, response is even more impressive given the notable have been tested in Phase 1, making the evaluation impacts of COVID-19, particularly for the health of this round crucial. Due to the delays in running sector. this round, and changes to the assessment process, we expect that there may be some delay to the The assessment processes for this round were design of Phase 2 funding opportunities so that we can incorporate the evaluation findings into initiated in several phases to accommodate the COVID-19 delays and extensions. The 32 recipients Phase 2.

The assessment processes for this round were initiated in several phases to accommodate the COVID-19 delays and extensions. The 32 recipients of the Health Delivery Research Project Grant and Health Delivery Research Activation Grant – stream 1 were announced in September 2020. Funding announcements for the other opportunities were made in October.

The HRC continues to work with six selected DHB pilot partners to test the Health Sector Research Collaboration Grant pilot, which represents a new and exciting way for the HRC to work with the health sector. The DHBs selected represent a range of important characteristics that help us to evaluate whether this new approach to health delivery





Focus 2: Work with others to speed translation

Our Partnership Programme aims to deliver research that effectively meets the knowledge and evidence needs of next users or end-users, such as policymakers, planners, communities and those involved in healthcare delivery. By partnering directly with our stakeholders, we can deliver to their needs outside of annual funding cycles and speed the uptake of knowledge.





Equity of access to breast cancer treatment

A new project seeks to develop advanced machine learning algorithms that can automatically identify digital signatures of genomic changes in invasive breast cancers from tissue slides. This project, led by Dr Gavin Harris of Canterbury District Health Board, intends to improve equity of access to testing and the prediction of a patient's prognosis and response to treatment. It is one of four new projects announced in August 2019 through the Breast Cancer Research in New Zealand partnership between the HRC, Breast Cancer Cure and the Breast Cancer Foundation NZ. A total of \$875,562 was awarded. Another Request for Proposals through this partnership released in May 2020 focused on addressing health inequities for communities disproportionately affected by breast cancer in New Zealand, particularly Māori and Pacific peoples.

Getting the best out of funded medicines

Dr Anna Howe from the University of Auckland is researching whether children at high-risk of pneumococcal disease are getting the protection they need. Her study aims to improve vaccination rates to help prevent pneumococcal-related morbidity and mortality, and potentially reduce the inequities experienced by children with chronic and congenital conditions. Dr Howe was one of two researchers awarded grants in November 2019 worth a total of \$425,048 through the HRC and PHARMAC partnership, which is designed to support innovative research that helps New Zealanders get the best out of funded medicines.

Fostering New Zealand's clinical trials

A new funding initiative aims to facilitate the development of a sustainable, nationally coordinated, and equitable clinical trials enterprise in New Zealand - an important part of the New Zealand Health Research Strategy. This joint initiative between the HRC and the Ministry of Health was released in December 2019.

Personalised healthcare for **New Zealanders**

A new round of postdoctoral fellowships is supporting emerging scientists to explore more effective and personalised healthcare for New Zealanders, leading to improved health outcomes and discoveries with a clear pathway to commercialisation. This round was announced in December 2019 through the partnership between the HRC and Precision Driven Health.

Regenerating the damaged nerves of spinal cord injury patients

An innovative new treatment to regenerate damaged nerves following spinal cord injury has the potential to boost the body's innate ability to heal itself and deliver both health and economic benefits to New Zealand. In January 2020, the HRC and CatWalk Spinal Cord Injury Research Trust announced joint funding of \$472,123 to Associate Professor Darren Svirskis of the University of Auckland to investigate this transformative technology, which combines both beneficial electrical fields and nerve growth factors.

Making better decisions for New Zealand's breast cancer patients

Findings from a new project focused on the costs of breast cancer in New Zealand will help inform healthcare planning, including decisions to introduce new treatment regimens, cost-effectiveness analyses of new treatments for breast cancer, and



better resource allocation to reduce inequities in breast cancer diagnosis, treatment, and health outcomes. This project led by Dr Chunhuan Lao from the University of Waikato is one of two projects funded through a partnership between the HRC and Breast Cancer Foundation NZ to a total value of \$238,396. Projects supported through this partnership fund leverage the Breast Cancer Foundation NZ's investment in the National Breast Cancer Register.



One Health collaboration to reduce high rate of work-related illness



Every year, 750 to 900 New Zealanders die prematurely due to work-related illness, yet little is known about the effectiveness of workplace interventions to address these health issues.

In late February 2020, WorkSafe New Zealand and the HRC announced new joint funding for two research projects exploring how to reduce work-related ill health in small and medium-sized organisations in New Zealand. The focus of this round of funding was on how to tackle risks at work that may negatively affect workers' mental wellbeing: factors such as high or low work demands, low job control, low social support, low recognition and reward, all of which are linked to harm such as stress, anxiety and depression.

Massey University Associate Professor David Tappin received a \$1.2 million grant to develop, implement and test interventions to reduce exposure to work-related psychosocial hazards in small and medium-sized organisations in New Zealand's manufacturing, health and education sectors. Meanwhile, senior psychology lecturer Dr Lixin Jiang from the University of Auckland is using her \$396,000 grant to carry out a systematic review of organisational-level interventions to combat psychosocial hazards, evaluate their effectiveness, and make any necessary modifications to reflect the unique needs of New Zealanders.

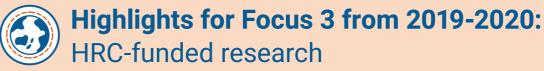
The HRC is pleased to team up with WorkSafe New Zealand to support research that will help provide the evidence base needed to make a tangible difference to work environments to support the mental wellbeing of New Zealand workers.



Focus 3: Build international partnerships and increase opportunities for New Zealand researchers to engage with large international research collaborations

New Zealand researchers make a major contribution to the knowledge base on global issues. By partnering with international agencies, the HRC can support new collaborations and access to international facilities, highend equipment, training and expertise. Our strong links to the international health research community are invaluable as we align with, contribute to, and benefit from the global response to serious threats to human health, such as pandemics and climate change.

The HRC's trilateral agreement with the National Health and Medical Research Council of Australia (NHMRC) and the Canadian Institutes of Health Research (CIHR) is a unique agreement that has been in place since 2012 and recognises and builds upon each country's strengths in indigenous health research. As part of this collaboration, the HRC hosted a highly successful International Indigenous Health Research Workshop at Waipuna Lodge in Auckland in December 2019. A total of 56 indigenous health researchers took part in the three-day workshop, including 17 from New Zealand (Māori), 11 from Australia (Aboriginal and Torres Strait Islanders), and 28 from Canada (First Nations, Inuit and Métis peoples). The three countries are committed to building on the momentum from this workshop to help develop and support a cadre of emerging indigenous health researchers who will go on to become international leaders in their fields, and help to reduce health inequities.



Close to 100% of funded contracts feature collaborations with external organisations

The 58 proposals for our 2019 Projects and Programmes funding rounds generated 513 individual collaborations from external organisations (an average of 8.8 collaborations per proposal), 200 of these being international in nature. Nearly all the funded researchers had collaborators from external organisations (97%).

New Zealand and China combine biomedical expertise

In October 2019, the HRC released a new Request for Proposals for funding of up to \$405,000 through the NZ-China Biomedical Research Alliance, supported by the Catalyst Crown



Fund. This call was designed to support a research project focusing on health and biomedical science as agreed by the New Zealand and Chinese governments.

Another funding call to support new and/or strengthen existing collaborations in biomedical sciences between New Zealand and China was released in March 2020 by the HRC and the National Natural Science Foundation of China. A total of \$1 million in funding was made available for a Project and up to three Emerging Research First Grants.

Teaming up with global counterparts in times of crisis

Of the 13 projects funded in the first COVID-19 rapid response funding round, eight projects included collaborations with international researchers and institutions, including collaborators in Australia, Fiji, United States and Republic of Ireland.

Contributing to the global effort to combat chronic diseases

Through our membership with the Global Alliance for Chronic Diseases (GACD), we are joining New Zealand researchers with the global research efforts on combating cancer. In March 2020, we put out a call to fund between one to four projects looking at implementation research for the primary and/or secondary prevention of cancer within Maori and/ or Pacific populations (total funding of \$2 million). The Ministry of Health and the Cancer Control Agency will provide in-kind support to the successful recipients (due to be announced in April 2021).

Leveraging international expertise for New Zealand's benefit

Ten per cent of researchers that we supported in 2019-2020 were not based in New Zealand. Of these, the majority (154) were in Australia, the USA (62) or the UK (46). The other 133 came from 26 countries from almost every region, including the Pacific, Europe, South Africa, South America, South and East Asia, Scandanavia and the West Indies. The international workforce on HRC contracts illustrates the diversity of connections that HRC-funded researchers are forging around the globe.

Growing collaborations with the South **Asian region**

New Zealand, through the HRC, is a member of the e-ASIA Program, which is currently the only opportunity that enables direct engagement and science collaborations to develop within the South Asian region via a multilateral forum. In late 2019, the HRC and e-ASIA awarded funding to Dr Susan McAllister from the University of Otago to study whether neighbourhoods around known tuberculosis cases are high-risk populations and to use genomic and epidemiological tools to guide appropriate interventions. Contracting for this project began in early 2020 but was delayed due to COVID-19. A new 2020 e-ASIA funding round was launched in January 2020 with results due to be announced at the end of 2020.

HRC-funded research: International collaborations

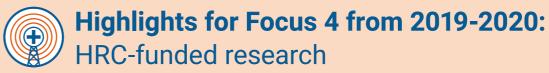




Focus 4: Communicate clearly with all our stakeholders, sharing the latest discoveries and promoting the benefit, value, and impact of health research

Highlighting the vast benefits of HRC-funded research to New Zealanders is a major focus of our communications strategy. We are committed to ensuring that our communications about HRCfunded research, including media releases, news articles and e-newsletters are shared widely and are easily understood by all our stakeholders.

The international workforce on HRC contracts illustrates the diversity of connections that HRC-funded researchers are forging around the globe.



Punching above our weight in the media

Our media monitoring shows that in the year ended 30 June 2020, the HRC had the following levels of media exposure:

390 mentions (times featured) in New Zealand news media (only online measured). In addition to this, 185 mentions on Radio NZ/Newstalk ZB. We also featured in TVNZ and TV3 news clips and interviews, however, these broadcasting sources are not measured.

299 mentions in global media

1,740 mentions in social media

Local sources of media exposure include:

- Scoop (66)
- Stuff.co.nz (26)
- the New Zealand Herald (25).

The top three international sources of media exposure were:

- Nature (11)
- The Conversation (Australia) (11)
- EurekAlert (9).

The top three international media locations were:

- United States (157)
- United Kingdom (55)
- Australia (45).

Preparations on track for national research information hub

We undertook significant work preparing our systems to be ready to submit data to the New Zealand Research Information System (NZRIS), which is set to be a national online hub of information about the research, science and innovation sector.

New-look website emphasises how health research saves lives

In November 2019, we launched the new-look HRC website to make it easier for the public to find out about the breadth and impact of the research we fund. The new features of the website included a research repository containing details of HRC-funded studies over the past 10 years; a comprehensive research library of our research and funding documents; and a section devoted to showing how the research we fund is making a difference to people's lives both in New Zealand and

Website viewing times triple

Between 30 November 2019 and 30 May 2020, over half the people who came to the HRC's new homepage continued into the site. The time spent on the site more than tripled from the previous year.





Keeping our stakeholders up-to-date with the latest health research news

During the year we communicated frequently with our stakeholders on a wide range of issues affecting the health research community:

- In August 2019, we launched our new criterion for scoring a research proposal's potential to advance Maori health along with Maori Health Advancement Guidelines. We followed this up with a series of videos featuring prominent New Zealand researchers sharing their views on the new criterion and how their research has benefited from working closely with Māori.
- · We provided regular updates via our Update e-newsletter and our website about the new Health Research Prioritisation Framework. Both English and Te Reo versions of the framework were produced and made available on the HRC's website.
- · We sent out regular updates to the research community about the major changes to our New Zealand Health Delivery research investment stream and the launch of a new funding round for this stream in December 2019.
- On 24 February 2020, we alerted researchers to the HRC and Ministry of Health's upcoming rapid research response to the COVID-19 pandemic through our e-newsletter, website and social media channels. The funding call for this response was launched on 2 March 2020, with the HRC's chief executive, Professor Sunny Collings, taking part in a widely-covered media briefing about these opportunities in Wellington, together with the Ministry of Health.

 Following the nationwide lockdown due to COVID-19, we communicated frequently with the health research community about changes to funding timelines and assessment processes, all designed to support them through this difficult time. We sent out 15 Update and Special Update e-newsletters between 24 February and 30 June 2020 to our subscribers and kept a running commentary of any COVID-19-related issues for health researchers on a dedicated page on our website.





Work with others to speed translation.

Number of positions for practising health practitioners on current contracts.

Actual 2019/20: Achieved 524 individuals holding 1,164 positions

Baseline 2018/19: 546 individuals holding 1,006 positions

(Target for 2019/20: 300-400 individuals

(Target for 2020/21: We will provide details of at least five research contracts that have led to a change in practice as a result of the involvement of a health practitioner in the research.

We already have examples of more than five contracts that have led to a change in practice as a result of the involvement of a health practitioner in research.



Build international partnerships and increase opportunities for New Zealand researchers to engage with large international collaborations.

Negotiate a long-term research funding partnership between the Ministry of Health and the HRC.

Actual 2019/20: Achieved The HRC and Ministry of Health have invested in the two additional priority areas of maternity services (Request for Proposals released in September 2020) and COVID-19 (Request for Proposals released in March 2020).

Baseline 2018/19: We worked with the Steering Group (the MoH-HRC Partnership Governance Group) to develop two funding initiatives for 2019/20 that addressed priorities identified through the New Zealand Health Research Strategy. These initiatives were expected to be announced in 2019/20.

(Target for 2019/20:

Invest in a second priority area.

Target for 2020/21: We will have established a joint research programme with the Ministry of Health in areas of strategic priority and are on track to achieve this.

Statement of Service Performance He Tauākī Whakarato Mahi

Under each of our three key decision drivers (Making a difference; Stimulating growth; and Increasing engagement and connection), there sits at least one of four outputs. It is through these outputs that we provide details of our actual performance against our forecast measures, followed by our detailed financial statements, prepared in accordance with good accounting practice. These four outputs are:

54

- Output 1: Health research contracts (our main funding rounds)
- Output 2: Career development contracts
- Output 3: Co-funding relationships (our Partnership Programme and international relationships funding rounds)
- Output 4: Contribution to policy, regulatory and ethical frameworks (our ethics and regulatory committees)

In addition to the measures provided under each of these outputs, we are required to report against performance measures in the government's Estimates of Appropriations for Vote Health and for Vote Business, Science and Innovation. These measures are included in the Key Performance Indicators (KPIs) for the four outputs. The Vote Health estimates identify all of the KPIs reported in the Statement of Service Performance for assessment of performance. The Vote Business, Science and Innovation estimates specify two of the measures, which are indicated with a footnote.

Investments through Output 1: Health research contracts

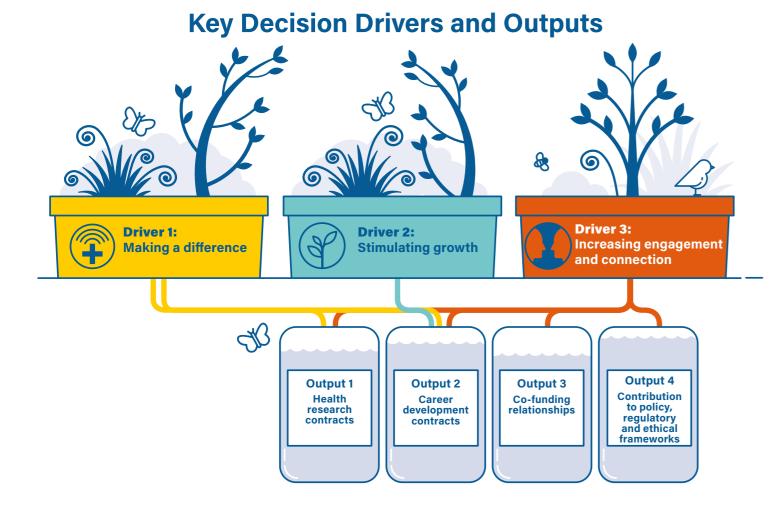
What we fund through this Output

The HRC invests in health research contracts through contestable funding rounds and co-funding partnerships. This output covers the research contracted through our annual funding rounds of which we have one main round, closing in November, and a separate round for Explorer Grants. In 2019-2020, we supported research with both long and short horizons, to build pathways to better health and wellbeing.

How our investments under Output 1 contribute to our Key Decision Drivers

Health research contracted through this output delivers to the following Drivers.





Income and expenditure in 2019-2020 under Output 1: Health research contracts

	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 \$000
Funding from Crown	110,943	110,970	97,445
Interest Received	110	342	248
Total Revenue	111,053	111,312	97,692
Cost of Output	104,428	108,952	98,795
Surplus (Deficit)	6,626	2,360	(1,102)

Our key performance indicators for **Output 1: Health research contracts**

Number of contracts funded in the previous financial year that meet the Health Research Council's definition of 'transformative'¹ research²

Actual 2019/20: 15 (2019 contracts) | Achieved

Baseline 2018/19: 10 (2018 contracts)

(O) Target for 2019/20: 10 - 18 (Health Research Fund 8-10. Achieved) This range covers our expected result, but a higher number of transformative research contracts funded is a desirable outcome.

Implement a risk classification for all current contracts

Actual 2019/20: Implemented | Achieved

Baseline 2018/19: New measure

Target for 2019/20: Implemented

Introduce site visits for current Programme contract holders

Actual 2019/20: Site visits suspended due to COVID-19 pandemic | Not Achieved

Baseline 2018/19: New measure



Investments through Output 2: Career development contracts

What we fund through this Output

We offer a programme of Career Development Awards, each aimed at addressing a gap in the health research workforce and building vital capacity. The programme is designed to build the Māori, Pacific and clinical workforce (which includes all allied health professionals) and foster the next generation of emerging leaders.

How our investments under Output 2 contribute to our Key Decision Drivers

Career development contracts supported through this output, deliver to the following Drivers.

Driver 2: Stimulating growth



Focus 2: Sustain a skilled and diverse health research workforce

Income and expenditure in 2019-2020 under Output 2: Career development contracts

	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 \$000
Funding from Crown	11,723	11,723	9,890
Interest Received	225	193	79
Total Revenue	11,948	11,916	9,968
Cost of Output	10,516	10,877	9,433
Surplus (Deficit)	1,432	1,039	535

Our key performance indicators for Output 2: Career development contracts

Number of current career development contracts awarded to practising clinicians

Actual 2019/20: 50 | Achieved

Baseline 2018/19: 41

Target for 2019/20: 30 - 50

Number of Māori Health Research Scholarships awarded (including Masters, PhD and postdoctoral awards)

Actual 2019/20: 12 | Achieved **Baseline 2018/19:** 10 (a) Target for 2019/20: 10 -18

Number of Pacific Health Research Scholarships awarded (including Masters, PhD and postdoctoral awards)



(Target for 2019/20: 8 - 16

1 Research that promises extraordinary outcomes, such as revolutionising entire disciplines; creating entirely new fields; or disrupting accepted theories and perspectives - in other words, those endeavours that have the potential to change the way we address challenges in health

Investments through Output 3: Co-funding relationships

What we fund through this Output

The HRC co-funds research through our Partnership Programme, which delivers research that meets the needs of policymakers and those involved in healthcare delivery.

Our partnership model allows us to pool our resources with those of our funding partners to increase the scale, use and reach of the research that we fund. The HRC can offer expertise and processes that are not available to many of our partners, meaning that the projects commissioned are more likely to be robustly designed and deliver value for the investment.

How our investments under Output 3 contribute to our Key Decision Drivers

Health research contracted through this output delivers to the following Drivers.

Driver 2: Stimulating growth



Focus 2: Sustain a skilled and diverse health research workforce

Driver 1: Making a difference



Focus 1: Invest in research that meets the current and future health needs of New Zealanders



Focus 2: Fund excellent research with high potential for national and international impact



Focus 3: Focus on achieving health equity

² This measure is one of two included in the end-of-year reporting requirements for the Health Research Fund (M84) under the Vote Business, Science and Innovation Estima tes of Appropriation for 2019/20.

Driver 3: Increasing engagement and connection

Focus 1: Focus 1: Strengthen our strategic leadership role - co-ordination, connection and alignment across the system



Focus 3: Build international partnerships and increase opportunities for New Zealand researchers to engage with large international research collaborations

Income and expenditure in 2019-2020 under Output 3: Co-funding relationships

	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 \$000
Funding from Crown	3,246	3,131	1,773
Interest Received	98	161	121
Other	985	494	652
Total Revenue	4,329	3,786	2,546
Cost of Output	6,667	4,672	4,542
Surplus (Deficit)	(2,338)	(886)	(1,996)

Our key performance indicators for **Output 3: Co-funding relationships**

Number of new funding agreements negotiated with government or nongovernment agencies to specifically address a health research priority developed as a result of the New Zealand Health Research Strategy⁴

Actual 2019/20: 5 | Achieved (In addition to three international funding alliances)



Target for 2019/20: 1

Number of New Zealand-based researchers named on current contracts resulting from HRC commitments to international organisations and agreements







4 This measure is one of two included in the end-of-year reporting requirements for the Health Research Fund (M84) under the Vote Business, Science and Innovation Estimates of Appropriation for 2019/20.

Investments through Output 4: Contribution to policy, regulatory and ethical frameworks

What we fund through this Output

Under this output, the HRC undertakes regulatory activities and safety monitoring, and provides strategic advice on health research issues. These activities are provided primarily through the work of several HRC committees: the HRC Ethics Committee, the Gene Technology Advisory Committee (GTAC), the Standing Committee on Therapeutic Trials (SCOTT), and the Data Monitoring Core Committee (DMCC).

Alignment with the HRC's Key Decision Drivers

Activities supported through this output deliver to the following Driver:



Driver 2: Stimulating growth

Focus 1: Develop a strong and enduring health research and innovation system where New Zealand research teams thrive

Income and expenditure in 2019-2020 under Output 4: Contribution to policy, regulatory and ethical frameworks

	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 \$000
Funding from Crown	285	285	285
Total Revenue	285	285	285
Cost of Output	195	388	196
Surplus (Deficit)	90	(103)	89

Our key performance indicators for Output 4: Contribution to policy, regulatory and ethical frameworks
Number of Ethics Notes published to inform researchers of issues on ethics in health research
Actual 2019/20: 1 Achieved
Baseline 2018/19: 1
Target for 2019/20: 1
Number of Health and Disability Ethics Committees (HDECs) reviewed and approved by HRC annually
Actual 2019/20: 4 Achieved
Baseline 2018/19: 4
Target for 2019/20: 4



Part 3: Our team and organisation

Wāhanga 3: Tō mātou rōpū me tō mātou whakahaere

Our team and organisation Tō mātou rōpū me tō mātou whakahaere

We have a diverse and talented team who are committed to supporting the health research and researchers that will help to build a healthy future for New Zealanders. In turn, we aim to provide a safe, flexible and fair working environment for all our staff.

At the end of June 2020, the HRC had 38 permanent staff members and one intern.

• Permanent staff – 28 full-time and 10 part-time • Intern – full-time

We are committed to being a good employer as set out under the Crown Entities Act. Equity is a major focus for our organisation and in 2020 we created a new Directorate of Equity, Māori, and Pacific Health Research. Our employment policy is one of equal opportunity to everybody, with no exclusions, and uses an open and transparent recruitment and selection process. We follow Equal Employment Opportunities guidelines, with an emphasis on recruiting the best people regardless of gender, nationality, disability or age. We have 14 different nationalities represented amongst our staff and 74 per cent of our staff are female.

All new employees undergo a formal induction programme focusing on general information about the organisation as well as role-specific information. As part of the induction process, all new employees will spend time with every area of the business to gain an understanding of our unique environment. We have an approved Training and Development Policy, enabling all staff to participate in development opportunities. Every position description in the HRC has been evaluated against the market to ensure that equitable remuneration can be offered to all staff.

Leadership within the HRC is managed through an Executive Leadership Team, consisting of our chief executive and four directors (Research Investment and Contracts; Strategy and Policy; Equity, Māori and Pacific Health Research; and Business

Operations and Chief Financial Officer). Our Chief Executive Professor Sunny Collings, started at the HRC in February 2020. She replaced the Acting Chief Executive Dr Vernon Choy who had been filling in since our former chief executive stepped down in August 2019. The executive leadership team is accountable to the Council who are appointed in terms of the Health Research Council Act (1990), by the Minister of Health.

The HRC is a flexible organisation, putting its employees first. This is evident in the flexible work hours offered and the accommodation of requests to work part-time for people returning from parental leave, those with other commitments, or those recovering from illness or injury. We provide support to employees such as access to counselling through the Employee Assistance Programme, HR consultants and workstation assessments. We have a zero-tolerance policy towards bullying and harassment, and as such, a Bullying and Harassment Policy and Professional Conduct Guide and Disciplinary Code are in place.

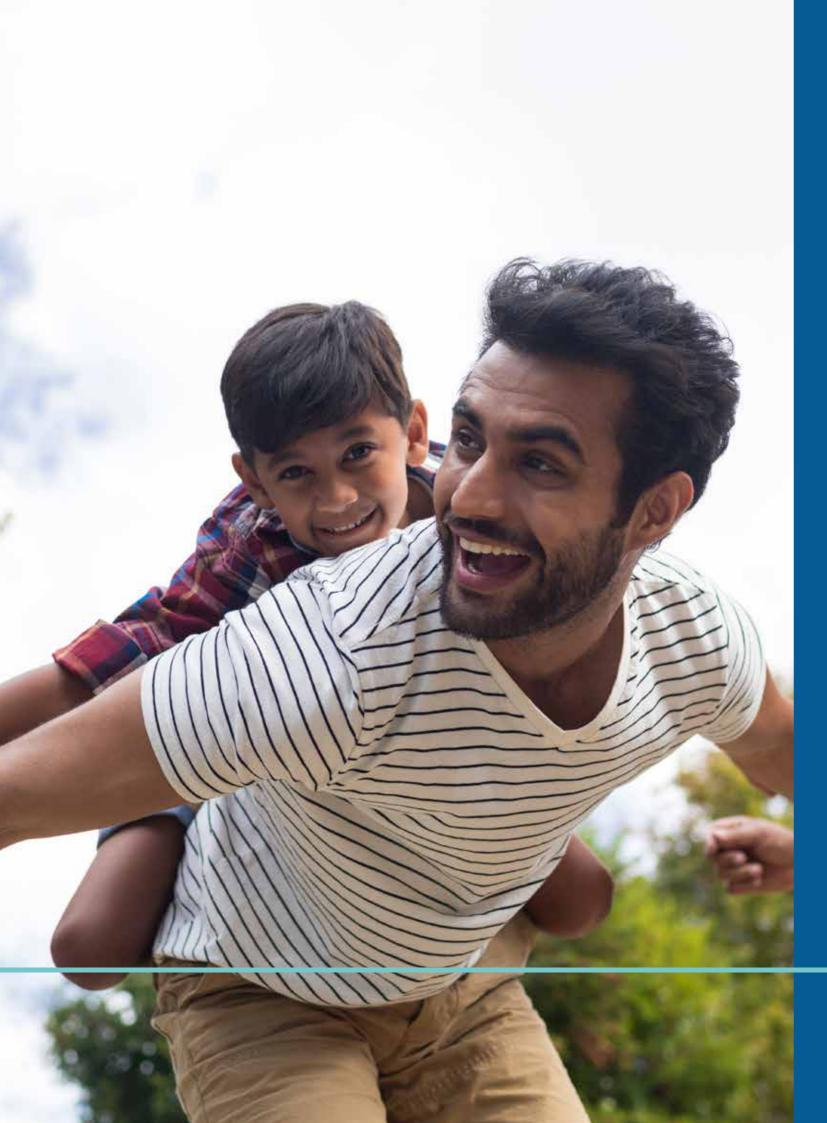
In March 2020, when the government announced a nationwide lockdown in response to the COVID-19 pandemic, we were able to have all our staff working from home within 48 hours of the announcement. During lockdown, we provided staff with access to virtual workstation assessments, virtual HR support and advice, and resilience e-training with a focus on employee wellbeing and mental health. For the first lockdown, we also provided an allowance to all staff in line with guidance provided by the Inland Revenue Department to help pay for the extra power incurred due to working from home.

The HRC places great importance on the health solutions. In 2019-2020, we made a big push to and safety of staff. We have a dedicated Health and reduce our ecological footprint. We introduced Safety Committee that meets regularly throughout a new waste management system, removing all the year to ensure we provide a healthy and rubbish bins by staff members desks and providing safe working environment. We encourage staff dedicated recycling bins for all the different types to report any issues and keep a register of these of waste generated, including organic waste, soft concerns along with the committees' response or plastics recycling, and general recycling for plastics recommendation. The Health and Safety Committee numbered 1 and 2. In 2020, our Keep it Green Team reports back to the HRC's Risk Management also began waste audits of the various kitchen Committee and Council. During the year, we bins to gain an insight into the quantity of waste increased security within the HRC's office to and how staff are disposing of different items. The protect our staff by installing an additional security team is weighing the HRC's waste-to-landfill to door. The committee is also in discussion with the report regulary to Toitū, our sustainability monitoring other tenants and the building manager around agency. To encourage more staff to bike to work, better access to bathroom facilities for people with we added four extra bike racks to the building disabilities. basement area. Many staff also took part in a beach clean-up day at Point Chevalier in Auckland, The HRC's Sustainability Framework outlines our collecting fifteen 50 Litre sacks of rubbish, including sustainability vision and presents the commitments seven tyres, a desk chair and an armchair.

we are making to our people, our place, and our policies and to champion better sustainable



HRC staff being welcomed onto Ōrākei Marae in February 2020.





Part 4: **Financial statements**

Wāhanga 4: Ngā Pūrongo Pūtea

Statement of Responsibility For the year ended 30 June 2020

In terms of the Crown Entities Act 2004, we hereby certify that:

- We have been responsible for the preparation of these financial statements and statement of service performance and the judgements used therein.
- We have been responsible for establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting.
- · We are responsible for any end-of-year performance information provided by the Health Research Council of New Zealand under section 19A of the Public Finance Act 1989.
- We are of the opinion that these financial statements and statement of service performance fairly reflect the financial position and operations of this Crown Entity for the year ended 30 June 2020.

Dr Will Barker,

Council member

Professor Lester Levy, CNZM, Chair

31 May 2021

*In 2019/20, the HRC did not meet its obligations for submission of the Statement of Intent 2020-2024 and the Statement of Performance Expectations 2020-2021, pursuant with our requirements under the Crown Entities Amendment Act 2013 (sections 149 and 1491). While we submitted a draft for comment on time in May, disruptions to the normal ministerial approval processes as a result of the COVID-19 pandemic meant that the letter from our Ministers providing feedback was delayed. The impact of the pandemic, the general election, and the need to review and update the Statement of Intent in the light of developments during the year all contributed to the finalisation of the documents being significantly delayed.

Statement of Comprehensive Revenue and Expense

for the year ended 30 June 2020

	Note	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 Restated* \$000
Revenue				
Funding from the Crown	2	126,198	126,107	109,392
Interest Revenue		433	697	448
Other Revenue		985	494	652
Total Income		127,616	127,298	110,492
Expense Research Grant costs	3	115,833	116,978	106,963
Operational costs				
Assessment and Council Committee costs		842	1,402	1,274
Personnel costs		4,063	4,230	3,671
Depreciation and amortisation expense		115	134	129
Fees to Audit New Zealand for the audit of the financial statements		64	64	63
Other costs		889	2,080	866
Total operational costs		5,973	7,910	6,003
Total expenses		121,806	124,888	112,966
Surplus/(Deficit)		5,810	2,410	(2,474)
Other comprehensive revenue and expenses		0	0	0
Total comprehensive revenue and expenses		5,810	2,410	(2,474)

Statement of Changes in Equity

for the year ended 30 June 2020

	Note	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 Restated* \$000
Equity at the beginning of the year		16,175	9,013	18,649
Total comprehensive revenue and expense for the year		5,810	2,410	(2,474)
Equity at the end of the year	6	21,985	11,423	16,175
Represented by				
Public equity		12,804	10,032	7,677
Joint Operations Reserve		7,925		7,026
Foxley Estate Reserve Fund		1,256	1,391	1,472
Total equity at 30 June	6	21,985	11,423	16,175

*See Note 11

The accompanying accounting policies and notes form part of these financial statements Explanations of major variances to budget are provided in note 17.

Statement of Financial Position

as at 30 June 2020

		Actual	Budget	Actual 2019
	Note	2020	2020	Restated*
		\$000	\$000	\$000
Current Assets				
Cash at Bank	4	1,171	845	828
Short-term Deposits	4	18,336	11,715	10,763
Short-term Deposits - Held for Joint Operations	4	7,925	-	7,026
Funds held on behalf of - Other Agencies	4	8,238	17,285	11,511
Funds held on behalf of - Foxley Estates	4	1,254	1,660	1,434
Receivables		600	524	380
Total Current Assets		37,524	32,029	31,942
Non-Current Assets				
Property Plant & Equipment		133	204	139
Intangible Assets		2	53	13
Total Non-Current Assets		135	257	152
Total Assets		37,659	32,286	32,094
Current Liabilities				
Payables		487	616	928
Contract Retentions	3	3,420	2,203	2,980
Provision for funds committed to International	5	334	0	0
Agencies				
Employee Entitlements		445	189	362
Rental Benefit in Advance		21	114	21
Unearned Management Fees		0	454	0
Funds held on behalf of other agencies	4	2,191	4,024	2,684
Total Current Liabilities		6,898	7,600	6,975
Non-Current Liabilities Provision for funds committed to International	5	2 622	0	0
Agencies	5	2,632	0	0
Rental Benefit in Advance		96	2	117
Funds held on behalf of other agencies	4	6,048	13,261	8,827
Total Non-Current Liabilities		8,776	13,263	8,944
Total Liabilities		15,674	20,863	15,919
Net Assets		21,985	11,423	16,175
Equity				
Public Equity		12,804	10,032	7,677
Joint Operations reserve		7,925	0	7,026
Foxley Estate Reserve Fund		1,256	1,391	1,472
Total Equity	6	21,985	11,423	16,175

The accompanying accounting policies and notes form part of these financial statements. Explanations of major variances to budget are provided in note 17.

Statement of Cash Flow

for the year ended 30 June 2020

Cash at Bank end of year		1,171	845	828
Cash at Bank beginning of year		828	1,408	1,136
Net increase (decrease) in cash held		343	(563)	(308)
Net cash flow from investing activities		(8,559)	(2,298)	814
		(80,476)	(101,824)	(93,221)
Purchase of Property Plant & Equipment		(98)	(232)	(19
Reinvestment of Term Deposits		(76,920)	(95,178)	(89,624)
Funds paid on behalf of other agencies		(3,458)	(6,414)	(3,578)
Cash was applied to				
		71,917	99,526	94,035
Maturing Term Deposits		71,900	93,112	91,134
Funds held on behalf of other agencies		17	6,414	2,901
Cash was provided from				
Cash flows from Investing activities				
Net cash flow from operating activities	13	8,902	1,735	(1,122)
		(118,626)	(125,563)	(111,382)
GST		(1,371)	(84)	309
Payments to employees		(3,980)	(4,166)	(3,498
Payments to suppliers		(113,275)	(121,313)	(108,193
Cash was applied to		121,020	121,200	110,200
		127,528	127,298	110,260
Other Revenue		846	494	427
Receipts from the Crown Interest received		126,198 484	126,107 697	109,392 441
Cash was provided from		100 100	400 407	400.000
Cash flows from operating activities				
				\$000
	note	\$000	\$000	Restated'
	Note	2020	2020	2019

*See Note 11

The accompanying accounting policies and notes form part of these financial statements. Explanations of major variances to budget are provided in note 17.

Notes to the Financial Statements

For the year ended 30 June 2020

Note 1 - Statement of accounting policies

Reporting Entity

The Health Research Council of New Zealand (HRC) is a Crown entity as defined by the Crown Entities Act 2004 and is domiciled and operates in New Zealand. The relevant legislation governing the HRC's operations includes the Crown Entities Act 2004 and the HRC Act 1990. The HRC's ultimate parent is the New Zealand Crown.

The HRC's primary objective is to benefit New Zealand through health research. The HRC does not operate to make a financial return. The HRC has designated itself as a public benefit entity (PBE) for financial reporting purposes. The financial statements for the HRC are for the year ended 30 June 2020 and were approved by Council on 31 May 2020.

Basis of preparation

The financial statements have been prepared on a going concern basis, and the accounting policies have been applied consistently throughout the period.

Standards issued and not yet in effect and not early adopted

Standards and amendments, issued but not yet effective, that have not been early adopted are:

Amendment to PBE IPSAS 2 Statement of Cash Flows

An amendment to PBE IPSAS 2 Statement of Cash Flows requires entities to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cashflows and non-cash changes. The amendment is effective for annual periods beginning on or after 1 January 2021, with early application permitted. The HRC does not intend to early adopt the amendment.

PBE IPSAS 41 Financial Instruments

The XRB issued PBE IPSAS 41 Financial Instruments in March 2019. This standard supersedes PBE IFRS 9 Financial Instruments, which was issued as an interim standard. It is effective for reporting periods beginning on or after 1 January 2022. Although the HRC has not assessed the effect of the new standard, it does not expect any significant changes as the requirements are similar to PBE IFRS 9.

PBE FRS 48 Performance Reporting

PBE FRS 48 Performance Reporting replaces the service performance reporting requirements of PBE IPSAS 1 and is effective for periods beginning on or after 1 January 2022. The HRC has not yet determined how application of PBE FRS 48 will affect its statement of performance.

Implementation of new and amended standard

PBE Standards on interests in other entities:

- PBE IPSAS 34 Separate Financial Statements;
- PBE IPSAS 35 Consolidated Financial Statements:
- PBE IPSAS 36 Investments in Associates and Joint Ventures;
- PBE IPSAS 37 Joint Arrangements; and
- PBE IPSAS 38 Disclosure of Interests in Other Entities.

The New Zealand Accounting Standards Board issued these standards to incorporate the equivalent standards issued by the International Public Sector Accounting Standards Board into PBE Standards. These standards replace PBE IPSAS 6 Consolidated and Separate Financial Statements, PBE IPSAS 7 Investments in Associates and PBE IPSAS 8 Interests in Joint Ventures.

The Council adopted PBE IPSAS 37 with effect from 1 July 2019. The remaining standards do not apply to the Council.

Refer to note 11 for further details.

PBE IPSAS 39 Employee Benefits

PBE IPSAS 39 replaces the previous standard on employee benefits, PBE IPSAS 25 Employee Benefits. PBE IPSAS 39 is based on IPSAS 39, which was issued by the IPSASB to update its standards for the amendments to IAS 19 by the IASB during the 2011-2015 period.

Statement of compliance

The financial statements of the HRC have been prepared in accordance with the requirements of the Crown Entities Act 2004, which includes the requirement to comply with generally accepted accounting practice in New Zealand (NZ GAAP). The financial statements have been prepared in accordance with Tier 1 PBE accounting standards. These financial statements comply with PBE accounting standards.

Presentation currency and rounding

The financial statements are presented in New Zealand dollars and all values are rounded to the nearest thousand dollars (\$000).

that do not relate to a specific note are outlined below.

a) Property Plant & Equipment (PPE) and Intangible Assets (IA)

All property, plant and equipment (PP&E) and intangible assets (IA) are stated at cost less accumulated depreciation or amortisation and impairment losses. Cost includes expenditure that is directly attributable to the acquisition and development of the items. Where an asset is acquired in a non-exchange transaction for nil or nominal consideration the asset is initially measured at its fair value. Subsequent expenditure is capitalised only if it is probable that the future economic benefits associated with the expenditure will flow to the HRC and the cost can be measured reliably. All other repair, maintenance, and costs of day-to day servicing are recognised in surplus or deficit as incurred. The costs of self-constructed assets are recognised as work in progress and not depreciated or amortised until the assets are operating in the manner intended, at which time they are transferred to PP&E or IA. Gains and losses on disposals are determined by comparing the proceeds with the carrying amount of the asset and are reported net in the surplus or deficit.

Depreciation and amortisation are recognised in surplus or deficit and are calculated to write off the cost of items of PP&E and IA less their residual values using the straight-line method over their useful lives as follows. The assets' residual values and useful lives are reviewed, and adjusted prospectively, if appropriate, at the end of each reporting period.

PP&E	Office and computer equipment	3 to 5 years	20 - 33%
PP&E	Leasehold improvements	5 years	20%
IA	Acquired computer software	3 years	33%
IA	Developed computer software	5 years	20%

b) Impairment of property, plant & equipment and intangible assets

The HRC only holds non-cash-generating assets as no assets are used to generate a commercial return. PP&E and IA held at cost that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable service amount. The recoverable service amount is the higher of

Significant accounting policies are included under the note to which they relate. Significant accounting policies

an asset's fair value less costs to sell and value in use. Value in use is determined using an approach based on either a depreciated replacement cost approach, restoration cost approach, or a service units' approach. The most appropriate approach used to measure value in use depends on the nature of the impairment and availability of information. If an asset's carrying amount exceeds its recoverable service amount, the asset is regarded as impaired and the carrying amount is written down to the recoverable amount. The total impairment loss is recognised in the surplus or deficit.

c) Employee entitlements

Short-term employee entitlements

Employee benefits that are due to be settled wholly before 12 months after the end of the period in which the employee renders the related service are measured based on accrued entitlements at current rates of pay. These include salaries and wages accrued up to balance date, annual leave earned but not yet taken at balance date, and sick leave.

Long-term employee entitlements

Employee benefits that are due to be settled wholly beyond 12 months after the end of period in which the employee renders the related service, such as long service leave and retirement gratuities, have been calculated on an actuarial basis. The calculations are based on likely future entitlements accruing to staff, based on years of service, years to entitlement, the likelihood that staff will reach the point of entitlement, contractual entitlement information, and the present value of estimated future cash flows.

Presentation of employee entitlements

Sick leave, annual leave and vested long service are classified as a current liability. Non-vested long service leave and retirement gratuities expected to be settled within 12 months of balance date are classified as a current liability.

Contributions to defined contribution schemes

Obligations for contributions to Kiwi Saver and the Government Superannuation Fund are accounted for as defined contribution superannuation schemes and are recognised as an expense in the surplus or deficit as incurred.

d) Receivables

Short-term receivables are recorded at the amount due, less an allowance for credit losses. The HRC applies the simplified expected credit loss model of recognising lifetime expected credit losses for receivables.

e) Payables

Short-term payables are recorded at the amount payable.

f) Goods and services tax

All items in the financial statements are presented exclusive of GST, except for receivables and payables, which are presented on a GST-inclusive basis. Where GST is not recoverable as input tax, it is recognised as part of the related asset or expense.

g) Income Tax

The HRC is a public authority and consequently is exempt from the payment of income tax. Accordingly, no provision has been made for income tax.

h) Budget Figures

The budget figures are derived from the statement of performance expectations as approved by the Board at the beginning of the financial year. The budget figures have been prepared in accordance with NZ GAAP, using accounting policies that are consistent with those adopted by the Board in preparing these financial statements except for the implementation of PBE IPSAS 37 – Joint Arrangements. Explanation of major variances against budget are provided in note 17.

i) Cost allocation

changes to the cost allocation methodology since the date of the last audited financial statements. Direct costs are those costs directly attributed to an output. Indirect costs are those costs that cannot be identified in an economically feasible manner with a specific output.

Direct costs are charged directly to outputs. Indirect costs are charged to outputs based on cost drivers and related activity or usage information. Depreciation is charged based on asset utilisation. Personnel costs are charged based on actual time incurred. Property and other premises costs, such as maintenance, are charged based on floor area occupied to produce each output. Other indirect costs are assigned to outputs based on the proportion of direct staff costs for each output.

j) Critical accounting estimates and assumptions

In preparing these financial statements, the HRC has made estimates and assumptions concerning the future. These estimates and assumptions may differ from the subsequent actual results. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. There are no estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

k) Critical judgements in applying accounting policies

Management has exercised the following critical judgments in applying accounting policies:

Leases classification

Determining whether a lease agreement is a finance, or an operating lease requires judgement as to whether the agreement transfers substantially all the risks and rewards of ownership to the HRC. Judgement is required on various aspects that include, but are not limited to, the fair value of the leased asset, the economic life of the leased asset, whether or not to include renewal options in the lease term and determining an appropriate discount rate to calculate the present value of the minimum lease payments. The HRC has determined no lease arrangements are finance leases.

Research Grant Expenditure

For purposes of making payments, the HRC applies judgement during the year when determining whether an appropriate level of progress and quality has been achieved. It also ensures that no other change events have occurred which might affect payment.

Note 2 - Revenue from the Crown

Note 2 - Revenue from the Crown Non-exchange revenue	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 Restated* \$000
Ministry of Business, Innovation and Employment (MBIE)	125,913	125,822	109,107
Ministry of Health (MoH)	285	285	285
	126,198	126,107	109,392

*See note 11

Accounting Policy

The specific accounting policies for significant revenue items are explained below:

Funding from the Crown

The HRC is primarily funded from the Crown. This funding is restricted in its use for the purpose of the HRC meeting the objectives specified in its founding legislation and the scope of the relevant appropriations of the funder. The HRC considers there are no conditions attached to the funding and it is recognised as revenue at the point of entitlement.

The fair value of revenue from the Crown has been determined to be equivalent to the amounts due in the funding arrangements.

Grants Received

Grants are recognised as revenue when they become receivable unless there is an obligation in substance to return the funds if the conditions of the grant are not met. If there is such an obligation the grants are initially recorded as revenue received in advance and recognised as revenue when the conditions of the grant are satisfied.

Interest revenue

Interest revenue is recognised using the effective interest method.

Provision of services

Services provided to third parties on commercial terms are exchange transactions. Revenue from these services is recognised in proportion to the stage of completion at balance date.

Joint Operations

The HRC recognises its share of income and expenditure by Joint Operations it is involved in as the obligations under the contract are performed. Also refer note 6.

Restrictions attached to revenue from the Crown

The HRC has been provided with funding from the Crown for the specific purposes of the HRC as set out in its Output Agreement with MBIE and MoH. Apart from these general restrictions, there are no unfulfilled conditions or contingencies attached to government funding.

Note 3 - Research Grant Expenditure

Note 3 - Research Grant Expenditure	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 Restated* \$000
Vote Health & Society Research	114,049	113,269	102,986
Vote Vision Mātauranga	1,429	3,004	3,589
Vote International Relationships	355	705	388
	115,833	116,978	106,963

*See note 11

Accounting Policy

Expenditure related to grants to researchers

Expenditure is recognised as the obligations under the contract are performed. Provision is made for any retentions and disbursements held at the end of the contract pending a final research report.

Expenditure related to Joint Operations

The HRC recognises its share of income and expenditure by Joint Operations it is involved in as the obligations under the contract are performed. Also refer note 6.

Expenditure related to funds committed to International Agencies

Expenditure and a provision are recognised when the HRC has committed to an International Agency to undertake and fund a research project and deliver the research to the International Agency such that a constructive obligation is created, and the amount involved can be reliably measured (Refer to Note 5). Related research costs are recognised against the provision as the obligations under the research contract are performed. Expenditure is recognised as the obligations under the contract are performed. Provision is made for any retentions held at the end of the contract pending a final research report.

Contract Retentions

Contract retentions relate to amounts withheld equivalent to 1 month's funding for each year of the term of the health research contract until a contractor provides a final research report. The contract funding retention is recognised as a financial liability at the end of the contract term, until the funding withheld is paid when the final research report is completed and provided to the HRC.

Disbursements

Disbursements relate to amounts held for expenditure claims payable to career development applicants by the HRC upon submission of an approved claim. Disbursements payable are recognised as a liability at the end of the contract.

Critical judgements in applying accounting policies

For purposes of making payments the HRC applies judgement during the year when determining whether an appropriate level of progress and quality has been achieved. It also ensures that no other change events have occurred which might affect payment.

Note 4 – Cash and cash equivalents, Short-term deposits and Funds held on behalf of other agencies

Accounting policy

Cash and cash equivalents include cash on hand, and deposits held on call with banks. The carrying value of shortterm deposits which are invested with maturity dates of 3 months or less approximates their fair value.

Interest Rates

In FY2020 the effective interest rates on deposited funds ranged from 1.56% pa to 3.15% pa.

Short-Term Deposits – Held for Joint Operations

Short-Term Deposits - Held for Joint Operations are the short-term funds set aside to meet the commitments made by the HRC to Joint Operations. These funds are interest bearing.

Funds held on behalf of other agencies

Funds held on behalf of other agencies are the balance of funds held which have been contributed by other partners to joint venture projects. These funds are interest bearing. Where funds have been committed to research contracts, payment terms are dependent on the individual underlying contracts. Uncommitted funds are held with no payment terms. The release of those funds to research projects are approved jointly by the HRC and partners.

Short term funds held on behalf of other agencies are the contract payments to be made in the next 12 months. The balance of funds held on behalf of other agencies are treated as long-term liabilities.

Funds held on behalf of Foxley Estate

Funds held on behalf of the Foxley Estate are pursuant to an HRC resolution to hold the bequeathed funds to support the Foxley Fellowship from the interest earned by the fund.

Note 5 - Provision for Funds Committed to International Agencies

Actual 2020 \$000	Budget 2020 \$000	Actual 2019 \$000
2,966	0	0
0	0	0
0	0	0
0	0	0
2,966	0	0
334	0	0
2,632	0	0
2,966	0	0
	\$000 2,966 0 0 0 2,966 2,966 334 2,632	\$000 \$000 2,966 0 0 0 0 0 0 0 0 0 2,966 0 334 0 2,632 0

Accounting policy

Provision for funds committed to International Agencies

Refer to Note 3 - research grant costs. Provisions are discounted to their present value at the reporting date and the unwinding of interest is recognised in surplus or deficit as part of "Other costs".

International Agency funding

International agency funding relates to two projects:

- The HRC's commitment to participate in the 6th joint call part of its membership of the Global Alliance for Chronic Disease (GACD). Under this call, the HRC has committed to provide \$2.0m in funding for cancer research, the results of which will be shared with members of the GACD. As of 30 June 2020, the balance of this provision was \$1,974k of which it expects to use \$111k in the next 12 months.
- The HRC's collaboration with the National Science Foundation of China (NSFC) in which it has established a funding initiative to support the development of collaborative research relationships between the two countries. As part of its second project with the NSFC, the HRC has committed to making \$1.0m available to researchers for biomedical research over the next 2-3 years which it will share with the NSFC. As of 30 June 2020, the balance of this provision was \$992k of which it expects to utilise \$223k in the next 12 months.

The HRC has estimated the cashflow profile of each of the above provisions. While there is certainty about overall amounts committed, there is uncertainty at balance date as to the exact timing of when payments for research will commence. Changes in the timing of the cash flow profile are not expected to be material.

Note 6 - Equity

Note 6 - Equity	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 Restated* \$000
Movements in Equity			
Public Equity			
Balance 1 July	7,677	7,538	9,439
Surplus/(deficit) for the year	5,810	2,410	(2,474)
Transfer of Net Income from/(to) Joint Operations Reserve Fund	(899)	0	601
Transfer of Net Income from/(to) Foxley Reserve Fund	216	84	111
Balance 30 June	12,804	10,032	7,677
Joint Operations Reserve Fund			
Balance 1 July	7,026	0	7,627
Transfer of Net Income from/(to) Joint Operations Reserve FundReserve	899	0	(601)
Balance 30 June	7,925	0	7,026
Foxley Reserve Fund			
Balance 1 July	1,472	1,475	1,583
Transfer (to)/from Accumulated Surplus/(deficit)	(216)	(84)	(111)
Balance 30 June	1,256	1,391	1,472
Total Equity at 30 June	21,985	11,423	16,175

*See note 11

Accounting policy

Equity is measured as the difference between total assets and total liabilities. Equity is disaggregated and classified into the following components.

- Accumulated surplus/(deficit)
- Joint Operations Reserve
- · Foxley Estate Reserve Fund.

Joint Operations Reserve

Accounting policy

The HRC recognises its share of jointly controlled assets, liabilities, expenses, and income. The joint operations reserve represents the HRC's interest in assets and liabilities of jointly controlled operations at balance date.

Joint Operations

The HRC regularly enters joint funding arrangements with various parties. The HRC generally enters into an overall agreement with another party whereby the main terms and format of the research funding agreement are agreed ("Umbrella Agreement"). The parties then agree on the research initiatives under that Umbrella Agreement.

Under these research agreements, the HRC and the other party generally agree to:

- 1. Jointly contribute an amount (committed funds) to pursue research activities ("the research initiative"); and
- 2. Have equal decision making rights as to how those monies are spent.

The HRC accounts for its joint operations by recognising its share of the jointly controlled assets, liabilities and expenses and income as these are incurred.

Foxley Estate Reserve Fund

The Foxley Estate Reserve Fund relates to the assets bequeathed to the HRC in 1998. The Council resolved to hold the bequest funds as the "Foxley Estate Reserve Fund" and to support the Foxley Fellowship from the interest earned by the fund. Interest received on these assets is credited to the reserve. Grants made for research sabbaticals are charged against the reserve.

Note 7 - Operating Lease Commitments

Note 7 - Operating Lease Commitments
Operating Leases as lessee
Not later than 1 year
Later than 1 year and not later than 5 years
Later than 5 years
Total non-cancellable operating leases
Operating Leases as lessor
Not later than 1 year
Later than 1 year and not later than 5 years
Later than 5 years
Total non-cancellable operating leases

Accounting policy

An operating lease is a lease that does not transfer substantially all the risk and rewards incidental to ownership of an asset to the lessee. Lease payments under an operating lease are recognised as an expense on a straight-line basis over the lease term. Lease incentives received are recognised in the surplus or deficit as a reduction of rental expense over the lease term.

Current Lease Arrangements

Operating Leases as lessee

The HRC currently leases office premises. The lease payments recognised as an expense in the period totalled \$276,711 (2019: \$276,711). No restrictions are placed on the HRC by any of its leasing arrangements. The lease has been surrendered with effect from 31 October 2020 and a new lease will commence on 1 November 2020 on the same terms and conditions, but with the option to be terminated on 3 months' notice. The HRC is not required to pay reinstatement costs upon either the surrender of lease or the termination of the new lease.

Operating Leases as lessor

Part of the office premises are sub-let to a tenant in the same building which the HRC occupies. This lease has been surrendered with effect 31 October 2020. The sublet premises have been returned to the landlord as part of the surrender of lease arrangement.

Actual 2020 \$000	Actual 2019 \$000
138	277
0	138
0	0
138	415
46	93
0	46
0	0
46	139

Note 8 - Categories of financial assets and liabilities

Note 8 - Categories of financial assets and liabilities	Actual 2020 \$000	Actual 2019 Restated* \$000
Loans and Receivables		
Cash and cash equivalents	1,171	828
Short-term Deposits	18,336	10,763
Short-term Deposits - Held for Joint Operations	7,925	7,026
Funds held on behalf of - Other Agencies	8,238	11,511
Funds held on behalf of - Foxley Estate	1,254	1,434
Receivables	600	380
Total loans and receivables	37,524	31,942
Other Financial liabilities measured at amortised cost		
Payables	487	927
Contract Retentions	3,420	2,980
Provision for Committed Grants	2,966	0
Funds held on behalf of other agencies	8,239	11,511
Total other financial liabilities	15,112	15,418

*See note 11

The fair values of the financial assets and financial liabilities are equal to their respective carrying amounts.

Accounting policy

The HRC classified financial assets into the category of loans and receivables and financial liabilities into the other financial liabilities category. The HRC initially recognises loans and receivables on the date that they are originated and derecognises a financial asset when the contractual rights to the cash flows from the asset expire or are transferred and does not retain control over the transferred asset. The HRC derecognises a financial liability when its contractual obligations are discharged or cancelled or expire. Financial assets and financial liabilities are offset, and the net amount presented in the statement of financial position when, and only when, the HRC has a legally enforceable right to offset the amounts and intends either to settle them on a net basis or to realise the asset and settle the liability simultaneously.

Loans and receivables and other financial liabilities

Loans and receivables and other financial liabilities are initially measured at fair value plus/(less) any directly attributable transaction costs. After initial recognition, they are measured at amortised costs using the effective interest method.

Note 9 - Financial Instruments Risk

a) Market risk

Fair value interest rate risk

Fair value interest rate risk is the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. The HRC's exposure to fair value interest rate risk is limited to its short-term deposits which are held at fixed rates of interest. The HRC does not actively manage its exposure to fair value interest rate risk. The interest rates on the HRC's cash and cash equivalents are disclosed in note 4.

Cash flow interest rate risk

Cash flow interest rate risk is the risk that the cash flows from a financial instrument will fluctuate because of changes in market interest rates. The HRC's investments are issued at fixed interest rates for fixed terms. The HRC is exposed to cash flow interest rate risk when investments mature and are reissued. The HRC does not actively manage its exposure to cash flow interest rate risk. The HRC currently has no variable interest rate investments.

Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in foreign exchange rates. The HRC does not enter into transactions in foreign currency and does not hold any assets or liabilities denominated in foreign currency. The HRC is not exposed to currency risk.

b) Credit risk

Credit risk is the risk that a third party will default on its obligation to the HRC, causing the HRC to incur a loss. The HRC's maximum credit exposure for each class of financial instrument is represented by the total carrying amount of cash and cash equivalents and debtors. There is no collateral held as security or other credit enhancement in respect of these amounts. None of these financial instruments are past due or impaired. The HRC has no significant concentrations of credit risk, as it has a small number of credit customers and only invests funds with registered banks with a Standard and Poor's credit rating of at least AA-.

c) Liquidity risk

Liquidity risk is the risk that the HRC will encounter difficulty raising liquid funds to meet commitments as they fall due. Prudent liquidity risk management implies maintaining sufficient cash and cash equivalents and the availability of funding. The HRC's annual revenue from the Crown (note 2) is known at the start of each financial year. Commitments are controlled and limited to this known level and timing of revenue and available cash reserves. If government funding is not continued, or the progress and or quality of research expected is not achieved, then the HRC may discontinue contracts at its discretion.

The table on page 82 analyses payables (not including employee entitlements), contract retentions, and funds held on behalf of other agencies into relevant maturity groupings based on the remaining period at balance date to the contractual maturity date.

Total	15,418	15,418	5,546	1,045	8,827
Funds held on behalf of other agencies	11,511	11,511	1,639	1,045	8,827
Provision for Committed Grants	0	0	0	0	0
Contract Retentions	2,980	2,980	2,980	0	0
Payables	927	927	927	0	0
2019					
	Restated*				
Total	15,112	15,112	5,393	1,037	8,682
Funds held on behalf of other agencies	8,239	8,239	1,486	703	6,050
Provision for Committed Grants	2,966	2,966	0	334	2,632
Contract Retentions	3,420	3,420	3,420	0	0
Payables	487	487	487	0	0
2020					
	\$000	\$000	\$000	\$000	\$000
	Amount	Cash flows	6 Months		1 year
	Carrying Amount	Contractual Cash flows	Less than 6 Months	6 to 12 Months	More tha 1 ye

*See note 11

Note 10 - Capital management

The HRC's capital is its equity, which comprises accumulated funds and other reserves. Equity is represented by net assets. The HRC is subject to the financial management and accountability provisions of the Crown Entities Act 2004, which impose restrictions in relation to borrowings, acquisition of securities, issuing guarantees and indemnities and the use of derivatives. The HRC manages its equity as a by-product of prudently managing revenues, expenses, assets, liabilities, investments, and general financial dealings to ensure the HRC effectively achieves its objectives and purpose, whilst remaining a going concern.

Note 11 - Prior Period Adjustment (Restatement)

Accounting Policy

All material prior-period errors are corrected retrospectively in the first set of financial statements authorised for issue after their discovery, by restating comparative prior-period amounts or, if the error occurred before the earliest period presented, by restating the opening balances of assets, liabilities and equity.

Correction of Errors - Prior Period Adjustment (Restatement) Impact

The HRC has assessed the impacts of PBE IPSAS 34 - 38 and determined that PBE IPSAS 37 is applicable to its Joint Funding Operation. Joint Operations are described below.

The HRC has determined that in accordance with PBE IPSAS 37 it should account for its joint operations by recognising its share of the jointly controlled assets, liabilities and expenses and income as these are incurred. This standard was first issued in 2017 effective for reporting periods beginning on or after 1 Jan 2019, however review of the impact of this standard has identified that PBE IPSAS 19 Provisions, Contingent Liabilities and Contingent Assets has been incorrectly applied in previously audited financial statements.

Joint Operations

The HRC regularly enters joint funding arrangements with various parties. The HRC generally enters into an overall agreement with another party whereby the main terms and format of the research funding agreement are agreed ("Umbrella Agreement"). The parties then agree on the research initiatives under that Umbrella Agreement.

Under these research agreements the HRC and the other party generally agree to:

- 2. Have equal decisions making rights as to how those monies are spent.

The HRC has been recognising a liability to the joint initiatives at the time the HRC sets aside cash into a term deposit (committed funds) representing its contributions to these joint agreements. However, at this stage, no funding obligation had been triggered as no research contract had yet been entered into. The payment of any research monies was still dependent on procuring a researcher and executing a research contract with that party. The standard requires certainty regarding both quantum and probability which are not satisfied until signing of specific research agreements.

The effect of this correction has been to reduce expenses and liabilities previously recognised, and so increase the opening balance of equity 1 July 2018 by \$7,627,000. The HRC created a special reserve within equity to manage the funds set aside for this purpose (see table below). Within the year ended 30 June 2019 \$601,000 of this reserve has been expended resulting in a closing balance in this reserve at 30 June 2019 of \$7,026,000. This is shown in the table below.

Correction of Errors - Prior Period Adjustment (Restatement) Impact

	Adjustment		
	1 July 2018 \$000	During 2018/2019 \$000	As at 30 June 2019 \$000
Liabilities			
Funds held on behalf of other agencies	(7,627)	601	(7,026)
Equity			
Joint Operations Reserve Fund	7,627	(601)	7,026

1. Jointly contribute an amount (committed funds) to pursue research activities ("the research initiative"); and

The comparative figures have been restated in the financial statements and notes to the financial statement to reflect this change.

The impact on the comparative year financial statements for the year ending 30 June 2019 are shown below.

Changes to the statement of financial performance (annual report 2019 column)

	Actual 2019 Reported \$000	Actual 2019 Restated* \$000	Adjustment \$000
Other Revenue	638	652	14
Research Grant costs	106,348	106,963	615
Surplus/(Deficit)	(1,873)	(2,474)	(601)

Note 3: Research Grant Expenditure in the financial statements (2019 column) was also adjusted as a consequence of this change.

Changes to the statement of changes in equity (annual report 2019 column)

	Actual 2019 Reported \$000	Actual 2019 Restated* \$000	Adjustment \$000
Equity at the beginning of the year	11,022	18,649	7,627
Total comprehensive revenue and expense	(1,873)	(2,474)	(601)
Equity at the end of the year	9,149	16,175	7,026
Represented by			
Public Equity	7,677	7,677	0
Joint Operations Reserve Fund	0	7,026	7,026
Foxley Estate Reserve Fund	1,472	1,472	0

Note 6: Equity in the financial statements (2019 column) was also adjusted as a result of this change.

Statement of financial position (annual report 2019 column)

	Actual 2019 Reported \$000	Actual 2019 Restated* \$000	Adjustment \$000
Current Assets			
Short-Term Deposits – Held for Joint Operations	0	7,026	7,026
Funds held on behalf of – Other Agencies	18,537	11,511	(7,026)
Other Current Assets	13,405	13,405	C
Total current assets	31,942	31,942	0
Non current assets	152	152	0
Total Assets	32,094	32,094	0
Current Liabilities			
Unearned management fees	478	0	(478)
Funds held on behalf of other agencies	4,262	2,684	(1,578)
Other current liabilities	4,291	4,291	0
Total current liabilities	9,031	6,975	(2,056)
Non-current Liabilities			
Funds held on behalf of other agencies	13,797	8,827	(4,970)
Other current liabilities	117	117	0
Total non current liabilities	13,914	8,944	(4,970)
Total liabilities	22,945	15,919	(7,026)
Equity			
Joint Operations Reserve	0	7,026	7,026
Other Equity	9,149	9,149	0
Total Equity	9,149	16,175	7,026

Note 8: Categories of Financial Assets and Liabilities and Note 9 Financial Instruments Risk (2019 column) were also adjusted as a result of this change.

Net cash flow from operating activities Net cash flow from investing activities

Net increase / (decrease) in cash held

Note 13: Reconciliation of Operating Surplus (deficit) to net cash flow from operations (2019 column) was also adjusted as a result of this change.

Adjustment \$000	Actual 2019 Restated* \$000	Actual 2019 Reported \$000
(561)	(1,122)	(561)
561	814	253
0	(308)	(308)

Note 12 - Employee Remuneration

Employees receiving over \$100,000	Actual 2020 No. of Staff	Actual 2019 No. of Staff
100,000 to 109,999	5	5
110,000 to 119,999	4	1
120,000 to 129,999	1	
130,000 to 139,999		1
160,000 to 169,999	1	
180,000 to 189,999		2
190,000 to 199,999	2	1
200,000 to 209,999		
240,000 to 249,999	1	
360,000 to 369,999		1
Total Employees	14	11

Councillors' Fees	Appointed	Term	Actual 2020 \$	Actual 2019 \$
Dr L Levy, CNZM	Jan 16	Aug 22	24,000	24,000
Professor L McCowan, ONZM	Feb 14	Mar 19	12,000	12,000
Professor A Mercer	Nov 12	Aug 19	2,500	15,000
Associate Professor S Pitama	June 15	Aug 22	15,000	15,000
Ms S Snively, ONZM	Dec 10	Apr 19	0	10,000
Professor J Douwes	Sep 15	Aug 20	15,000	15,000
Professor P Gilford	Oct 16	Oct 19	12,000	12,000
Dr W Barker	Jun 17	Jun 20	12,000	12,455
Dr M Faleafa	Jun 17	Jun 20	12,000	12,000
Mr T Norman	Jun 17	Jun 20	12,000	12,000
Dr A Dewes	May 19	May 22	12,000	2,000
Professor A Cameron, ONZM	Sep 19	Aug 22	12,500	0
			141,000	141,455

Note 13 - Reconciliation of Operating surplus (deficit) to net cash flow from operating activities

Note 13 - Reconciliation of Operating surplus (deficit) to net cash flow from operating activities	Actual 2020 \$000	Budget 2020 \$000	Actual 2019 Restated* \$000
Surplus /(Deficit) for year	5,810	2,410	(2,474)
Add non-cash items			
Depreciation and Amortisation expense	115	134	129
Joint Venture Management Fees Earned	(155)	0	(232)
Rent recovered	(21)	(21)	(21)
Add/(deduct) movements in provisions	2,966	0	0
Add/(deduct) movements in working capital items			
Receivable (increase)/decrease	105	0	227
Payables increase/(decrease)	81	(788)	1,249
Net cash flow from operating activities	8,902	1,735	(1,122)

*See note 11

Note 14 - Related party information

The HRC is a Crown Entity.

Related party disclosures have not been made for transactions with related parties that are:

- Within a normal supplier or client/recipient relationship, and
- · On terms and conditions no more or less favourable than those that it might be reasonable to expect the HRC would have adopted in dealing with the party at arm's length in the same circumstances.

Further, transactions with other government agencies are not disclosed as related party transactions when they are on normal terms and conditions consistent with the normal operating arrangements between government agencies.

Remuneration - \$000 Full-time equivalent members	899 3.79	920 4.00
Remuneration - \$000	899	920
Leadership Team		
Full-time equivalent members	0.81	0.74
Remuneration - \$000	141	142
Board Members		

Key management personnel include all Council members, the chief executive, and members of the leadership team.

Cessation, termination payments or compensation paid to those who ceased employment during the year totalled \$Nil, Staff Nil (2019: \$Nil, Staff Nil)

Note 15 - Contingencies

As at 30 June 2020, the HRC has no contingent assets or contingent liabilities (2019: Nil).

Note 16 - Post Balance Date Events

Operating Leases as lessee

The lease of the HRC premises located at the 3rd floor of 110 Stanley Street, Auckland was surrendered with effect from 31 October 2020 and a new lease will commence on 1 November 2020 on the same terms and conditions, except with the option to terminate the lease upon giving 3 months' notice to the landlord. The HRC is not required to pay reinstatement costs upon either the surrender of the original lease or the termination of the new lease.

Operating Leases as lessor

Part of the office premises are sub-let to a tenant in the same building which the HRC occupies. This lease has been surrendered with effect 31 October 2020. The sublet premises have been returned to the landlord as part of the surrender of lease arrangement. The tenant was not required to pay reinstatement costs upon the surrender of the lease

There were no post balance date events that could impact the financial statements for the year ended 30 June 2020.

Note 17 - Explanation of major variances against budget \$000

The budget figures are derived from the statement of performance expectations as approved by the Board at the beginning of the financial year. The budget figures have been prepared in accordance with NZ GAAP, using accounting policies that are consistent with those adopted by the Board in preparing these financial statements except for the implementation of PBE IPSAS 37 – Joint Arrangements. The variances against the budget are described below.

Statement of comprehensive revenue and expense

Revenue

Revenue was higher than budget (\$318k) driven by increased management fees received from joint operations (\$491k) and offset by lower interest rates (\$264k).

Expenditure

Research Grant Expenditure was lower than budget (\$1,145k) or 1.0% driven by lower Vision Mātauranga expenditure (\$1,575k). Lower operational costs (\$1,938k) were driven by the slower than expected implementation of Information Technology improvements (\$1,331k) staff vacancies (\$168k) and lower Assessing Committee Costs (\$596k).

Statement of financial position

Current assets are higher than budget (\$5,495k) driven by timing differences with funding budgeted for international arrangements and retention payments remaining unpaid at balance date (\$3,836k) and a higher operating surplus (\$3,400k).

Statement of Cash Flow

Cash from operating activities were higher than budget (\$7,167k) driven by a higher operating surplus (\$3,400k) and timing differences with funding budgeted for international arrangements and retention payments remaining unpaid at balance date (\$3,836k).

Note 18 - Impact of COVID-19

On Wednesday 25 March 2020 at 11.59pm, New Zealand increased its COVID-19 alert level to 4 which required a nationwide lockdown for a period of five weeks for non-essential businesses. The HRC was an essential service only at alert Level 2 for the purposes of making payments to research providers. The HRC responded to this by closing its offices and moving staff to work from home for the duration of the level 4 and level 3 lockdown. This method of working allowed the HRC to continue its operation. Since then, a flexible working framework has been introduced which will allow the HRC to continue its operation as New Zealand moves between the various alert levels.

The main impacts on the HRC's financial statements due to COVID-19 are explained below:

Revenue

Revenue from the Crown was not impacted by the New Zealand COVID-19 response levels

Interest Revenue is earned from term deposits held by the HRC. Interest rates on deposited funds ranged from 1.56% pa to 3.15% pa during FY 2020 and have fallen further since end of the financial year as interest rate markets respond to COVID-19 Stimulus packages.

Expenditure

Research Grant costs were reduced by \$600k due to requests for extensions to research contracts driven by the need for research providers to suspend aspects of research activity during the various COVID-19 alert levels.

In late February 2020, the HRC and the Ministry of Health allocated \$1.0M of their partnership funds to a rapid response to COVID-19. In May 2020, the HRC approved funding from its own resources of \$3.0M to a variety of COVID-19 and Emerging Infectious Diseases Grant Projects.

Operational costs were reduced by approximately \$290k due to savings in travel and accommodation costs (both domestic and international) as result of the restriction on travel during the various COVID-19 alert levels and work from home arrangements. There was a small number of IT peripheral purchases immediately prior to and during the lockdown period to support staff to adapt to working from home arrangements.

Other significant assumptions

There are no provisions made for COVID-19 impact within the HRC's balance sheet.

There are no other significant assumptions being made concerning the future and no other key sources of estimation uncertainty at the reporting date that pose significant risk of causing material adjustments to the carrying balances of assets and liabilities within the next financial year.

for New Zealanders.

We have a diverse and talented team who are committed to supporting the health research and researchers that will help to build a healthy future

Statement of Resources

for the year ended 30 June 2020

Operating Resources

- Computer systems
- Photocopying machines
- Furniture and fittings

Accommodation

The HRC is located at the 3rd floor of 110 Stanley Street, Auckland. The lease expires on 31 December 2020. Rights of renewal with two further terms of 3 years. The annual rental cost is \$0.27m including operating costs.

Staff Resources

	FTEs 2020	FTEs 2019
Operational staff	2020	2010
Chief Executive	1.0	1.0
Senior Managers	4.0	3.0
Manager Pacific Health Research	1.0	1.0
Manager Māori Health Research		1.0
Support staff	29.51	27.8
	35.51	33.8

Note: An FTE is a full-time equivalent employee.

Insurance Cover in respect of Council Members and Employees

The HRC has following Insurance Policies in place in respect of Council Members and Employees

- 1. An Employers' Liability policy to cover any event in which the HRC becomes legally liable to pay costs in respect of all employees who sustain injury.
- 2. A Directors' and Officers' liability policy to cover any event in which Board members find themselves personally liable to third parties.
- 3. A Professional Indemnity policy to help protect professional advice and service providing individuals from bearing the full cost of defending negligence claims by third parties, and damages awarded in such a civil lawsuit.

Independent Auditor's Report To the readers of the Health Research Council's financial statements and performance information for the year ended

30 June 2020

The Auditor-General is the auditor of the Health Research Council. The Auditor-General has appointed me, Lauren Clark, using the staff and resources of Audit New Zealand, to carry out the audit of the financial statements and the performance information, including the performance information for an appropriation, of the Health Research Council on his behalf.

Opinion

We have audited:

- the financial statements of the Health Research Council on pages 67 to 90, that comprise the statement of financial position as at 30 June 2020, the statement of comprehensive revenue and expense, statement of changes in equity and statement of cash flows for the year ended on that date and the notes to the financial statements including a summary of significant accounting policies and other explanatory information; and
- the performance information of the Health Research Council on pages 14 to 59.

In our opinion:

- the financial statements of the Health Research Council on pages 67 to 90:
 - present fairly, in all material respects:
 - its financial position as at 30 June 2020; and
 - its financial performance and cash flows for the year then ended; and
 - Entity accounting standards; and
- the performance information on pages 14 to 59:
 - June 2020, including:
 - for each class of reportable outputs:
 - statement of performance expectations for the financial year; and
 - of performance expectations for the financial year; and
 - what has been achieved with the appropriations; and
 - expenses or capital expenditure.
 - complies with generally accepted accounting practice in New Zealand.

Our audit was completed on 31 May 2021. This is the date at which our opinion is expressed.

The basis for our opinion is explained below, and we draw attention to the impact of Covid-19 on the Health Research Council. In addition, we outline the responsibilities of the Council and our responsibilities relating to the financial statements and the performance information, we comment on other information, and we explain our independence.

comply with generally accepted accounting practice in New Zealand in accordance with Public Benefit

presents fairly, in all material respects, the Health Research Council's performance for the year ended 30

its standards of delivery performance achieved as compared with forecasts included in the

its actual revenue and output expenses as compared with the forecasts included in the statement

the actual expenses or capital expenditure incurred compared with the appropriated or forecast

Emphasis of matter – Impact of Covid-19

Without modifying our opinion, we draw attention to the disclosures about the impact of Covid-19 on the Health Research Council as set out in Note 18 to the financial statements and page 14 of the performance information.

Basis for our opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor-General's Auditing Standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of the Council for the financial statements and the performance information

The Council is responsible on behalf of the Health Research Council for preparing financial statements and performance information that are fairly presented and comply with generally accepted accounting practice in New Zealand. The Council is responsible for such internal control as it determines is necessary to enable it to prepare financial statements and performance information that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements and the performance information, the Council is responsible on behalf of the Health Research Council for assessing the Health Research Council's ability to continue as a going concern. The Council is also responsible for disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless there is an intention to merge or to terminate the activities of the Health Research Council, or there is no realistic alternative but to do so.

The Council's responsibilities arise from the Crown Entities Act 2004, the Health Research Council Act 1990, and the Public Finance Act 1989.

Responsibilities of the auditor for the audit of the financial statements and the performance information

Our objectives are to obtain reasonable assurance about whether the financial statements and the performance information, as a whole, are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit carried out in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures, and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers, taken on the basis of these financial statements and the performance information.

For the budget information reported in the financial statements and the performance information, our procedures were limited to checking that the information agreed to the Health Research Council's statement of performance expectations.

We did not evaluate the security and controls over the electronic publication of the financial statements and the performance information.

As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. Also:

 We identify and assess the risks of material misstatement of the financial statements and the performance information, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Health Research Council's internal control.
- and related disclosures made by the Council.
- framework for reporting its performance.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Council and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Health Research Council's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements and the performance information or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Health Research Council to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the financial statements and the performance information, including the disclosures, and whether the financial statements and the performance information represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the Council regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Our responsibilities arise from the Public Audit Act 2001.

Other information

The Council is responsible for the other information. The other information comprises the information included on pages 1, 4 to 13, 60 to 66, and 94 to 135, but does not include the financial statements and the performance information, and our auditor's report thereon.

Our opinion on the financial statements and the performance information does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

In connection with our audit of the financial statements and the performance information, our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the financial statements and the performance information or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independence

We are independent of the Health Research Council in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1: International Code of Ethics for Assurance Practitioners issued by the New Zealand Auditing and Assurance Standards Board.

Other than in our capacity as auditor, we have no relationship with, or interests, in the Health Research Council.

Lauren Clark

Audit New Zealand On behalf of the Auditor-General Auckland, New Zealand

We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates

We evaluate the appropriateness of the reported performance information within the Health Research Council's



Part 5: **HRC contracts**

Wāhanga 5: Ngā kirimana a HRC

HR	С	con	ntr	acts	
Ngā	kiri	mana	a a	HRC	

This section lists all of the HRC's contracts current as of 30 June, or expired in the financial year.

Health and Wellbeing in New Zealand

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
20/872	Vision / hearing / speech	Spatial oculomics with imaging mass spectrometry for drug delivery	\$0.60	Consolidator Grant	Dr Angus Grey	The University of Auckland
20/776	Obstetrics complications / perinatal care	Is our destiny in our genes? Using Mendelian genetics to refine cancer risk	\$0.15	Explorer Grant	Dr Louise Bicknell	University of Otago
20/766	Obstetrics complications / perinatal care	The placental clock: Investigating mechanisms of stillbirth	\$0.15	Explorer Grant	Dr Meghan Hill	The University of Auckland
20/759	Infectious disease	Sewers for superbug surveillance	\$0.15	Explorer Grant	Associate Professor Siouxsie Wiles	The University of Auckland
20/733	Wellness	Synthesis of a million stories with natural language processing	\$0.15	Explorer Grant	Dr Simone Rodda	The University of Auckland
20/704	Alcohol / drugs and dependence	Instagram influencers, unhealthy products, and covert marketing to young people	\$0.15	Explorer Grant	Dr Ian Goodwin	Massey University
20/668	Wellness	Manalagi: Aotearoa Pacific Rainbow/ Queer/LGBTIQA+ MVPFAFF Health and Wellbeing Project	\$0.25	Emerging Researcher First Grant	Dr Patrick Thomsen	The University of Auckland
20/651	Child development	Neonatal Glucose Care Optimisation (NeoGluCO) Study	\$0.25	Feasibility Study	Dr Christopher McKinlay	The University of Auckland
20/644	Mental health	Tē 'ākirāta mārama: Cook Islands mental health prevalence	\$0.25	Emerging Researcher First Grant	Dr Sam Manuela	The University of Auckland
20/637	Gastrointestinal disease	The epidemiology of Crohn's and colitis in New Zealand: a data linkage study	\$0.25	Feasibility Study	Associate Professor Andrea 't Mannetje	Massey University
20/622	Physical activity / exercise	Taking a break from Netflix: The effect on glycaemia and sleep	\$0.20	Emerging Researcher First Grant	Dr Meredith Peddie	University of Otago
20/591	Nutrition	Metabolites in plasma and urine as objective markers of dietary intakes	\$0.25	Emerging Researcher First Grant	Dr Andrew Reynolds	University of Otago
19/730	Reproduction / fertility / sexual health	"Missing Women" in New Zealand: Exploring gender bias in migrant communities	\$0.15	Explorer Grant	Dr Rachel Simon- Kumar	The University of Auckland
19/687	Cardio / cerebrovascular disease	Aberrant purinergic afferent signalling in cardiovascular disease	\$4.93	Programme	Professor Julian Paton	The University of Auckland
19/667	Physical activity / exercise	Novel approach to measuring the food and activity environments for child health	\$0.23	Emerging Researcher First Grant	Dr Niamh Donnellan	The University of Auckland
19/647	Disability	Exploring medicinal cannabis use in New Zealand in a time of policy change	\$0.25	Emerging Researcher First Grant	Associate Professor Marta Rychert	Massey University

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
19/641	Alcohol / drugs and dependence	Whakahā o Te Pā Harakeke	\$4.94	Programme	Professor Janet Hoek	University of Otago
19/614	Infectious disease	An epigenetic marker of BCG protection from M. tuberculosis	\$0.25	Emerging Researcher First Grant	Dr Ayesha Verrall	University of Otago
19/605	Infectious disease	Characteristics of S. pyogenes isolated prior to rheumatic fever diagnosis	\$0.25	Emerging Researcher First Grant	Dr Julie Bennett	University of Otago
19/596	Child development	Sensory organisation for balance control in children with strabismus	\$0.24	Emerging Researcher First Grant	Dr Prasath Jayakaran	University of Otago
19/534	Respiratory disease / asthma	Biodiversity and microbiota: a novel pathway to allergy and asthma prevention	\$1.20	Project	Professor Jeroen Douwes	Massey University
19/460	Oncology / cancer	Impact of germline copy number variation on endometrial cancer risk	\$1.15	Project	Associate Professor Logan Walker	University of Otago
19/457	Infectious disease	The role of microbial viability in regulating mucosal associated invariant T (MAIT) cell activation	\$1.19	Project	Dr James Ussher	University of Otago
19/421	Environmental health	Health and equity impacts of Te Ara Mua Future Streets	\$1.19	Project	Dr Alex Macmillan	University of Otago
19/407	Wellness	Enrichment of community health through targeted social protection strategies	\$0.59	Project	Professor Steven Ratuva	University of Canterbury
19/390	Mental health	A neural circuit to suppress stress in motherhood	\$1.17	Project	Dr Karl Iremonger	University of Otago
19/384	CNS/ neurological disorders	Dissecting the role of glial lysosome function in neurodegeneration	\$1.20	Project	Associate Professor Stephanie Hughes	University of Otago
19/381	Mental health	Climate change and mental wellbeing: The impacts on Pacific peoples	\$0.59	Project	Dr Jemaima Tiatia-Seath	The Univers of Auckland
19/367	Skin disease	Understanding scabies prevalence to improve the health of Pasifika/Māori kids	\$0.59	Project	Dr Gerhard Sundborn	The Univers of Auckland
19/346	Obesity	Does a brief sleep intervention in infancy have long-term health benefits?	\$1.19	Project	Professor Rachael Taylor	University of Otago
19/327	Alcohol / drugs and dependence	Developing optimal strategies to support smoking cessation among roll your own (RYO) tobacco users	\$1.20	Project	Professor Janet Hoek	University of Otago
19/264	Cardio / cerebrovascular disease	Environmental effects on cardiometabolic biomarkers in Pacific peoples	\$0.59	Project	Honourable Allamanda Faatoese	University of Otago
19/263	Child development	Ethnic differences in the uptake of healthcare services: A microanalysis	\$1.09	Project	Professor Gail Pacheco	Auckland University of Technology
19/243	Infectious disease	Tackling antimicrobial resistance	\$1.18	Project	Professor Emily Parker	Research Tr of Victoria University of Wellington
19/232	Rheumatology / arthritis	Transitions to gout research (TIGER) study	\$1.18	Project	Professor Nicola Dalbeth	The Univers of Auckland

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19/173	Physical activity / exercise	Built environment and active transport to school: BEATS Natural Experiment	\$1.20	Project	Associate Professor Sandra Mandic	University of Otago
19/172	Nutrition	Novel methods of infant feeding in New Zealand – cause for concern or optimism?	\$1.19	Project	Associate Professor Anne- Louise Heath	University of Otago
19/118	Vision / hearing / speech	Measuring visual field loss in glaucoma using involuntary eye movements	\$1.18	Project	Professor Steven Dakin	The University of Auckland
19/104	Environmental health	Climate change, extreme rainfall events and enteric disease outbreaks	\$1.19	Project	Associate Professor Simon Hales	University of Otago
18/738	Alcohol/ drugs and dependence	Towards personalised digital health services for preventable health conditions	\$0.15	Explorer Grant	Dr Melanie Tomintz	University of Canterbury
18/710	Wellness	'This is not an intervention, it's a movement!': reducing screen time in teens	\$0.15	Explorer Grant	Dr Samantha Marsh	The University of Auckland
18/709	Infectious disease	A universal scaffold for multivalent vaccine development	\$0.15	Explorer Grant	Dr Paul Young	The University of Auckland
18/699	Oncology / cancer	Pinpointing prostate cancer: a paradigm shift in diagnosis	\$0.15	Explorer Grant	Associate Professor Paul Harris	The University of Auckland
18/672	Nutrition	Dietary interventions: evidence and translation (DIET) programme	\$4.88	Programme	Professor Cliona Ni Mhurchu	The University of Auckland
18/667	Wellness	Enhancing primary health care services to improve health in Aotearoa/ New Zealand	\$4.78	Programme	Professor Jacqueline Cumming	Research Trust of Victoria University of Wellington
18/651A	Wellness	Working on wellbeing with young people	\$0.21	Emerging Researcher First Grant	Dr Octavia Calder Dawe	Research Trust of Victoria University of Wellington
18/621	CNS/ neurological disorders	The role of sleep in healthy ageing and living well with dementia	\$0.25	Emerging Researcher First Grant	Dr Rosemary Gibson	Massey University
18/613	Disability	Caffeine prophylaxis to improve neurodevelopment in babies born late preterm	\$0.25	Feasibility Study	Dr Jane Alsweiler	The University of Auckland
18/609	Infectious disease	Towards elimination of tuberculosis in Māori through preventive treatment	\$0.25	Feasibility Study	Professor Philip Hill	University of Otago
18/608	Ageing	People with dementia and robots for independence	\$0.25	Feasibility Study	Professor Ngaire Kerse	The University of Auckland
18/586	Infectious disease	Exploring immunisation inequities among refugee children in New Zealand	\$0.13	Emerging Researcher First Grant	Dr Nadia Charania	Auckland University of Technology
18/580	Child development	Omega-3 for improvement of cardiometabolic outcomes following preterm birth	\$0.25	Emerging Researcher First Grant	Dr Rebecca Dyson	University of Otago
18/579	Ageing	Caring for our wisdom bearers: Pacific Matua (Elder) care	\$0.60	Project	Dr Siautu Alefaio	Massey University
18/566	Biomedical – pharmaceuticals / treatments	Pasifika medicinal plants: Elucidating the science behind the tradition	\$0.35	Pacific Health Postdoctoral Fellowship	Dr Victoria Woolner	Research Trust of Victoria University of Wellington

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18/551	Alcohol / drugs and dependence	Quantifying the disease burden of alcohol's harm to others	\$1.00	Project	Professor Sally Casswell	Massey University
18/510	Immune system / allergy	Molecular characterisation of dendritic cells during immune responses	\$1.20	Project	Professor Franca Ronchese	Malaghan Institute of Medical Research
18/473	Wellness	Integrating survey and intervention research for youth health gains	\$1.19	Project	Dr Theresa Fleming	Research Tri of Victoria University of Wellingtor
18/414	Injury – intentional and unintentional	Staying UpRight in residential care	\$1.44	Project	Professor Ngaire Kerse	The Universi of Auckland
18/407	Obstetrics complications / perinatal care	Nutrition and brain development in moderate and late preterm babies	\$1.19	Project	Professor Jane Harding	The Universi of Auckland
18/397	Cardio / cerebrovascular disease	Improving CVD risk prediction in primary care: novel arterial waveform method	\$1.20	Project	Professor Robert Scragg	The Universi of Auckland
18/352	Vision / hearing / speech	Hearing health in Samoan and Tokelauan populations	\$0.03	Pacific Health Masters Scholarship	Miss Latasi Koro	The Universion of Auckland
18/345	Wellness	Predictors and impact of driving cessation on older adults and whānau/ families	\$1.20	Project	Dr Rebecca Brookland	University of Otago
18/338	Diabetes	CHOCS and TOFU Projects: Ophthalmic changes in diabetes	\$0.17	Pacific Health Clinical Training Fellowship	Dr James Slater	The Universi of Auckland
18/280	Ageing	Fractures and falls among older adults in New Zealand.	\$0.13	Pacific Health PhD Scholarship	Mr Samuela Ofanoa	The Univers of Auckland
18/258	Cardio / cerebrovascular disease	Evaluation of a new screening tool for atrial fibrillation in Pacific people	\$0.29	Sir Thomas Davis Te Patu Kite Rangi Ariki Health Research Fellowship	Dr John Sluyter	The Universi of Auckland
18/245	CNS/ neurological disorders	Mechanisms of neural network metaplasticity via astrocytes	\$1.18	Project	Professor Cliff Abraham	University of Otago
18/239	Infectious disease	Emerging sources and pathways for leptospirosis – a paradigm shift	\$1.20	Project	Dr Jackie Benschop	Massey University
18/237	Gambling	Smart phone delivered CBT for gambling-related harm: A RCT	\$1.19	Project	Gayl Humphrey	The Univers of Auckland
18/218	Obesity	How has a 'water only' and 'healthy kai' school policy impacted on child obesity	\$0.55	Project	Dr Gerhard Sundborn	The Univers of Auckland
18/179	Physical activity / exercise	The effectiveness of circuit-based exercise in Cook Islands communities	\$0.13	Pacific Health PhD Scholarship	Mr Troy Ruhe	University of Otago
18/079	Infectious disease	Developing an optimal strategy for the rheumatic fever endgame	\$1.20	Project	Professor Michael Baker	University of Otago
18/055	Mental health	Mental health and wellbeing of Pacific youth in higher education	\$0.60	Project	Associate Professor Faafetai Sopoaga	University of Otago
18/023	Mental health	Assessing mental health and wellbeing among high risk Pasifika youth in Aotearoa	\$0.25	Emerging Researcher First Grant	Dr Julia Ioane	Auckland University of Technology

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18/011	Environmental health	Are toxic moulds a real health hazard in New Zealand?	\$1.19	Project	Professor Julian Crane	University of Otago
18/003	Health services – clinical	Pacific women navigating colposcopy services	\$0.05	Pacific Health PhD Scholarship	Mrs Georgina McPherson	Auckland University of Technology
17/911	Environmental health	Havelock North campylobacter outbreak study	\$0.44	Project	Dr Nicholas Jones	Hawke's Bay District Health Board
17/655	Alcohol / drugs and dependence	Changing our view of tobacco dependence: the monoamine oxidase inhibitor story	\$0.15	Explorer Grant	Dr Penelope Truman	Massey University
17/652	Gastrointestinal disease	Maternal bacteria to correct abnormal gut microbiota in babies born by C-section	\$0.15	Explorer Grant	Professor Wayne Cutfield	The University of Auckland
17/611	Occupational health	Interventions to Reduce Occupational Disease (iROD)	\$5.00	Programme	Professor Jeroen Douwes	Massey University
17/590	Reproduction / fertility / sexual health	Omega-3 fats during obese pregnancy, for metabolic protection of the offspring	\$0.25	Emerging Researcher First Grant	Dr Benjamin Albert	The University of Auckland
17/587	Mental health	The New Zealand Transgender Health Survey: stigma and protective factors	\$0.24	Emerging Researcher First Grant	Dr Jaimie Veale	University of Waikato
17/568	Alcohol / drugs and dependence	Extending brief alcohol interventions using mobile technology	\$0.23	Emerging Researcher First Grant	Dr Damian Scarf	University of Otago
17/566	Nutrition	Optimising cognitive function: the role of dietary and lifestyle patterns	\$0.25	Emerging Researcher First Grant	Dr Kathryn Beck	Massey University
17/548	Mental health	Improving the effectiveness of lifestyle change strategies	\$0.25	Emerging Researcher First Grant	Dr Simone Rodda	The University of Auckland
17/515	Wellness	Attitudes, knowledge, behaviours and health in Rarotongan adolescents	\$0.02	Pacific Health Masters Scholarship	Mrs Mayor Pokino	The University of Auckland
17/495	Wellness	Indigenous approaches to family restoration and wellbeing	\$0.06	Pacific Health PhD Scholarship	Mrs Sesimani Havea	Massey University
17/494	Health services – delivery	Pacific patients' perspectives of treatment of chronic conditions	\$0.40	Project	Dr Debbie Ryan	Pacific Perspectives
17/481	Physical activity / exercise	Run it straight!' – Pasifika men, mental wellbeing and elite sports	\$0.11	Pacific Health PhD Scholarship	Mr Caleb Marsters	The University of Auckland
17/479	Child development	Non-communicable disease risk in Rarotongan adolescents	\$0.11	Pacific Health PhD Scholarship	Miss Siobhan Tu'akoi	The University of Auckland
17/478	Diabetes	Differences in fructose uptake in Pacific adolescents	\$0.60	Project	Dr Ofa Dewes	The University of Auckland
17/472	Obesity	Pacific Island peoples' experiences of bariatric surgery health care engagement	\$0.32	Pacific Health Postdoctoral Fellowship	Dr Tamasin Taylor	Auckland University of Technology
17/458	Obesity	To investigate health-related behaviours of Rarotongan adolescents	\$0.02	Pacific Health Masters Scholarship	Miss Heimata Herman	The University of Auckland
17/417	Oncology / cancer	Reducing delay and increasing access to early diagnosis for colorectal cancer	\$1.20	Project	Professor Ross Lawrenson	University of Waikato
17/405	Gastrointestinal disease	Integration of inflammatory signalling by TNF receptor associated factors	\$1.19	Project	Professor Catherine Day	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
17/367	Wellness	Integrated services to improve the health of Pacific peoples	\$1.19	Project	Professor Jacqueline Cumming	Research Trus of Victoria University of Wellington
17/364	Infectious disease	Evolution of an epidemic: emergence and adaptation of group B meningococci in NZ	\$1.19	Project	Dr Philip Carter	ESR Institute of Environmental Science & Research
17/333	Alcohol / drugs and dependence	Assessing and comparing national policy to reduce harmful use of alcohol	\$0.87	Project	Professor Sally Casswell	Massey University
17/285	Reproduction / fertility / sexual health	GnRH neuron control of ovulation	\$1.17	Project	Professor Allan Herbison	University of Otago
17/282	Vision / hearing / speech	Pacific Islands Families Study: impact of hearing loss on Pacific youth	\$1.20	Project	Professor Janis Paterson	Auckland University of Technology
17/265	Respiratory disease / asthma	The epidemiology of respiratory syncytial virus (RSV) in New Zealand children	\$0.10	Pacific Health PhD Scholarship	Ms Namrata Prasad	The University of Auckland
17/250	Respiratory disease / asthma	Child poverty: health consequences, costs, and policy interventions	\$1.18	Project	Dr Barry Milne	The University of Auckland
17/240	Endocrine disease	Mid-childhood outcomes of children born at risk of neonatal hypoglycaemia	\$1.20	Project	Professor Jane Harding	The University of Auckland
17/236	Reproduction / fertility / sexual health	Deciphering the dendron for fertility control	\$1.09	Project	Professor Allan Herbison	University of Otago
17/189	Injury – intentional and unintentional	Curbing the tide of violence! Exploring a Pacific psychological faith-quotient	\$0.15	Emerging Researcher First Grant	Dr Siautu Alefaio	Massey University
17/187	Wellness	Sleep and wellbeing among Pacific children and adolescents	\$0.58	Project	Dr Rosalina Richards	University of Otago
17/155	Respiratory disease / asthma	Respiratory health of Pacific youth: risk and resilience throughout childhood	\$1.18	Project	Dr El-Shadan Tautolo	Auckland University of Technology
17/154	Mental health	Pacific Islands families: cultural resiliency and vulnerability in mental health	\$1.19	Project	Dr El-Shadan Tautolo	Auckland University of Technology
17/135	Birth defects / congenital conditions	Environmental and genetic risk factors for cleft lip and palate	\$1.20	Project	Associate Professor John Thompson	The University of Auckland
17/114	Mental health	Depression in young Samoan females: The views of mental health service providers	\$0.02	Pacific Health Masters Scholarship	Miss Sarah McLean	The University of Auckland
17/113	Oncology / cancer	Genetic modifiers of risk of familial breast and ovarian cancer	\$1.14	Project	Dr Logan Walker	University of Otago
17/066	Mental health	The impact of racism on the future health of adults: a prospective cohort study	\$0.82	Project	Dr James Stanley	University of Otago
16/656	Obesity	Nutrition 2.0: Toward a food systems approach for public health nutrition	\$0.15	Explorer Grant	Professor Boyd Swinburn	The University of Auckland
16/605	Child development	Feeding preterm babies for life-long health	\$5.00	Programme	Professor Frank Bloomfield	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
16/604	Ageing	A lifecourse study on ageing processes to inform early intervention strategies	\$4.99	Programme	Professor Richie Graham Poulton CNZM	University of Otago
16/600	Alcohol / drugs and dependence	The Christchurch Health and Development Study – birth to 40 years	\$4.36	Programme	Professor John Horwood	University of Otago
16/551	Health services – delivery	Utilizing a prognostic indicator to guide deprescribing in aged residential care	\$0.15	Emerging Researcher First Grant	Dr Claire Heppenstall	University of Otago
16/510	Cardio / cerebrovascular disease	Disturbed energetics in heart failure: its association with t-tubule disruption	\$0.11	Emerging Researcher First Grant	Dr June-Chiew Han	The University of Auckland
16/475	Infectious disease	Zoonotic disease transmission in New Zealand rural communities	\$0.15	Emerging Researcher First Grant	Dr Pippa Scott	University of Otago
16/443	Cardio / cerebrovascular disease	BODE3: Modelling preventive interventions to improve health and social outcomes	\$4.95	Programme	Professor Tony Blakely	University of Otago
16/402	Obesity	Role of hypothalamic beta-catenin in body weight regulation	\$1.20	Project	Professor David Grattan	University of Otago
16/351	Occupational health	Work-related risk factors for cardiovascular disease	\$0.72	Project	Professor Jeroen Douwes	Massey University
16/329	Obesity	Communities fighting sugar in soft drinks	\$1.18	Project	Dr Gerhard Sundborn	The University of Auckland
16/294	Child development	The next generation studies	\$1.20	Project	Professor Bob Hancox	University of Otago
16/289	Ageing	Towards streetscapes promoting inclusive mobility, health and wellbeing for all	\$1.19	Project	Professor Shanthi Ameratunga	The University of Auckland
16/206	Environmental health	Community water supplies: ensuring microbial safety for disease prevention	\$1.06	Project	Dr Liping Pang	ESR Institute of Environmental Science & Research
16/185	Health services – delivery	Exploring the development and impact of changes in community pharmacy services	\$1.19	Project	Professor Jacqueline Cumming	Research Trust of Victoria University of Wellington
16/173	Injury – intentional and unintentional	Creating safer workplaces: understanding our work-related fatalities	\$1.19	Project	Dr Rebbecca Lilley	University of Otago
16/149	Alcohol / drugs and dependence	Supporting informed e-cigarette use: A mixed methods study	\$1.20	Project	Professor Janet Hoek	University of Otago
16/148	Reproduction / fertility / sexual health	Generating pulses with KNDy neurons	\$1.12	Project	Professor Allan Herbison	University of Otago
16/096	CNS / neurological disorders	Targeting the RFRP neuronal system to control stress and anxiety	\$1.19	Project	Professor Greg Anderson	University of Otago
16/078	Bone disease	Zoledronic acid and fracture prevention in early postmenopausal women	\$0.96	Project	Associate Professor Mark Bolland	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
16/076	Alcohol / drugs and dependence	A head-to-head trial of cytisine and varenicline for smoking cessation	\$1.60	Project	Associate Professor Natalie Walker	The University of Auckland
16/027	Reproduction / fertility / sexual health	Timekeeping in the neural network controlling fertility	\$1.07	Project	Dr Richard Piet	University of Otago
16/017	Dental / oral health	Preventing upper respiratory tract infections in infancy	\$1.20	Project	Professor Julian Crane	University of Otago
16/010	Infectious disease	New generation lipopeptide antimicrobial agents using patented CLipPA technology	\$1.20	Project	Professor Margaret Brimble CNZM FRSNZ	The University of Auckland
16/005	Infectious disease	Understanding GAS pharyngitis and skin infections as causes of rheumatic fever	\$1.20	Project	Professor Michael Baker	University of Otago
15/429	Environmental health	He Kainga Oranga: translating housing research to practice for children's health	\$4.94	Programme	Professor Dr Philippa Howden- Chapman	University of Otago
15/397	Wellness	Pacific students' health, wellbeing & success in higher education	\$0.10	Pacific Health PhD Scholarship	Associate Professor Faafetai Sopoaga	University of Otago
15/273	Obesity	The gut microbiome: a new pathway to obesity prevention and metabolic health	\$1.20	Project	Professor Bernhard Breier	Massey University
15/265	Dental / oral health	Oral health from childhood to mid-life	\$1.19	Project	Associate Professor Jonathan Broadbent	University of Otago
15/216	Child development	Does preventing neonatal hypoglycaemia improve outcome at two years of age?	\$1.60	Project	Professor Jane Harding	The University of Auckland
15/125	Injury – intentional and unintentional	Safety on steps: a randomised controlled trial	\$1.20	Project	Associate Professor Michael Keall	University of Otago
15/072	Alcohol / drugs and dependence	The New Zealand International Tobacco Control Project	\$1.20	Project	Professor Peter Edwards	University of Otago

Improving Outcomes of Acute and Chronic Conditions

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19/791	Lymphoedema	Identification and monitoring of lymphoedema	\$0.15	Explorer Grant	Dr Bartosz Nowak	University of Canterbury
19/779	Cardio / cerebrovascular disease	Synthetic stem cells – a new area for myocardial infarction treatment	\$0.15	Explorer Grant	Dr Xiaolin Cui	University of Ota
19/777	Oncology / cancer	A novel device for early cancer detection	\$0.15	Explorer Grant	Professor Parry Guilford	University of Ota
19/774	Respiratory disease / asthma	Asthma – a test case for precision	\$0.15	Explorer Grant	Associate Professor Justin O'Sullivan	The University of Auckland
19/771	Oncology / cancer	Transforming the paradigm of functional genome organisation	\$0.15	Explorer Grant	Dr Tracy Hale	Massey Universi
19/768	Alcohol / drugs and dependence	Investigating iNKT cell-based vaccinology to treat drug addiction	\$0.15	Explorer Grant	Dr Benjamin Compton	Research Trust of Victoria Universi of Wellington
19/763	Reproduction / fertility / sexual health	Development of a non-invasive diagnostic test for endometriosis	\$0.15	Explorer Grant	Dr Anna Ponnampalam	The University of Auckland
19/750	Immune system / allergy	Enabling New Zealand biomedical research with superior targeted cell ablation models	\$0.15	Explorer Grant	Professor David Ackerley	Research Trust Victoria Universi of Wellington
19/743	General critical illness states	Rebalancing fluid distribution in critical illness	\$0.15	Explorer Grant	Associate Professor Anthony Phillips	The University of Auckland
19/734	Cardio / cerebrovascular disease	Next-generation cardiac ultrasound: training echocardiography using MRI	\$0.15	Explorer Grant	Dr Sean Coffey	University of Ota
19/701	Cardio / cerebrovascular disease	Does energy deficiency compromise myofilament contractility in diabetes?	\$0.15	Explorer Grant	Dr Kenneth Tran	The University of Auckland
19/696	Infectious disease	Developing computational tools to design highly potent antibiotics	\$0.15	Explorer Grant	Dr Wanting Jiao	Research Trust of Victoria Universion of Wellington
19/691	Cardio / cerebrovascular disease	ARCOS V: Incidence of stroke and TIA in NZ	\$1.20	Project	Professor Valery Feigin	Auckland University of Technology
19/690	Child development	Assessing the impact of maternal and perinatal interventions on life-long health	\$4.97	Programme	Professor Jane Harding	The University of Auckland
19/679	Rheumatology / arthritis	Oxygen control in 3D-bioprinted osteochondral constructs	\$0.25	Emerging Researcher First Grant	Dr Gabriella Lindberg	University of Ota
19/670	Mental health	Group transdiagnostic treatment for anxiety and depression in primary care	\$0.25	Feasibility Study	Associate Professor Caroline Bell	University of Ota
19/657	Cardio / cerebrovascular disease	Diet and circulating lipids in relation to cardiovascular disease in New Zealand	\$0.25	Emerging Researcher First Grant	Dr Kathryn Bradbury	The University of Auckland
19/654	Mental health	Social rhythm therapy and bright light for treatment-resistant bipolar disorder	\$0.24	Feasibility Study	Professor Richard Porter	University of Ota
19/652	Impairment	Prediction of the form-function musculoskeletal system in a paediatric population	\$0.25	Emerging Researcher First Grant	Dr Julie Choisne	The University of Auckland

IRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
19/632	Ageing	Enhancing balance in older adults via noisy galvanic vestibular stimulation	\$0.25	Feasibility Study	Professor Denise Taylor	Auckland University of Technology
19/624	CNS/ neurological disorders	Measuring perceived task difficulty during rehabilitation	\$0.23	Emerging Researcher First Grant	Dr Nada Signal	Auckland University of Technology
19/622	Oncology / cancer	Younger women's wellness after cancer programme: Feasibility Study	\$0.25	Feasibility Study	Professor Alexandra McCarthy	The University of Auckland
19/609	Respiratory disease / asthma	Treatable traits for the management of asthma: a feasibility study	\$0.24	Feasibility Study	Dr James Fingleton	Medical Research Institute of New Zealand
19/603	Mortality	Hospital Operating Theatre Randomised OXygen trial (HOT-ROX)	\$0.25	Feasibility Study	Dr Paul Young	Medical Research Institute of New Zealand
19/602	Reproductive system and disorders	Cysteine biosynthesis and infection, gonorrhoea's weak link?	\$0.25	Emerging Researcher First Grant	Dr Joanna Hicks	University of Waikato
19/594	Cardio / cerebrovascular disease	A suPAR Prognostic Indicator of Cardiovascular Risk and Outcomes	\$0.24	Emerging Researcher First Grant	Dr Janice Chew- Harris	University of Otago
19/591	Injury – intentional and unintentional	Are concussion services for mild traumatic brain injury cost effective?	\$0.25	Emerging Researcher First Grant	Dr Braden Te Ao	The University of Auckland
19/532	Mortality	Duration of Dual Antiplatelet Therapy in Acute Coronary Syndrome (DUAL- ACS)	\$1.55	Project	Dr Philip Adamson	University of Otago
19/487	Respiratory disease / asthma	A randomised controlled trial of beta- blockers in COPD	\$1.44	Project	Professor Bob Hancox	University of Otago
19/481	Diabetes	Automated insulin delivery for type- 1 diabetes utilising open source technology	\$1.32	Project	Dr Martin de Bock	University of Otago
19/463	Cardio / cerebrovascular disease	A precision medicine approach to improving heart disease outcomes	\$1.19	Project	Dr Anna Pilbrow	University of Otago
19/433	Oncology / cancer	Precision treatment of head and neck cancer with evofosfamide	\$1.20	Project	Dr Stephen Jamieson	The University of Auckland
19/420	CNS/ neurological disorders	International case-control study of sudden unexpected death in epilepsy	\$1.19	Project	Dr Peter Bergin	Auckland DHB Charitable Trust
19/415	Oncology / cancer	A novel genetic mechanism in acute myeloid leukaemia	\$1.18	Project	Professor Julia Horsfield	University of Otago
19/401	Cardio / cerebrovascular disease	Biomarker-guided secondary prevention post-acute coronary syndromes: A randomised controlled trial	\$1.60	Project	Professor Robert Doughty	The University of Auckland
19/397	Infectious disease	Readying next-generation antifungals for drug development	\$1.20	Project	Associate Professor Brian Monk	University of Otago
19/387	CNS/ neurological disorders	Patterns of recovery from concussion in children and adolescents	\$1.20	Project	Professor Nicola Starkey	University of Waikato
19/344	Injury – intentional and unintentional	Prospective Outcomes of Injury Study: 10 years on (POIS-10)	\$1.19	Project	Professor Sarah Derrett	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
19/340	Cardio / cerebrovascular disease	Targeted therapeutic mild hypercapnia after resuscitated cardiac arrest	\$1.20	Project	Associate Professor Rachael Parke	Medical Researc Institute of New Zealand
19/297	Obstetrics complications / perinatal care	Circulating miRNAs in maternal blood as biomarkers for preterm birth	\$1.14	Project	Professor Mark Vickers	The University of Auckland
19/290	Renal disease / urology	Teaching to improve health outcomes for peritoneal dialysis: The TEACH- PD trial	\$1.44	Project	Professor Dr Suetonia Palmer	University of Ota
19/268	Renal disease / urology	Serum phosphate to improve outcomes for dialysis patients: The PHOSPHATE trial	\$1.27	Project	Professor Dr Suetonia Palmer	University of Ota
19/259	Infectious disease	New drugs for the post-antibiotic era by targeting glutamate racemase	\$1.12	Project	Professor Kurt Krause	University of Ota
19/242	Alcohol / drugs and dependence	Characterisation of synthetic cannabinoid signalling bias and toxicity	\$1.17	Project	Professor Michelle Glass	University of Ota
19/213	Oncology / cancer	Doubling down on DNA-dependent protein kinase (DNA-PK): Radiosensitisers for head & neck cancer	\$1.20	Project	Associate Professor Michael Hay	The University of Auckland
19/206	Rheumatology / arthritis	Addressing clinical questions in gout using genetic data	\$1.20	Project	Professor Tony Merriman	University of Ota
19/204	CNS/ neurological disorders	Manipulating rewards to treat maladaptive brain disorders: focus on tinnitus	\$1.19	Project	Professor John Reynolds	University of Ota
19/190	Diabetes	Glycotoxicity in the diabetic heart – novel treatment targets	\$1.15	Project	Dr Kim Mellor	The University of Auckland
19/069	Cardio / cerebrovascular disease	Exercise or hypochlorous acid for venous leg ulcer healing: Factorial4VLU trial	\$1.40	Project	Professor Andrew Jull	The University of Auckland
19/044	Mental health	A novel biomarker for preclinical drug development in schizophrenia	\$0.49	Project	Professor David Bilkey	University of Ota
19/027	Mental health	Do hippocampus, insula and amygdala contribute to an anxiety syndrome biomarker?	\$1.09	Project	Professor Dr Neil McNaughton	University of Ota
18/735	Biomedical - psychology	Is there a 'fourth axis' of vesicular communication?	\$0.15	Explorer Grant	Associate Professor Anthony Phillips	The University of Auckland
18/714	Immune system / allergy	Using smallpox proteins to treat human inflammation	\$0.15	Explorer Grant	Professor Kurt Krause	University of Ota
18/697	CNS/ neurological disorders	Developing and validating a novel site for mobile and unobtrusive electro- encephalograms (EEG) recording	\$0.15	Explorer Grant	Professor Neil McNaughton	University of Ota
18/693	Cardio / cerebrovascular disease	A unique cellular mechanism for diabetic heart disease?	\$0.15	Explorer Grant	Dr Chris Baldi	University of Ota
18/691	Vision / hearing / speech	Ocular laser bio-meter, fast and cheap early diagnosis of vision impairment	\$0.15	Explorer Grant	Dr Ehsan Vaghefi	The University of Auckland
18/681	Diabetes	Understanding genetic risk factors for metabolic disease in Māori and Pacific	\$5.00	Programme	Professor Peter Shepherd	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
18/674A	Infectious disease	Targeting pathogen energetics to produce new antimicrobials	\$1.00	Project	Professor Gregory Cook	University of Otago
18/673	Gastrointestinal disease	Translational advances in gastrointestinal (GI) surgical recovery and motility disorders	\$5.00	Programme	Associate Professor Gregory O'Grady	The University of Auckland
18/671	Endocrine disease	Untangling PCOS: Understanding androgen excess and the female brain	\$5.00	Programme	Associate Professor Rebecca Campbell	University of Otago
18/654	Mental health	Social rhythms therapy for bipolar disorder in routine clinical practice	\$0.25	Feasibility Study	Professor Richard Porter	University of Otago
18/643	Oncology / cancer	CRC Predict Study – association of molecular subtypes and microbiome in colorectal cancer (CRC)	\$0.25	Emerging Researcher First Grant	Dr Rachel Purcell	University of Otago
18/637	Cardio / cerebrovascular disease	Role of myoregulin in cardiovascular disease	\$0.25	Emerging Researcher First Grant	Dr Sarah Appleby	University of Otago
18/636	Cardio / cerebrovascular disease	Optimisation of pre-operative cardiovascular fitness: The heat vs HIIT study	\$0.25	Emerging Researcher First Grant	Dr Kate Thomas	University of Otago
18/632	Oncology / cancer	Lung cancer screening with scent- detection dogs	\$0.23	Emerging Researcher First Grant	Dr Timothy Edwards	University of Waikato
18/627	Ageing	Can inflammation and aging modify the human epigenome?	\$0.25	Emerging Researcher First Grant	Dr Aaron Stevens	University of Otago
18/623	Infectious disease	Feasibility study of vitamin C therapy in community acquired pneumonia	\$0.25	Feasibility Study	Professor Stephen Chambers	University of Otago
18/602	Cardio / cerebrovascular disease	Automated over-ground gait rehabilitation in acute stroke: A Feasibility Study	\$0.24	Feasibility Study	Associate Professor Andrew McDaid	The University of Auckland
18/596	Rheumatology / arthritis	Anti-depressants for osteoarthritis pain: Can we predict treatment efficacy?	\$0.25	Emerging Researcher First Grant	Dr David Rice	Waitemata District Health Board
18/593	Injury – intentional and unintentional	STRIDE – Steroids To Reduce the Impact on DElirium study	\$0.25	Feasibility Study	Dr Michal Kluger	Waitemata District Health Board
18/590	Ageing	Is a dementia prevalence study feasible in NZ?	\$0.25	Feasibility Study	Dr Sarah Cullum	The University of Auckland
18/585	Oncology / cancer	Circulating RNA as diagnostic and prognostic biomarkers in colorectal cancer	\$0.25	Emerging Researcher First Grant	Dr Kirsty Danielson	University of Otago
18/532	Infectious disease	Repurposing the anthelmentic niclosamide to combat Gram negative superbugs	\$1.19	Project	Professor David Ackerley	Research Trust of Victoria University of Wellington
18/513	Physical activity / exercise	Rugby fans in training: A randomised controlled trial	\$1.20	Project	Professor Ralph Maddison	The University of Auckland
18/506	Cardio / cerebrovascular disease	Dietary sodium reduction to improve heart failure outcomes: the SODIUM- HF study	\$1.41	Project	Professor Richard Troughton	University of Otago
18/408	Obstetrics complications / perinatal care	Placental extracellular vesicles, controllers of the maternal vasculature	\$1.19	Project	Professor Larry Chamley	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
18/400	Cardio / cerebrovascular disease	Nanoscale fibrosis and loss of contractility in the failing human heart	\$1.18	Project	Dr David Crossman	The University of Auckland
18/382	CNS/ neurological disorders	Identifying the first signs of dementia in humans	\$0.89	Project	Professor Maurice Curtis	The University of Auckland
18/323	Oncology / cancer	Reducing oxaliplatin toxicity: a randomised dose-finding proof-of- concept trial	\$1.20	Project	Professor Mark McKeage	The University of Auckland
18/300	Oncology / cancer	Banishing tumour hypoxia to render cancer immunotherapy curative	\$1.20	Project	Associate Professor Adam Patterson	The University of Auckland
18/272	Oncology / cancer	A new combination therapy for cancer	\$1.17	Project	Professor Peter Shepherd	The University of Auckland
18/233	Oncology / cancer	More gain, less pain from chemoradiation for rectal cancer by adding simvastatin	\$1.40	Project	Associate Professor Michael Jameson	The University of Auckland
18/232	Cardio / cerebrovascular disease	A novel target for the control of arrhythmias	\$1.13	Project	Associate Professor Peter Jones	University of Otag
18/225	Obstetrics complications / perinatal care	Look before we leap: strategies for treating mild neonatal encephalopathy	\$1.19	Project	Dr Joanne Davidson	The University of Auckland
18/219	Cardio / cerebrovascular disease	Naturally occurring peptaibols: "magic bullets" for targeting breast cancer	\$1.20	Project	Professor Margaret Brimble DNZM FRSNZ	The University of Auckland
18/207	Cardio / cerebrovascular disease	Targeting new receptors for lipoprotein(a)	\$1.19	Project	Professor Sally McCormick	University of Ota
18/193	Mental health	Pharmacological brain-imaging of novel rapid antidepressant medicines	\$1.19	Project	Associate Professor Suresh Muthukumaraswamy	The University of Auckland
18/189	Cardio / cerebrovascular disease	Targeting chemoreceptors in hypertension: a large animal pre- clinical trial	\$1.19	Project	Dr Rohit Ramchandra	The University of Auckland
18/183	Obstetrics complications / perinatal care	New horizons for preterm brain protection: exploiting endogenous neuroprotection	\$1.19	Project	Associate Professor Mhoyra Fraser	The University of Auckland
18/156	Biomedical – pharmaceuticals / treatments	Towards a new penicillin for rheumatic fever – the BPG pharmacokinetic study	\$0.25	Emerging Researcher First Grant	Dr Dianne Sika- Paotonu	University of Otag
18/152	Mental health	Treating cognitive impairment in severe depression	\$1.15	Project	Profssor Richard Porter	University of Otag
18/151	Rheumatology / arthritis	Is prophylaxis required with start-low go slow dosing of allopurinol in gout?	\$1.42	Project	Professor Lisa Stamp	University of Otag
18/150	Oncology / cancer	Understanding regulation of the polycomb repressive deubiquitinase in malignancy	\$1.19	Project	Dr Peter Mace	University of Otag
18/147	Cardio / cerebrovascular disease	Reducing fatigue after stroke: A randomised controlled trial	\$1.18	Project	Dr Kelly Jones	Auckland University of Technology
18/144	Oncology / cancer	Epigenomic profiling to predict patient response to melanoma immunotherapy	\$1.20	Project	Professor Michael Eccles	University of Otag

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
18/063	CNS/ neurological disorders	Development of novel remyelination treatments for multiple sclerosis	\$1.17	Project	Dr Bronwyn Kivell	Research Trust of Victoria University of Wellington
17/661	Dental / oral health	'No drill, no fill' – a novel substitute to regrow teeth	\$0.15	Explorer Grant	Dr Azam Ali	University of Otago
17/649	Chemical sciences	Developing the holy grail of bioprinting: vascularisation	\$0.15	Explorer Grant	Dr Jaydee Cabral	University of Otago
17/632	Reproduction / fertility / sexual health	Linking viruses that call uterus home and unexplained female infertility	\$0.15	Explorer Grant	Dr Anna Ponnampalam	The University of Auckland
17/625	Bioengineering	Towards bone regeneration by developing electroactive hybrid materials	\$0.15	Explorer Grant	Dr Leandro Bolzoni	University of Waikato
17/624	Obstetrics complications / perinatal care	Transforming women's pelvic floor health.	\$0.15	Explorer Grant	Dr Jennifer Kruger	The University of Auckland
17/622	Oncology / cancer	A proton switch for T cell migration and activation	\$0.15	Explorer Grant	Associate Professor Alexander McLellan	University of Otago
17/616	Infectious disease	Real time in situ antibiotic sensitivity testing	\$0.15	Explorer Grant	Professor Sarah Hook	University of Otago
17/614	Respiratory disease / asthma	Prevention of asthma	\$4.99	Programme	Professor Stuart Dalziel	Auckland DHB Charitable Trust
17/610	Oncology / cancer	Reducing the burden of gastric cancer in New Zealand	\$4.97	Programme	Professor Parry Guilford	University of Otago
17/608	Cardio / cerebrovascular disease	Biomechanics in heart disease	\$4.96	Programme	Professor Martyn Nash	The University of Auckland
17/601	Obstetrics complications / perinatal care	Pathogenesis, detection and treatment of perinatal brain injury	\$4.92	Programme	Professor Alistair Gunn	The University of Auckland
17/586	Oncology / cancer	IMPACT-ful resistance mechanism of cancer cells	\$0.25	Emerging Researcher First Grant	Dr Petr Tomek	The University of Auckland
17/582	Child development	Functional behavioural sandman: treating sleep disturbance in children with ASD	\$0.16	Emerging Researcher First Grant	Dr Laurie McLay	University of Canterbury
17/571	Diabetes	Deciphering the metabolic function of igf2 derived peptide hormones.	\$0.23	Emerging Researcher First Grant	Dr Kate Lee	The University of Auckland
17/562	Cardio / cerebrovascular disease	Improving risk assessment for worsening kidney function in heart failure	\$0.17	Emerging Researcher First Grant	Dr Moritz Lassé	University of Otago
17/561	Gastrointestinal disease	Activation to recovery mapping to predict gastric dysrhythmias	\$0.25	Emerging Researcher First Grant	Dr Niranchan Paskaranandavadivel	The University of Auckland
17/558	Gastrointestinal disease	Development of targeted gastric ablation as a novel gastrointestinal therapy	\$0.25	Emerging Researcher First Grant	Dr Timothy Angeli	The University of Auckland
17/536	Physical activity / exercise	The effectiveness of tailored rehabilitation versus standard exercise programme	\$0.21	Feasibility Study	Dr Daniel Ribeiro	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
17/533	Diabetes	Feasibility of a mobile game to improve diabetes self-management in young people	\$0.25	Feasibility Study	Professor Ralph Maddison	The University of Auckland
17/531	Mental health	Sensory modulation for anxiety in primary health care: a feasibility study	\$0.16	Feasibility Study	Dr Daniel Sutton	Auckland University of Technology
17/529	Diabetes	Effects of Helicobacter pylori in pre- diabetes and type 2 diabetes	\$0.25	Feasibility Study	Dr Stephen Inns	University of Ota
17/522	Cardio / cerebrovascular disease	Mindfulness training for people after stroke: a feasibility study	\$0.25	Feasibility Study	Professor Richard Siegert	Auckland University of Technology
17/521	Respiratory disease / asthma	Taking charge of COPD: A low-cost self-management intervention	\$0.25	Feasibility Study	Associate Professor William Levack	University of Ota
17/425	Renal disease / urology	Kidney organoids: modelling kidney injury and preclinical drug testing	\$1.18	Project	Associate Professor Alan Davidson	The University of Auckland
17/414	Renal disease / urology	The BEST-Fluids study: Better Evidence for Selecting Transplant Fluids	\$0.55	Project	Dr Michael Collins	Auckland DHB Charitable Trust
17/402	Cardio / cerebrovascular disease	An epigenome-wide study for coronary artery disease	\$1.14	Project	Professor Greg Jones	University of Ota
17/372	Infectious disease	Unmasking genes for antibiotic resistance in a superbug	\$1.15	Project	Professor lain Lamont	University of Ota
17/298	Obesity	Targeting the ERp44-adiponectin interaction for diabesity treatment	\$1.19	Project	Associate Professor Alok Mitra	The University of Auckland
17/294	Rheumatology / arthritis	Targeting crystal-driven macrophage activation to suppress gouty inflammation	\$1.19	Project	Dr Christopher Hall	The University of Auckland
17/290	Oncology / cancer	Development of a novel and specific inhibitor of CSF1R for cancer therapy	\$1.20	Project	Professor William Denny	The University of Auckland
17/288	Birth defects / congenital conditions	Defining human specific genetic variants in brain developmental disorders	\$1.20	Project	Professor Stephen Robertson	University of Ota
17/284	CNS/ neurological disorders	Implantable light stimulator to treat Parkinson's disease.	\$1.19	Project	Dr Louise Parr- Brownlie	University of Ota
17/271	Cardio / cerebrovascular disease	Reducing heart failure readmission: the IMPERATIVE-HF study	\$0.71	Project	Professor Richard Troughton	University of Ota
17/255	Oncology / cancer	Development of an optimal hypoxia- selective cytotoxin for clinical use	\$1.19	Project	Associate Professor Adam Patterson	The University of Auckland
17/234	Cardio / cerebrovascular disease	Left ventricular remodelling in the multi-ethnic study of atherosclerosis	\$1.19	Project	Professor Alistair Young	The University of Auckland
17/232	Infectious disease	A vaccine to limit the severity of staphylococcal infections	\$1.05	Project	Professor John Fraser	The University of Auckland
17/230	Oncology / cancer	Can pre-screening reduce the risk of life-threatening fluoropyrimidine toxicity?	\$1.19	Project	Associate Professor Nuala Helsby	The University of Auckland
17/226	Cardio / cerebrovascular disease	Are treatments for COPD increasing the risk of acute coronary syndrome?	\$0.84	Project	Dr Lianne Parkin	University of Ota

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
17/222	Oncology / cancer	The molecular pathological epidemiology of NHL	\$0.49	Project	Associate Professor Brian Cox	University of Otago
17/204	Renal disease / urology	Timing of initiation of renal support in acute kidney injury (STARRT-AKI)	\$1.19	Project	Dr Shay McGuinness	Medical Research Institute of New Zealand
17/194A	Mental health	Effectiveness of ūloa model	\$0.12	Emerging Researcher First Grant	Dr Sione Vaka	Auckland University of Technology
17/100	Mental health	Understanding the role of insulin in promoting fatty liver disease	\$1.18	Project	Dr Troy Merry	The University of Auckland
17/099	Ageing	Targeting PI3K to promote healthy ageing	\$1.19	Project	Dr Troy Merry	The University of Auckland
17/082	Infectious disease	Role of host exocytosis in infection of human cells by Listeria monocytogenes	\$0.93	Project	Associate Professor Keith Ireton	University of Otago
17/076	Obstetrics complications / perinatal care	Targeting IGF-1 signalling for repair of preterm brain dysmaturation	\$1.16	Project	Dr Justin Dean	The University of Auckland
17/052	CNS/ neurological disorders	Targeting a zinc link in the treatment of autism spectrum disorders	\$1.17	Project	Associate Professor Johanna Montgomery	The University of Auckland
16/670	CNS/ neurological disorders	Can we rehabilitate a reflex? A treatment protocol for the cough reflex	\$0.15	Explorer Grant	Dr Phoebe Macrae	University of Canterbury
16/631	Infectious disease	Platform trial optimising interventions in severe community acquired pneumonia	\$4.81	Programme	Dr Colin McArthur	Medical Research Institute of New Zealand
16/617	Oncology / cancer	Chromatin nanofibre as a therapeutic cancer vaccine	\$0.15	Explorer Grant	Dr Jeong Park	Massey University
16/609	Cardio / cerebrovascular disease	Vascular risk informatics using epidemiology & the web 2020 (VIEW2020)	\$4.98	Programme	Professor Rodney Jackson	The University of Auckland
16/608	CNS/ neurological disorders	Vascular and inflammatory mediators of neurodegeneration	\$5.00	Programme	Professor Michael Dragunow	The University of Auckland
16/597	CNS/ neurological disorders	Harnessing brain mechanisms to tackle Alzheimer's disease	\$4.93	Programme	Professor Cliff Abraham	University of Otago
16/559	CNS/ neurological disorders	Lost in translation: translation dysregulation and Parkinson's disease	\$0.12	Emerging Researcher First Grant	Dr Ivanhoe Leung	The University of Auckland
16/537	Diabetes	The consequences of type-2 diabetes on the cardiovascular effects of ageing	\$0.15	Emerging Researcher First Grant	Dr Graeme Carrick- Ranson	The University of Auckland
16/511	Diabetes	Corneal nerve microstructural changes in diabetes	\$0.15	Emerging Researcher First Grant	Dr Stuti Misra	The University of Auckland
16/505	Vision / hearing / speech	The transition zone as corneal endothelial transplants	\$0.15	Emerging Researcher First Grant	Dr Jie Zhang	The University of Auckland
16/430	CNS/ neurological disorders	The epigenome is compromised in Huntington's disease	\$0.15	Emerging Researcher First Grant	Dr Pritika Narayan	The University of Auckland

IRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
16/391	Oncology / cancer	Intercellular mitochondrial transfer in glioblastoma	\$1.10	Project	Professor Michael Berridge	Malaghan Institute of Medical Research
16/385	Cardio / cerebrovascular disease	Targeting human atrial microstructure: The key to resolving atrial fibrillation	\$1.18	Project	Dr Jichao Zhao	The University of Auckland
16/361	Infectious disease	Repurposing amiloride derivatives as new agents for drug-resistant tuberculosis	\$1.19	Project	Professor Gregory Cook	University of Otag
16/341	Oncology / cancer	Potentiation of targeted cancer therapies by statins	\$1.17	Project	Professor Peter Shepherd	The University of Auckland
16/331	Oncology / cancer	Proliferating tumour-associated macrophages in human cancers	\$1.17	Project	Professor Rod Dunbar	The University of Auckland
16/314	Oncology / cancer	Targeting cancer vaccines to human dendritic cells via CD301	\$1.19	Project	Professor Rod Dunbar	The University of Auckland
16/300	Diabetes	Fructose and the heart: targeting novel mechanisms of diabetic cardiomyopathy	\$1.17	Project	Dr Kimberley Mellor	The University of Auckland
16/279	Gastrointestinal disease	Translational advances in faecal incontinence and anterior resection syndrome	\$1.19	Project	Associate Professor Gregory O'Grady	The University of Auckland
16/242	Cardio / cerebrovascular disease	Reducing the burden of atrial fibrillation	\$1.09	Project	Professor Richard Troughton	University of Otag
16/236	Gastrointestinal disease	Targeting toxic gut lymph to treat acute disease	\$1.18	Project	Professor John Windsor	The University of Auckland
16/232	Infectious disease	Structure-directed discovery of next- generation antifungals	\$1.20	Project	Associate Professor Brian Monk	University of Otag
16/231	Gastrointestinal disease	Establishing drainage of thoracic duct lymph for longitudinal clinical studies	\$1.16	Project	Professor John Windsor	The University of Auckland
16/226	Biomedical – pharmaceuticals / treatments	Genomic analysis of adverse drug reactions	\$1.19	Project	Professor Martin Kennedy	University of Otag
16/172	Infectious disease	Biodiscovery and biosynthesis of new drug candidates	\$1.20	Project	Professor David Ackerley	Research Trust of Victoria University of Wellington
16/165	Child development	Effect of early childhood ear infections on language, cognition and behaviour	\$1.19	Project	Professor Cameron Grant	The University of Auckland
16/155	Cardio / cerebrovascular disease	Physiological pacing to improve cardiac output in heart failure	\$1.12	Project	Dr Rohit Ramchandra	The University of Auckland
16/135	Cardio / cerebrovascular disease	Keramatrix4VLU: a trial of wool- derived keratin dressings for venous ulcers	\$1.20	Project	Professor Andrew Jull	The University of Auckland
16/120	Oncology / cancer	Novel radiosensitisers for head and neck cancer	\$1.20	Project	Associate Professor Michael Hay	The University of Auckland
16/011	Cardio / cerebrovascular disease	Novel biomarker for acute coronary syndromes	\$1.16	Project	Associate Professor Chris Pemberton	University of Otag
16/009	Intensive care	The PLUS trial: PLasmalyte versUs Saline for intravenous fluid therapy in ICU	\$1.39	Project	Dr Paul Young	Medical Research Institute of New Zealand

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
15/607	Health services - clinical	Cyclic voltammetry of the critically ill: a new window on disease status	\$0.15	Explorer Grant	Associate Professor Anthony Phillips	The University of Auckland
15/576	Bone disease	Mechanisms and management of musculoskeletal disease	\$5.00	Programme	lan Reid	The University of Auckland
15/573	Respiratory disease / asthma	RCT of an ICS/LABA reliever therapy regimen in mild asthma	\$4.98	Programme	Professor Richard Beasley	Medical Research Institute of New Zealand
15/500	Oncology / cancer	p53 and variants in inflammatory disease and cancer	\$4.90	Programme	Professor Antony Braithwaite	University of Otago
15/491	Ageing	Developing a diagnostic tool for myelodysplastic syndrome	\$0.14	Emerging Researcher First Grant	Dr Euan Rodger	University of Otago
15/479	Infectious disease	Neutrophil oxidants in infection and inflammation	\$4.83	Programme	Professor Anthony Kettle	University of Otago
15/333	Respiratory disease / asthma	Oxidative stress in cystic fibrosis	\$0.80	Project	Professor Anthony Kettle	University of Otago
15/311	Respiratory disease / asthma	Persistent airflow limitation and the airway microbiome in childhood asthma	\$1.20	Project	Professor Jeroen Douwes	Massey University
15/263	Rheumatology / arthritis	The impact and management of rising osteoarthritis burden	\$1.20	Project	Professor J. Abbott	University of Otago
15/247	Oncology / cancer	The chemoprevention and treatment of diffuse gastric cancer	\$1.19	Project	Professor Parry Guilford	University of Otago
15/229	Oncology / cancer	Investigating a novel drug target in acute myeloid leukaemia	\$1.15	Project	Associate Professor Julia Horsfield	University of Otago
15/209	Obstetrics complications / perinatal care	A healthy life starts with a bio- energetically healthy placenta	\$1.19	Project	Professor Larry Chamley	The University of Auckland
15/141	Nutrition	TARGET (The Augmented versus Routine approach to Giving Energy Trial)	\$1.20	Project	Dr Paul Young	Medical Research Institute of New Zealand
15/103	CNS/ neurological disorders	Cellular reprogramming: A unique approach to understanding Huntington's disease.	\$1.19	Project	Associate Professor Bronwen Connor	The University of Auckland
15/086	Cardio / cerebrovascular disease	Hypertension after stroke - therapeutic or pathological?	\$1.06	Project	Dr Fiona McBryde	The University of Auckland
12/308	Surgery	The influence of anaesthetic depth on patient outcome after major surgery	\$1.20	Project	Associate Professor Timothy Short	Auckland DHB Charitable Trust

Research for New Zealand Health Delivery

IRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
20/756	Respiratory disease / asthma	Continuous dynamic monitoring of lung function at the bedside	\$0.15	Explorer Grant	Dr Haribalan Kumar	The University of Auckland
20/632	Diabetes	Improving equitable access to diabetes eye services	\$0.25	Emerging Researcher First Grant	Dr Jacqueline Ramke	The University of Auckland
20/611	Mental health	Tele-mental health delivery of psychotherapy for recurrent mood disorders	\$0.24	Feasibility Study	Professor Marie Crowe	University of Otago
19/741	Gastrointestinal disease	The 'Surgical Canary' : A Rapid detector of anastomotic leaks	\$0.15	Explorer Grant	Associate Professor Gregory O'Grady	The University of Auckland
19/675	Rheumatology / arthritis	Reducing the burden of knee osteoarthritis through community pharmacy	\$0.25	Feasibility Study	Dr Benjamin Darlow	University of Otago
19/649	Child development	Supporting mothers and babies in Lakes District	\$0.25	Emerging Researcher First Grant	Dr Rosie Dobson	The University of Auckland
19/640	Other	Valuing health-related quality of life in New Zealand	\$0.25	Emerging Researcher First Grant	Dr Trudy Sullivan	University of Otago
19/621	Ageing	A community-based psychosocial group treatment for older adults with loneliness	\$0.25	Feasibility Study	Dr Gary Cheung	The University of Auckland
19/617	Birth defects / congenital conditions	Coaching caregivers of children with developmental disability: A cluster RCT	\$0.23	Emerging Researcher First Grant	Dr Fiona Graham	University of Otago
19/491	Respiratory disease / asthma	Two RCTs of salbutamol therapy in exacerbations of asthma in adults	\$0.58	Project	Professor Richard Beasley	Medical Research Institute of New Zealand
19/488	Other	A rural-urban classification for NZ health research and policy	\$0.94	Project	Associate Professor Garry Nixon	University of Otago
19/466	Infectious disease	BLING III – Phase III RCT of continuous ß-lactam infusion in the critically ill	\$1.20	Project	Dr Shay McGuinness	Medical Research Institute of New Zealand
19/450	Oncology / cancer	Do concomitant medicines impede safe and effective lung cancer treatment in NZ?	\$1.19	Project	Professor Mark McKeage	The University of Auckland
19/234	Cardio / cerebrovascular disease	ICare-FASTER Improving care by FAster risk-STratification in the EmeRgency dept.	\$1.15	Project	Dr Martin Than	Canterbury District Health Board
19/021	Physical activity / exercise	Targeted early activity and mobilisation in the ICU (the TEAM study)	\$1.01	Project	Dr Paul Young	Medical Research Institute of New Zealand
18/739	Health services - delivery	EngageBOT: exploring chatbots for supporting patient engagement	\$0.15	Explorer Grant	Gayl Humphrey	The University of Auckland
18/656	Oncology / cancer	Prophylactic InCisional antibiotics in skin surgery (PICASSo trial) feasibility	\$0.25	Feasibility Study	Dr Jon Mathy	Middlemore Clinical Trials
18/486	Injury – intentional and unintentional	How safe are our emergency departments? A national prospective cohort study	\$1.20	Project	Professor Stuart Dalziel	Auckland DHB Charitable Trust

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
18/465	Injury – intentional and unintentional	Evaluating the impact of prehospital care on mortality following major trauma	\$1.10	Project	Associate Professor Bridget Kool	The University of Auckland
18/442	Rheumatology / arthritis	The primary care management and impact of osteoarthritis: learning from big data	\$1.20	Project	Professor J. Abbott	University of Otago
18/311	Dental / oral health	Evaluating a sustainable model of peer mentoring in traumatic brain injury	\$1.19	Project	Associate Professor Nicola Kayes	Auckland University of Technology
18/254	Other	Co-creating a digital self-help intervention for people with persistent pain	\$1.20	Project	Professor Leigh Hale	University of Otago
18/138	Other	Do regional district health board (DHB) groupings improve service integration and health outcomes?	\$0.80	Project	Professor Timothy Stokes	University of Otago
18/134	Mental health	Randomised controlled trial of prescription charges	\$1.03	Project	Professor Pauline Norris	University of Otago
17/657	Health services - delivery	Developing an innovative performance measurement framework for health care	\$0.15	Explorer Grant	Professor Nigel Grigg	Massey University
17/585	Vision / hearing / speech	Aniseikonia as a potential barrier to neural plasticity: does image size matter?	\$0.25	Emerging Researcher First Grant	Dr Joanna Black	The University of Auckland
17/438	Oncology / cancer	Improving early access to lung cancer diagnosis for Māori and rural communities	\$1.19	Project	Professor Ross Lawrenson	University of Waikato
17/391	Birth defects / congenital conditions	Reducing inequity through timely detection of critical congenital heart disease	\$1.18	Project	Professor Frank Bloomfield	The University of Auckland
17/363	Ageing	Using the InterRAI to improve identification and management of frailty	\$1.17	Project	Dr Hamish Jamieson	University of Otago
17/330	Surgery	Development and application of a risk prediction tool for emergency laparotomy	\$1.18	Project	Professor Andrew Hill	The University of Auckland
17/323	Infectious disease	Bacteraemia Antibiotic Length Actually Needed for Clinical Effectiveness- BALANCE	\$1.19	Project	Dr Colin McArthur	Medical Research Institute of New Zealand
17/233	Diabetes	Community exercise for long-term management of diabetes and multimorbidity	\$1.18	Project	Professor Leigh Hale	University of Otago
17/164	Vision / hearing / speech	Randomised controlled trial of hearing aids to improve cognition in older NZers	\$1.15	Project	Associate Professor Grant Searchfield	The University of Auckland
17/037	Cardio / cerebrovascular disease	Geographic and ethnic inequities in stroke outcomes	\$1.20	Project	Associate Professor Annemarei Ranta	University of Otago
16/807	Obstetrics complications / perinatal care	Outpatient balloon induction of labour versus inpatient prostaglandins: a RCT	\$0.20	Joint Research Partnership Project	Dr Michelle Wise	Auckland DHB Charitable Trust
16/521	Vision / hearing / speech	Improving children's vision screening: Are Lea symbols a better option?	\$0.14	Emerging Researcher First Grant	Associate Professor Nicola Anstice	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
16/425	Cardio / cerebrovascular disease	Pragmatic clinical trial of sodium lowering in dialysate	\$1.20	Project	Associate Professor Mark Marshall	Middlemore Clinical Trials
16/405	Mortality	Self-sampling for HPV screening: a community trial	\$1.20	Project	Professor John Potter	Massey University
16/387	Injury – intentional and unintentional	Pre-hospital anti-fibrinolytics for traumatic coagulopathy and haemorrhage	\$0.94	Project	Dr Colin McArthur	Medical Research Institute of New Zealand
16/353	Cardio / cerebrovascular disease	Transfusion requirements in patients for cardiac surgery - TRiCS III	\$1.20	Project	Dr Shay McGuinness	Medical Research Institute of New Zealand
16/344	Diabetes	What predicts regression from prediabetes to normal glucose regulation?	\$1.11	Project	Dr Kirsten Coppell	University of Otago
16/330	Cardio / cerebrovascular disease	Improving outcomes of patients with atrial fibrillation in primary care	\$1.20	Project	Professor Dr Ralph Stewart	Auckland DHB Charitable Trust
16/229	Alcohol / drugs and dependence	Me mutu kai paipa – improving the provision of cessation to NZ smokers	\$0.58	Project	Professor Christopher Cunningham	Massey University
16/133	Occupational health	Implementing a science-based approach for fatigue risk management in nursing	\$0.89	Project	Professor Philippa Gander ONZM	Massey University
16/014	Intensive care	ICU-ROX: An ICU RCT of conservative vs standard OXygen therapy	\$1.40	Project	Dr Paul Young	Medical Research Institute of New Zealand
15/352	Liver disease	Molecular predictors of liver cancer in Māori with chronic hepatitis B	\$0.53	Project	Professor Edward Gane	Auckland DHB Charitable Trust

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
20/614	Other	The Māori in-between? Identity, health, and social service access needs	\$0.17	Emerging Researcher First Grant	Dr Lara Greaves	The University of Auckland
19/792	Mental health	Interpretation of anomalous experiences: Implications for wāhine Māori	\$0.15	Explorer Grant	Dr Natasha Tassell- Matamua	Massey University
19/694	Wellness	Tangata Whenua Tangata Ora: Investigating health gain through whenua initiatives	\$5.00	Programme	Professor Helen Moewaka Barnes	Massey University
19/664	Nutrition	He Pātaka Marohi – The feasibility of novel and conventional instruments	\$0.25	Feasibility Study	Dr Geoffrey Kira	Massey University
19/608	Wellness	Whangaia ka tupu, ka puawai	\$0.25	Feasibility Study	Dr Kendall Stevenson	Research Trust of Victoria University of Wellington
19/342	Alcohol / drugs and dependence	Whānau Manaaki: Methamphetamines: a strength-based community approach	\$1.19	Project	Professor Beverley Lawton	Research Trust of Victoria University of Wellington
19/325	Injury – intentional and unintentional	POIS-10 Māori: Outcomes and experiences in the decade following injury	\$1.19	Project	Associate Professor Emma Wyeth	University of Otago
19/147	Disability	Te Ao Mārama: Disability perspectives of tāngata whaikaha Māori	\$1.19	Project	Mrs Bernadette Jones	University of Otago
19/087	Injury – intentional and unintentional	Tangaroa Ara Rau: Māori water safety programme for whānau	\$1.19	Project	Associate Professor Anne-Marie Jackson	University of Otago
18/652	Other	Bridging rongoā Māori healing and medical health treatment collaboration	\$0.22	Feasibility Study	Associate Professor Jonathan Koea	Waitemata District Health Board
18/489	Other	Te Hao Nui	\$1.20	Project	Mr Andrew Sporle	McDonald Sporle Ltd
18/474	Occupational health	Te whakahaumaru taiao: safe environments for Māori medical practitioners	\$0.99	Project	Dr Donna Cormack	The University of Auckland
18/471	Mental health	Revealing the realities of racism for rangatahi in Aotearoa - R4Aotearoa	\$1.20	Project	Dr Sarah-Jane Paine	The University of Auckland
18/127	Mental health	Pathways to first episode psychosis and outcomes in Māori	\$0.62	Project	Dr Cameron Lacey	University of Otago
18/037	Mental health	Under the knife: Why are Māori more likely to die shortly after surgery?	\$0.52	Project	Dr Jason Gurney	University of Otago
17/659	Nutrition	Transforming nutrition and food security in New Zealand: enabling communities	\$0.15	Explorer Grant	Dr Geoffrey Kira	Massey University
17/441	Family / whānau	Does a whānau ora approach improve outcomes for hospitalised tāmariki?	\$0.93	Project	Dr Nina Scott	Waikato District Health Board
17/315	Wellness	Harnessing the spark of life: Maximising whānau contributors to rangatahi wellbeing	\$1.20	Project	Dr Terryann Clark	The University of Auckland
17/309	Mortality	Pae Herenga: An investigation of Māori whānau end of life cultural care customs	\$1.20	Project	Dr Tess Moeke- Maxwell	The University of Auckland
17/251	Health services	Examining Emergency Department	\$0.90	Project	Dr Elana Curtis	The University

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisat
17/193A	Oncology / cancer	He Tapu te whare tangata	\$1.13	Project	Professor Beverley Lawton	Research Trust of Victoria University of Wellington
17/060	Health services – delivery	D3: Data, Decision-making & Development: using data to improve health outcomes	\$1.20	Project	Dr Amohia Boulton	Whakauae Resear Services
16/587	Child development	Te kura mai i tawhiti	\$0.15	Feasibility Study	Dr Mihi Ratima	Te Pou Tiringa Incorporated
16/586	Wellness	Whakarauora hapori	\$0.48	Māori Health Postdoctoral Fellowship	Dr Ruakere Hond	Te Pou Tiringa Incorporated
16/550	Disability	Development of a neural interface for prosthetics	\$0.11	Māori Health PhD Scholarship	Mr Mahonri Owen	University of Waik
16/541	Injury – intentional and unintentional	Kia Maanu, Kia Ora: Examining Māori water safety	\$0.08	Māori Health PhD Scholarship	Miss Chanel Phillips	
16/518	Reproduction / fertility / sexual health	Māori experiences of antenatal care in Tāmaki Makaurau	\$0.15	Emerging Researcher First Grant	Dr Anneka Anderson	The University of Auckland
16/491	Reproduction / fertility / sexual health	Investigating customary Māori philosophies regarding the whare tangata (womb)	\$0.11	Māori Health PhD Scholarship	Ms Ngahuia Murphy	University of Waik
16/477	Alcohol / drugs and dependence	Maraea – supportive solutions for indigenous children who misuse substances	\$0.54	Māori Health Postdoctoral Fellowship	Dr Lisa Chant	Auckland Universi of Technology
16/450	Ageing	A qualitative investigation of experiences of aged residential care by Māori	\$0.10	Māori Health PhD Scholarship	Ms Karen Keelan	University of Otag
16/449	Health services – clinical	Optimising post-operative pain relief following abdominal surgery	\$0.11	Māori Health PhD Scholarship	Dr Jamie-Lee Rahiri	The University of Auckland
16/444A	Child development	Whānau manaaki	\$3.60	Programme	Professor Beverley Lawton	Research Trust of Victoria University of Wellington
16/415	Oncology / cancer	Cancer support programmes for Māori whānau	\$1.04	Project	Dr Lis Ellison- Loschmann	Massey University
16/346	Mental health	He oranga ngakau: Māori and trauma informed care	\$1.19	Project	Dr Leonie Pihama	University of Waik
16/338	Mental health	Māori and bipolar disorder	\$1.18	Project	Dr Cameron Lacey	University of Otag
16/268	Wellness	Honour project Aotearoa	\$1.19	Project	Dr Leonie Pihama	University of Waik
16/089	Ageing	A Māori approach to the assessment and management of dementia	\$1.06	Project	Dr Margaret Dudley	The University of Auckland
16/088	Alcohol / drugs and dependence	Te ara auahi kore	\$1.19	Project	Mr Andrew Waa	University of Otag
15/688	Wellness	Kokiritia te ora: Promoting vitality, enhancing belonging for Ngatiwai tāmariki	\$0.20	Ngā Kanohi Kitea Project	Mr Wi Pirihi	Ngatiwai Educatio
15/428	Diabetes	A kaupapa Māori feasibility study to improve type-2 diabetes in Whangaroa	\$0.34	Māori Health Postdoctoral Fellowship	Dr Jennifer Reid	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
15/426	Health services – delivery	Māori participation in traditional Māori health practices	\$0.11	Māori Health PhD Scholarship	Ms Erena Wikaire	The University of Auckland
15/315	Respiratory disease / asthma	Whakapai e te Ara Hä: A health literacy approach to tāmariki asthma	\$1.20	Project	Dr Tristram Ingham	University of Otago
15/153	Other	Te whakahawea tangata: decoding discrimination	\$0.33	Project	Dr Donna Cormack	University of Otago
14/845	Metabolic disease	Nga Puna Hauora	\$0.13	Ngā Kanohi Kitea Project	Mr Garry Watson	Te Rangatahi o te Whenua Trust
14/608	Injury – intentional and unintentional	Māori disability outcomes: Pathways and experiences after injury	\$0.15	Emerging Researcher First Grant	Dr Emma Wyeth	University of Otago
14/373	CNS/ neurological disorders	Augmenting neuroplasticity in the Huntington's disease brain	\$1.19	Project	Dr Melanie Cheung	The University of Auckland
13/394a	Mortality	Preventable Māori mortality	\$0.09	Project	Mr Andrew Sporle	McDonald Sporle Ltd

Research contracts not classified by Research Investment Stream

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
20/1095	Infectious disease	Clinical trial of hydroxychloroquine prophylaxis in frontline healthcare workers	\$0.43	Project	Professor Richard Beasley	Medical Research Institute of New Zealand
20/1077	Infectious disease	Attenuating lung injury during prolonged ventilation for COVID-19	\$0.16	Project	Professor Anthony Phillips	The University of Auckland
20/1068	Infectious disease	Australasian COVID-19 Trial (ASCOT)	\$0.77	Project	Dr Susan Morpeth	Middlemore Clinical Trials
20/1066	Infectious disease	COVID-19 pandemic in Aotearoa NZ: Impact, inequalities & improving our response	\$0.50	Project	Professor Michael Baker	University of Otago
20/1064	Infectious disease	Clinical trial of COVID-19 treatments for the critically ill	\$0.17	Joint Research Partnership Project	Dr Colin McArthur	Medical Research Institute of New Zealand
20/1053	Infectious disease	An effective point-of-care screening pathway for COVID-19	\$0.24	Joint Research Partnership Project	Associate Professor Jo-Ann Stanton	University of Otago
20/1041	Infectious disease	Rapid diagnosis and genome sequencing to follow CoV-2019 outbreak	\$0.17	Joint Research Partnership Project	Dr Olin Silander	Massey University
20/1030	Infectious disease	Economic Risks from COVID-19 in Pacific Island countries	\$0.05	Joint Research Partnership Project	Professor Ilan Noy	Research Trust of Victoria University of Wellington
20/990	Infectious disease	Improving effectiveness and equity in the operation of COVID-19 'self- isolation'	\$0.18	Joint Research Partnership Project	Ms Lesley Gray	University of Otago
20/690	Other	The use of social licence in health contexts	\$0.006	Ethics Summer Studentships	Mr Paul Sneyd	The University of Auckland
20/689	Other	Lifeboat ethics: does precision medicine mean we are in a new era for resource allocation?	\$0.006	Ethics Summer Studentships	Mr Thomas Haig	University of Otago
20/457	Other	Revitalisation of the Samoan traditional diet	\$0.13	Pacific Health PhD Scholarship	Amy Maslen- Miller	The University of Auckland
20/453	Oncology / cancer	Barriers and cultural values for Pacific women accessing breast cancer care	\$0.005	Pacific Health Summer Studentship	Miss Emily Yee	Massey University
20/433	Alcohol / drugs and dependence	Māori women and methamphetamine addiction in pregnancy: A literature review	\$0.005	Māori Health Summer Studentship	Miss Hazel Gilbert	Te Puawai Tapu Trust
20/427	Cardio / cerebrovascular disease	Lifestyle programme for Pacific	\$0.13	Pacific Health PhD Scholarship	Mr Gavin Faeamani	Massey University
20/397	Mental health	He Toa Taumata Rau – the many resting places of courage	\$0.01	Māori Health Development Grant	Dr Tepora Emery	Toi Ohomai Institute of Technology
20/393	Ageing	Use of online technology for effective wellness and exercise programme delivery	\$0.005	Māori Health Summer Studentship	Ms Rian Sanerive	University of Otago
20/388	Dental / oral health	Māori experiences with oral health services in Aotearoa	\$0.005	Māori Health Summer Studentship	Ms Maia Tapsell	University of Otago
20/364	Mental health	Positive youth development in Māori youth through an adventure education programme	\$0.005	Māori Health Summer Studentship	Mr Ben Shine	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
20/330	Impairment	Identifying biomarkers of aneuploidy in embryos	\$0.39	Pacific Health Postdoctoral Fellowship	Dr Zaramasina Clark	Research Trust of Victoria University of Wellington
20/329	Disability	Student health professionals' understanding of tāngata whaikaha Māori concepts	\$0.005	Māori Health Summer Studentship	Ms Julia Law	University of Otago
20/302	Vision / hearing / speech	Microdrop administration of phenylephrine and cyclopentolate in neonates	\$0.08	Māori Health PhD Scholarship	Miss Lisa Kremer	University of Otago
20/298	Diabetes	Improving adherence to a reduced carbohydrate diet for women with gestational diabetes	\$0.03	Pacific Health Masters Scholarship	Ms Tutangi Amataiti	University of Otago
20/281	Physical activity / exercise	Whānau fitness culture: Community fitnesscCulture changes across the life course	\$0.005	Māori Health Summer Studentship	Miss Grace Davies	University of Otago
20/270	Wellness	Health seeking and unmet need for Pacific children accessing primary health care	\$0.005	Pacific Health Summer Studentship	Miss Jessica Fowler	The University of Auckland
20/264	Other	Exploring appropriate ways to recruit Pacific people into research	\$0.005	Pacific Health Summer Studentship	Ms Leilani Pereira	University of Otago
20/261	Other	Rangatahi Māori views on pharmacy in Aotearoa as a study and career pathway	\$0.005	Māori Health Summer Studentship	Ms Sharnee Breingan	The University of Auckland
20/259	CNS/ neurological disorders	Therapeutic development for fragile X syndrome	\$0.13	Māori Health PhD Scholarship	Miss Victoria Hawkins	The University of Auckland
20/245	Wellness	Implementing a long-term conditions exercise class on a marae	\$0.005	Māori Health Summer Studentship	Miss Sydney Hynes	University of Otago
20/239	Diabetes	Improving publicly funded Pacific bariatric surgery patients' retention rates	\$0.30	Sir Thomas Davis Te Patu Kite Rangi Ariki Health Research Fellowship	Dr Tamasin Taylor	The University of Auckland
20/233	Wellness	Niuean happiness: A hiapo approach to Niuean mental health and wellbeing	\$0.36	Pacific Health Postdoctoral Fellowship	Miss Jessica Pasisi	University of Waikato
20/231	Other	Global Health Classroom (GHCR) as a tool for global child health learning	\$0.005	Pacific Health Summer Studentship	Miss Fuatino Heath	University of Otago
20/229	Child development	Exploring resilience among Pasifika children within the Growing Up in New Zealand (GUiNZ) Study	\$0.09	Pacific Health PhD Scholarship	Ms Jacinta Fa'alili-Fidow	The University of Auckland
20/227	Reproduction / fertility / sexual health	Māori women and cervical screening: A kaupapa Māori literature review	\$0.005	Māori Health Summer Studentship	Miss Rebecca Lourie	Te Puawai Tapu Trust
20/226	Mental health	Counselling survivors of sexual violence trauma: Developing a Pasifika model	\$0.13	Pacific Health PhD Scholarship	Mrs Sarah McRobie	The University of Auckland
20/203	Cardio / cerebrovascular disease	Pacific and Māori populations undergoing cardiac surgery in the Southern District Health Board (SDHB) region	\$0.03	Pacific Health Masters Scholarship	Miss Tilda Leleai	University of Otago

IRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisati
20/185	Wellness	Māmā e Mamia – piloting a marae- based wellbeing model for pēpi and māmā Māori	\$0.33	Erihapeti Rehu- Murchie Fellowship	Dr Aria Graham	Whakauae Resear Services
20/180	Diabetes	Metabolic health of Māori and Pacific women: relationships between CREBRF genotype and metabolic resilience	\$0.13	Pacific Health PhD Scholarship	Ms Taimi Tuimalealiifano	The University of Auckland
20/166	Wellness	Hauora Rangatahi Māori: Appropriateness and acceptability of health measures	\$0.14	Māori Health PhD Scholarship	Miss Georgia McCarty	University of Otago
20/138	Other	Supporting allied health professionals in rural areas	\$0.20	Clinical Research Training Fellowship	Mrs Sarah Walker	University of Otago
20/137	Oncology / cancer	Understanding the role of the aryl hydrocarbon receptor in cancer	\$0.59	Sir Charles Hercus Fellowship	Dr Christoph Goebl	University of Otago
20/115	Child development	Lighted paths: Education and pathways to better health for Pacific families	\$0.26	Sir Thomas Davis Te Patu Kite Rangi Ariki Health Research Fellowship	Dr Jesse Kokaua	University of Otago
20/113	Ageing	Keteparaha: A community framework to support Māori ageing and end-of-life study	\$0.41	Māori Health Postdoctoral Fellowship	Dr Melissa Carey	The University of Auckland
20/111	Mental health	Sleep, health, communication, and wellbeing for Pacific children and families	\$0.13	Pacific Health PhD Scholarship	Miss Albany Lucas	University of Otago
20/108	Dental / oral health	Oral health of elderly Pacific people among New Zealand nursing home residents	\$0.005	Pacific Health Summer Studentship	Miss Ruby Tukia	University of Otago
20/106	Injury – intentional and unintentional	A systematic review of alcohol research in the Pacific Islands	\$0.005	Pacific Health Summer Studentship	Miss Monleigh Ikiua	The University of Auckland
20/105	Cardio / cerebrovascular disease	Epidemiology of cardiovascular disease among Pacific people in New Zealand	\$0.12	Pacific Health PhD Scholarship	Mrs Julie Winter- Smith	The University of Auckland
20/103	Oncology / cancer	Molecular mechanisms and the gut microbiome in colorectal cancer (CRC)	\$0.60	Sir Charles Hercus Fellowship	Dr Rachel Purcell	University of Otago
20/092	Other	Strategies to improve Māori recruitment and retention into nursing	\$0.13	Māori Health PhD Scholarship	Miss Phillipa Barton	Auckland Universit of Technology
20/089	Wellness	Whakamana te reo a ngā rangatahi ki roto i nga tautuhinga hauora	\$0.13	Māori Health PhD Scholarship	Mrs Te Wai Barbarich-Unasa	Auckland Universit of Technology
20/069	Oncology / cancer	Tickling cancer cells to provoke an anti-tumour immune response	\$0.58	Sir Charles Hercus Fellowship	Dr Muhammad Hanif	The University of Auckland
20/067	Nutrition	Breastfeeding support for whānau Māori: The Northland experience	\$0.01	Māori Health Development Grant	Ms Carmen Timu-Parata	University of Otago
20/057	CNS/ neurological disorders	The use of cannabis as a medicine in New Zealand	\$0.13	Clinical Research Training Fellowship	Dr Karen Oldfield	Medical Research Institute of New Zealand
20/052	Oncology / cancer	Rational extension of immunotherapy in colorectal cancer	\$0.60	Sir Charles Hercus Fellowship	Dr Nicholas Fleming	University of Otago
20/045	CNS/ neurological disorders	Nocebo Hypothesis Cognitive Behavioural Therapy (NH-CBT): a RCT	\$0.32	Clinical Research Training Fellowship	Dr Matt Richardson	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
20/042	Obstetrics complications / perinatal care	Optimising the care and outcomes for women with severe postpartum anaemia	\$0.32	Clinical Research Training Fellowship	Ms Esther Calje	The University of Auckland
20/041	CNS/ neurological disorders	The role of psychological flexibility in recovery following a concussion	\$0.10	Foxley Fellowship	Dr Josh Faulkner	Auckland University of Technology
20/035	Mortality	The role of oedema and lymphatic dysfunction in critical illness	\$0.28	Clinical Research Training Fellowship	Dr Peter Russell	The University of Auckland
20/030	Obstetrics complications / perinatal care	Improving care and outcomes for babies at risk of brain injury	\$0.82	Clinical Practitioner Research Fellowship	Dr Malcolm Battin	Auckland DHB Charitable Trust
20/027	Injury – intentional and unintentional	Understanding and treating obesity's harmful effects on rotator cuff healing	\$0.32	Clinical Research Training Fellowship	Dr Scott Bolam	The University of Auckland
20/026	Diabetes	Improving outcomes for children and adolescents with diabetes	\$0.90	Clinical Practitioner Research Fellowship	Associate Professor Craig Jefferies	Auckland DHB Charitable Trust
20/024	Infectious disease	Towards a new penicillin for rheumatic fever prevention	\$0.005	Pacific Health Knowledge Translation Grant	Dr Dianne Sika- Paotonu	University of Otago
20/023	Respiratory disease / asthma	Evaluating a model of care for patients with chronic obstructive pulmonary disease (COPD) in their last year of life	\$0.32	Clinical Research Training Fellowship	Dr Amanda Landers	University of Otago
20/021	Ageing	Estimating the cost of dementia care in NZ and modelling future costs and needs	\$0.32	Pacific Health Clinical Training Fellowship	Dr 'Etuini Ma'u	The University of Auckland
20/019	Wellness	Mindfulness based cognitive therapy for family carers of people with dementia	\$0.32	Clinical Research Training Fellowship	Dr Emme Chacko	The University of Auckland
20/018	Obesity	Does a sleep intervention reduce weight gain in infancy? A novel approach	\$0.32	Clinical Research Training Fellowship	Ms Louise Fangupo	University of Otago
20/017	Oncology / cancer	Precision cancer treatment using predictive software and imaging biomarkers	\$0.47	Sir Charles Hercus Fellowship	Dr Hayley Reynolds	The University of Auckland
20/015	Vision / hearing / speech	Adult stem cell treatments for corneal endothelial diseases	\$0.58	Sir Charles Hercus Fellowship	Dr Jie Zhang	The University of Auckland
20/014	Mental health	Implementing effective treatments: Parent training for conduct problems	\$0.32	Clinical Research Training Fellowship	Dr Melanie Woodfield	Auckland DHB Charitable Trust
20/012	Mental health	Improving Pacific youth wellbeing: co- creation and evaluation of a digital tool	\$0.13	Pacific Health PhD Scholarship	Mrs Taulaga Auva'a-Alatimu	The University of Auckland
20/011	Cardio / cerebrovascular disease	Vulnerability of the female heart	\$0.59	Sir Charles Hercus Fellowship	Dr June-Chiew Han	The University of Auckland
20/009	Diabetes	Developing Tongan-centred ways to improve primary health care access in Auckland, New Zealand	\$0.09	Pacific Health PhD Scholarship	Ms Manusiu Latu	The University of Auckland
20/006	Immune system / allergy	Novel strategies to harness therapeutic potential of CB2 in the immune system	\$0.57	Sir Charles Hercus Fellowship	Dr Natasha Grimsey	The University of Auckland
20/005	Ageing	Health and the Ta'unga: Cook Island palliative health knowledge in New Zealand	\$0.13	Pacific Health PhD Scholarship	Mrs Amy Henry	University of Otago

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20/002	Respiratory disease / asthma	Understanding dyspnoea and exercise limitation in interstitial lung disease	\$0.32	Clinical Research Training Fellowship	Dr Charlotte Simmonds	The University of Auckland
19/913	Other	Te Puna Taiao – improving health outcomes for tamariki	\$0.01	Ngā Kanohi Kitea Development Grant	Miss Hannah	Te Puna Taiao Charitable Trust
19/912	Other	'Mā wai e tõ taku kauwae ki uta' – who will take my place?	\$0.01	Ngā Kanohi Kitea Development Grant	Dr Tepora Emery	Ngati Pikiao Iwi Tru
19/911	Other	Te Poipoia Tūkino o Hauraki – courageous conversations about safety	\$0.01	Ngā Kanohi Kitea Development Grant	Dr Stephanie Palmer	Te Whariki Manawahine o Hauraki
19/907	Mental health	Psychological effects of the March 15 Mosque attacks	\$0.69	Project	Associate Professor Caroline Bell	University of Otago
19/895	Injury – intentional and unintentional	A bioelectronic implant to reconnect damaged nerves following spinal cord injury	\$0.47	Joint Research Partnership Project	Associate Professor Darren Svirskis	The University of Auckland
19/880	Alcohol / drugs and dependence	Exploring the lived experiences of whanau Māori with a foetal alcohol spectrum disorder (FASD) diagnosis	\$0.20	Ngā Kanohi Kitea Project	Miss Elizabeth Strickett	Hapai Te Hauora Tapui
19/879	Wellness	Ngā waka hauora: Community development through creating vehicles of wellbeing	\$0.20	Ngā Kanohi Kitea Project	Dr Lily George	Waikare Communit Development & Research Trust
19/873	Occupational health	A systematic review and meta-analysis of organisational-level interventions	\$0.40	Joint Research Partnership Literature Review	Dr Lixin Jiang	The University of Auckland
19/862	Occupational health	Evaluating a multi-level participatory psychosocial risk intervention	\$1.20	Joint Research Partnership Project	Associate Professor David Tappin	Massey University
19/861	Wellness	Ngati Kuia He Maunga Pakohe Rautaki Hauora	\$0.20	Ngā Kanohi Kitea Project	Mrs Victoria Thorn	Kaikaiawaro Charitable Trust
19/855	Oncology / cancer	Validation of predictive biomarkers for T-DM1 activity in HER2+ breast cancer.	\$0.20	Joint Research Partnership Fellowship	Dr Barbara Lipert	The University of Auckland
19/851	Oncology / cancer	Effect of recency of childbirth on breast cancer survival	\$0.04	Joint Research Partnership Project	Associate Professor Brian Cox	University of Otago
19/845	Oncology / cancer	Validation of a liquid biopsy to predict recurrence in NZ breast cancer patients	\$0.24	Joint Research Partnership Project	Dr Annette Lasham	The University of Auckland
19/844	Oncology / cancer	Costs of breast cancer in New Zealand	\$0.19	Joint Research Partnership Project	Dr Chunhuan Lao	University of Waika
19/835	Oncology / cancer	Using deep learning and digital pathology to intrinsically subtype breast cancer	\$0.25	Joint Research Partnership Project	Dr Gavin Harris	Canterbury District Health Board
19/834	CNS/ neurological disorders	Early vocational rehabilitation following acquired neurological disability	\$0.59	Joint Research Partnership Project	Dr Jennifer Dunn	University of Otago
19/832	Oncology / cancer	Analysis of full-length transcripts for variant classification in breast cancer	\$0.19	Joint Research Partnership Project	Associate Professor Logan Walker	University of Otago
19/826	Reproduction / fertility / sexual health	Te kaha o te rangatahi: Young Māori women's access to LARC in Counties Manukau	\$0.20	Ngā Kanohi Kitea Project	Dr Kim Southey	Te Puawai Tapu Tr

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
19/816	Oncology / cancer	Third-generation CAR T-cells incorporating TLR domains	\$0.60	International Relationship Fund	Dr Robert Weinkove	Malaghan Institute of Medical Research
19/813	Ageing	MicroRNA in Tau protein-mediated synapse weakening	\$0.10	International Relationship Fund	Dr Owen Jones	University of Otago
19/806	Cardio / cerebrovascular disease	Cardiovascular risk prediction for people with diabetes in New Zealand and China	\$0.09	International Relationship Fund	Dr Romana Pylypchuk	The University of Auckland
19/804	Child development	Effect of maternal diet & pollutant exposure on infant neurocognition at 1 year	\$0.10	International Relationship Fund	Dr Jamie de Seymour	Massey University
19/760	Other	From prescription to patients: identifying pharmaceutical information pathways	\$0.21	Joint Research Partnership Project	Dr Denise Taylor	Research Trust of Victoria University of Wellington
19/722	Infectious disease	Are children at high risk of pneumococcal getting the protection they require?	\$0.21	Joint Research Partnership Project	Dr Anna Howe	The University of Auckland
19/580	Rheumatology / arthritis	Pharmacokinetics of benzathine penicillin G in children and young people in NZ	\$0.005	Māori Health Summer Studentship	Esther Pinfold	University of Otago
19/486	Mental health	Tāne Ora Alliance – Emerging approaches to health gains for Māori men	\$0.13	Māori Health PhD Scholarship	Luke Rowe	Massey University
19/472	Child development	Health-related policies in schools in the Cook Islands	\$0.13	Pacific Health PhD Scholarship	Heimata Herman	The University of Auckland
19/470	Nutrition	Investing, empowering and enabling adolescents to drive health improvements in Tāmaki: A focus on food insecurity in the community	\$0.13	Pacific Health PhD Scholarship	Alvina Pauuvale	The University of Auckland
19/332	Diabetes	Reducing the burden of metabolic disease in Māori	\$0.29	Māori Health Postdoctoral Fellowship	Dr Megan Leask	University of Otago
19/318	Obesity	Optimising preschool obesity intervention: the Whānau Pakari preschool project	\$0.03	Māori Health Masters Scholarship	Tami Cave	The University of Auckland
19/307	Rheumatology / arthritis	The immunogenetics of rheumatic fever and rheumatic heart disease	\$0.005	Pacific Health Summer Studentship	Toni Anitelea	University of Otago
19/294	Cardio / cerebrovascular disease	Is elevated cardiac fibrosis in Pacific patients associated with reduced klotho?	\$0.03	Pacific Health Masters Scholarship	Tumanu Futi	University of Otago
19/291	Wellness	Tairāwhiti waka, Tairāwhiti tāngata – Examining Tairāwhiti voyaging philosophies	\$0.14	Māori Health PhD Scholarship	Ngahuia Mita	University of Otago
19/284	Cardio / cerebrovascular disease	Te Tino Rangatiratanga o te Mate Ikura Roro	\$0.03	Māori Health Masters Scholarship	TeWhaawhai Taki	The University of Auckland
19/247	Historical trauma	Ka Ora – exploring the healing potential of birth	\$0.13	Māori Health PhD Scholarship	Marnie Reinfelds	The University of Auckland
19/209	Health equity	Racial and ethnic bias among registered nurses	\$0.13	Māori Health PhD Scholarship	Sonia Hawkins	The University of Auckland
19/195	Cardio / cerebrovascular disease	An mHealth approach: Reducing cardiovascular disease (CVD) risk among Pacific people living in NZ	\$0.13	Pacific Health PhD Scholarship	Amio Ikihele	The University of Auckland

IRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisat
19/194	Mental health	Nga kaiwhakaako, whakapakari tinana me te hauora hinengaro	\$0.11	Māori Health PhD Scholarship	Emerald Muriwai	The University of Auckland
19/193	Ageing	Deglutition (swallowing) in advanced age	\$0.08	Māori Health PhD Scholarship	Marie Jardine	The University of Auckland
19/191	Mortality	Staying at home: A qualitative descriptive study on Pacific palliative care	\$0.03	Pacific Health Masters Scholarship	Mrs Amy Henry	University of Otag
19/169	Reproductive system and disorders	The impact of micro-environment composition on oocyte developmental competency	\$0.11	Māori Health PhD Scholarship	Matire Ward	Research Trust of Victoria University of Wellington
19/145	Diabetes	Food and diabetes: the underlying factors that determine food practices of Tongan	\$0.22	Pacific Health Clinical Training Fellowship	Soana Muimuiheata	Auckland Universion of Technology
19/140	Respiratory disease / asthma	Knowledge translation bronchiolitis study	\$0.20	Clinical Research Training Fellowship	Libby Haskell	Auckland DHB Charitable Trust
19/139	Oncology / Cancer	Development of chimeric antigen receptor (CAR) T-Cell therapy in New Zealand	\$0.80	Clinical Practitioner Research Fellowship	Dr Robert Weinkove	Malaghan Institute Medical Research
19/135	Bone disease	3D bioassembly of functional bone grafts: a Lego approach	\$0.49	Sir Charles Hercus Fellowship	Dr Khoon Lim	University of Otag
19/134	Cultural Competence	Cultural competence and equity focussed activities in primary care	\$0.22	Foxley Fellowship	Dr Rawiri Keenan	University of Waik
19/125	Obstetrics complications / perinatal care	Long-term pan-sector outcomes for New Zealand's Neonatal Intensive Care Unit (NICU) graduates	\$0.31	Clinical Research Training Fellowship	Dr Benjamin McConchie	University of Otag
19/124	Infectious disease	The use of whole genome sequencing (WGS) to describe the molecular epidemiology of tuberculosis (TB) in NZ	\$0.26	Clinical Research Training Fellowship	Dr Veronica Playle	The University of Auckland
19/123	Oncology / Cancer	The immunotherapy effects of gene variants unique to Māori and Pacific peoples	\$0.02	Pacific Health PhD Scholarship	Chris Puliuvea	The University of Auckland
19/110	Nutrition	Advancing opportunities for big dietary data in New Zealand	\$0.44	Sir Charles Hercus Fellowship	Dr Kathryn Bradbury	The University of Auckland
19/107	Alcohol / drugs and dependence	Alcohol's harm to others: impacts on children of problem/heavy drinkers	\$0.50	Sir Charles Hercus Fellowship	Dr Taisia Huckle	Massey University
19/094	Endocrine disease	Development of trials with novel designs	\$0.76	Clinical Practitioner Research Fellowship	Associate Professor Mark Bolland	Auckland DHB Charitable Trust
19/082	Mental Health	Enhancing long-term recovery in mood disorders	\$0.43	Sir Charles Hercus Fellowship	Dr Katie Douglas	University of Otag
19/081	Gastrointestinal disease	Refining prognostic accuracy in colorectal cancer patients	\$0.29	Clinical Research Training Fellowship	Dr Janet Rhodes	University of Otag
19/078	Cardio / cerebrovascular disease	Optimal Medication Therapy in Indigenous Populations and specifically in Māori.	\$0.29	Clinical Research Training Fellowship	Leanne Te Karu	The University of Auckland
19/053	Child development	The neurobiology of maternal care; understanding the critical role of prolactin	\$0.50	Sir Charles Hercus Fellowship	Dr Rosemary Brown	University of Otag
19/038	Respiratory disease /	Caffeine for the prevention of intermittent hypoxaemia in late preterm	\$0.32	Clinical Research Training Fellowship	Elizabeth Oliphant	The University of Auckland

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19/031	Oncology / Cancer	Physical activity, sedentary behaviours and breast cancer risk	\$0.30	Girdlers HRC Fellowship	Dr Sandar Tin Tin	University of Oxford
19/026	Oncology / Cancer	The applicability of circulating tumour DNA (ctDNA) as a diagnostic tool for early cancer detection	\$0.20	Sir Thomas Davis Te Patu Kite Rangi Ariki Health Research Fellowship	Dr Dianne Sika- Paotonu	University of Otago
19/019	General health status	Racism and Māori health: translating research knowledge into policy action	\$0.13	Foxley Fellowship	Natalie Talamaivao	University of Otago
19/017	Respiratory disease / asthma	Māori experience of using continuous positive airway pressure (CPAP) treatment for obstructive sleep apnoea (OSA)	\$0.03	Māori Health Masters Scholarship	Nicola Canter- Burgoyne	Massey University
19/012	Cardio / cerebrovascular disease	Patient reported outcomes after cardiac surgery: advanced cardiac imaging study.	\$0.32	Clinical Research Training Fellowship	Dr Mohammed Moharram	University of Otago
19/008	Renal disease / urology	Prevalence of chronic kidney disease in Samoan residents in New Zealand and Samoa	\$0.32	Pacific Health Clinical Training Fellowship	Professor Malama Tafunai	University of Otago
19/007	CNS/ Neurological Disorders	Delivering neurotrophic growth factors to stimulate and orient axonal outgrowth	\$0.50	Sir Charles Hercus Fellowship	Associate Professor Darren Svirskis	The University of Auckland
19/004	Surgical disease	Improving pain after haemorrhoidectomy	\$0.21	Clinical Research Training Fellowship	Dr Weisi Xia	The University of Auckland
19/003	Respiratory disease / asthma	Effects of antipyretics on respiratory disease and eczema in infancy	\$0.32	Clinical Research Training Fellowship	Dr Eunicia Tan	The University of Auckland
18/1030	Other	Enabling self-care through personalised mHealth	\$0.21	Joint Research Partnership Project	Dr Rosie Dobson	The University of Auckland
18/1016	Oncology / Cancer	Discovery of selective FGFR4 inhibitors as anti-hepatocellular carcinoma agents	\$0.40	International Relationship Fund	Associate Professor Jeffrey Smaill	The University of Auckland
18/1005	Other	Independent Research Organisation Funding	\$2.84	Independent Research Organisation Fund	Dr Cherryl Smith	Te Atawhai o te Ao: Independent Māori Institute for Environment & Health
18/1004	Other	Independent Research Organisation Funding	\$2.10	Independent Research Organisation Fund	Dr Amohia Boulton	Whakauae Research Services
18/1003	Other	Independent Research Organisation Funding	\$10.68	Independent Research Organisation Fund	Professor Graham Le Gros CNZM	Malaghan Institute of Medical Research
18/1002	Other	Independent Research Organisation Funding	\$1.70	Independent Research Organisation Fund	Professor Richard Beasley	Medical Research Institute of New Zealand
19/002	Injury – intentional and unintentional	Improving road safety and health: Understanding kava's impact on driver fitness	\$0.28	Sir Thomas Davis Te Patu Kite Rangi Ariki Health Research Fellowship	Dr Apo Aporosa	University of Waikato
18/829	Respiratory disease / asthma	Randomised trial of an intervention to increase tuberculosis notifications	\$0.45	Joint Research Partnership Project	Professor Philip Hill	University of Otago

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18/821	Mental Health	Development of cross-agency collaboration to improve employment outcomes	\$0.47	Joint Research Partnership Project	Dr Helen Lockett	Te Pou Limited
18/804	Disability	Support for gaining employment for people with a long-term condition	\$0.32	Joint Research Partnership Project	Dr Joanna Fadyl	Auckland University of Technology
18/800	Injury – intentional and unintentional	Taurite Tu – Development of falls prevention exercise programme for Māori	\$0.18	Ngā Kanohi Kitea Project	Katrina Bryant	Te Runanga o Otakou
18/799	Skin disease	He iti kahikatoa pakaru rikiriki te totara: Kānuka drug discovery	\$0.10	Ngā Kanohi Kitea Project	Bella Paenga	Hikurangi Bioactives Limited Partnership
18/796	Wellness	Koeke a ko ake nei towards intergenerational positive aging for Ngati Pikiao	\$0.20	Ngā Kanohi Kitea Project	Waitiahoaho Emery	Ngati Pikiao lwi Tru
18/794	Wellness	Whāia te Manaaki: manaakitanga and hauora for Te Atiawa ki Whakarongotai	\$0.20	Ngā Kanohi Kitea Project	Kiri Parata	Atiawa ki Whakarongotai Charitable Trust Board
18/788	Other	Evidence to guide investment in a model of primary care for all	\$1.30	Joint Research Partnership Project	Professor Nicolette Sheridan	Massey University
18/776	Rheumatology / arthritis	A decision aid to incorporate patient preferences into biologic therapies	\$0.21	Joint Research Partnership Project	Professor Carlo Marra	University of Otago
18/773	Infectious disease	Pertussis immunisation in pregnancy – infant outcomes	\$0.21	Joint Research Partnership Project	Dr Helen Petousis-Harris	The University of Auckland
18/766	Oncology / Cancer	Gaps in the provision of radiotherapy for early breast cancer	\$0.06	Joint Research Partnership Project	Dr Karen Bartholomew	Waitemata District Health Board
18/765	Oncology / Cancer	Analysis of DCIS data in the National Breast Cancer Register	\$0.12	Joint Research Partnership Project	Dr Annette Lasham	The University of Auckland
18/764	Oncology / Cancer	Spatial variability in breast cancer incidence, care and outcomes	\$0.20	Joint Research Partnership Project	Dr Sandar Tin Tin	The University of Auckland
18/756	Oncology / Cancer	Preventing breast cancer metastasis with conjugate vaccines targeting human HER2	\$0.25	Joint Research Partnership Project	Dr Robert Weinkove	Malaghan Institute Medical Research
18/753	Oncology / Cancer	Investigating Fn14 as a driver of breast cancer metastasis	\$0.13	Joint Research Partnership Project	Dr Heather Cunliffe	University of Otago
18/750	Oncology / Cancer	Targeting HIF-1 in triple negative breast cancer using glutaminase inhibitors	\$0.24	Joint Research Partnership Project	Dr Dean Singleton	The University of Auckland
18/742	Oncology / Cancer	Targeting breast cancer metastasis with heparan sulfate mimetics	\$0.10	Joint Research Partnership Project	Professor John Miller	Research Trust of Victoria University of Wellington
18/664	Child development	Rangahau Ara Oranga	\$0.50	Māori Health Emerging Leader Fellowship	Dr Reremoana Theodore	University of Otago
18/588	Oncology / Cancer	Improving the quantity and quality of life for Māori with cancer	\$0.50	Māori Health Emerging Leader Fellowship	Dr Jason Gurney	University of Otago
18/571	Wellness	Privilege and health inequity, the role for Matauranga Māori	\$0.35	Hohua Tutengaehe Fellowship	Dr Belinda Borell	Massey University
18/536	Health services	The effect of discrimination on health outcomes for Pacific people	\$0.03	Pacific Health Masters Scholarship	Ms Sarah Kapeli	The University of Auckland

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18/491	Mental health	Whakapiki wairua: Study of a Māori mindfulness intervention in a Wharekura	\$0.36	Māori Health Postdoctoral Fellowship	Dr Marama McDonald	University of Waikato
18/469	Diabetes	Co-designing a community-based intervention programme for prediabetes	\$0.13	Pacific Health PhD Scholarship	Mrs Veisinia Pulu-Lakai	Massey University
18/373	Vision / hearing / speech	Using pluripotent stem cells to determine the cellular basis of hearing loss	\$0.08	Māori Health PhD Scholarship	Miss Blaise Forrester- Gauntlett	University of Waikato
18/293	Family / whanau	The foster caregiving relationship with new-borns who have feeding difficulties	\$0.03	Māori Health Masters Scholarship	Mrs Nari Hann	Massey University
18/262	Health ethics	Whānau consent: an expression of indigenous rights	\$0.13	Māori Health PhD Scholarship	Ms Hannah Burgess	The University of Auckland
18/209	Nutrition	Effects of artificial sweetener in the maternal diet on offspring fertility	\$0.12	Māori Health PhD Scholarship	Pania Bridge- Comer	The University of Auckland
18/201	Infectious disease	Does inhibition of quorum sensing increase antibiotic resistance spread?	\$0.13	Māori Health PhD Scholarship	Mr Howard Maxwell	University of Otago
18/114	Immune system / allergy	Impact of microenvironment on dendritic cell function	\$0.50	Sir Charles Hercus Fellowship	Dr Lisa Connor	Research Trust of Victoria University of Wellington
18/113	Respiratory disease / asthma	The role of a sublingual bacterial vaccine in adult bronchiectasis patients.	\$0.32	Clinical Research Training Fellowship	Dr William Good	The University of Auckland
18/111	Health services - delivery	Process evaluation of trials: maximising the potential for implementation	\$0.50	Sir Charles Hercus Fellowship	Dr Daniel Ribeiro	University of Otago
18/095	Oncology / Cancer	The prognostic significance of immune cell infiltrates in meningioma	\$0.24	Clinical Research Training Fellowship	Dr Clinton Turner	Auckland DHB Charitable Trust
18/086	Child development	Optimising parent-child interaction therapy for childhood conduct problems	\$0.14	Foxley Fellowship	Dr Melanie Woodfield	Auckland DHB Charitable Trust
18/073	Gastrointestinal disease	Developing a gut dysfunction scoring tool in critical illness	\$0.32	Clinical Research Training Fellowship	Ms Varsha Asrani	The University of Auckland
18/056	Obstetrics complications / perinatal care	Long term outcomes of children born at risk of neonatal hypoglycaemia	\$0.25	Clinical Research Training Fellowship	Dr Rebecca Griffith	The University of Auckland
18/048	CNS/ Neurological Disorders	Genetic characterisation of the epileptic encephalopathies	\$0.32	Clinical Research Training Fellowship	Dr Gemma Poke	University of Otago
18/046	Mental health	Management of psychological factors after mild traumatic brain injury	\$0.41	Clinical Practitioner Research Fellowship	Dr Deborah Snell	Canterbury District Health Board
18/041	Surgery - emergency	Development and application of a risk prediction tool for emergency laparotomy	\$0.20	Clinical Research Training Fellowship	Dr Ahmed Barazanchi	The University of Auckland
18/031	Health services - delivery	Improving patient safety in New Zealand general practice	\$0.32	Clinical Research Training Fellowship	Dr Sharon Leitch	University of Otago
18/027	Reproduction / fertility / sexual health	Bi-modal anti-Müllerian hormone signalling in the ovary.	\$0.50	Sir Charles Hercus Fellowship	Dr Michael Pankhurst	University of Otago
18/026	Orthopaedics	Designing and using animal models to improve tendon healing	\$0.13	Clinical Research Training Fellowship	Dr Mark Zhu	The University of Auckland
18/024	Infectious disease	Combatting Tuberculosis at local and international frontlines	\$0.50	Sir Charles Hercus Fellowship	Dr Htin Lin Aung	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisatio
18/013	Surgery	Perioperative local anaesthetic	\$0.21	Clinical Research Training Fellowship	Dr Wiremu MacFater	The University of Auckland
18/006	Cardio / cerebrovascular disease	Big data – creating new insights into heart failure	\$0.50	Sir Charles Hercus Fellowship	Dr Hamish Jamieson	University of Otago
17/719	Mental Health	Indigenous solutions: enabling Māori & Pacific mental health resilience	\$0.79	Global Alliance for Chronic Diseases Project	Dr Kahu McClintock	Te Rau Ora
17/707	Mental Health	Pathways to first episode psychosis and outcomes in Māori	\$0.54	Global Alliance for Chronic Diseases Project	Dr Cameron Lacey	University of Otago
17/705	Mental Health	Primary care e-screening for mental health among TeTai Tokerau youth	\$0.62	Global Alliance for Chronic Diseases Project	Professor Felicity Goodyear-Smith	Auckland UniServices
17/678	Infectious disease	Genetic and molecular basis of drug resistance and drug action in vivax malaria	\$0.45	Joint Research Partnership Project	Dr Bruce Russell	University of Otago
17/672	Oncology / Cancer	The potential of immunotherapy as a treatment for ER+ve breast cancer	\$0.20	Joint Research Partnership Project	Dr Anita Dunbier	University of Otago
17/669	Oncology / Cancer	Targeting growth hormone signal transduction in breast cancer	\$0.20	Joint Research Partnership Project	Dr Jo Perry	The University of Auckland
17/630	Obesity	An international collaboration to reduce infant obesity in high risk groups	\$0.06	International Relationship Fund	Professor Rachael Taylor	University of Otago
17/596	Vision / hearing / speech	Using Chinese medicine to treat tinnitus: targeting metabolic networks	\$0.40	International Relationship Fund	Dr Yiwen Zheng	University of Otago
17/496	Child development	Key influences for bed sharing and the relationship with SUDI	\$0.11	Māori Health PhD Scholarship	Mrs Melanie MacFarlane	The University of Auckland
17/492	Reproduction / fertility / sexual health	Becoming sexual beings: Māori recommendations for sexual violence prevention	\$0.37	Māori Health Postdoctoral Fellowship	Dr Jade Le Grice	The University of Auckland
17/487	Diabetes	Te reo tipu – a bittersweet quest for new anti-diabetic agents in rongoā rākau	\$0.43	Māori Health Postdoctoral Fellowship	Dr Jonni Koia	University of Waika
17/466	Mental health	Health implications from education for Pasifika people and their families.	\$0.33	Pacific Health Postdoctoral Fellowship	Dr Jesse Kokaua	University of Otago
17/465	Diabetes	Text messaging support for Tongan people with prediabetes	\$0.11	Pacific Health PhD Scholarship	Miss Julienne Faletau	The University of Auckland
17/342	Family / whanau	Tūhono Māori: Promoting secure whānau relationships for traumatised mokopuna	\$0.39	Māori Health Postdoctoral Fellowship	Dr Alayne Mikahere-Hall	Auckland Universit of Technology
17/210	Alcohol / drugs and dependence	Taiohe and whānau entering acute mental health with alcohol and drug issues	\$0.11	Māori Health PhD Scholarship	Ms Debra Gerrard	Auckland Universit
17/161	Intensive care	Knowledge translation in the management of oxygen therapy in Intensive Care	\$0.25	Clinical Research Training Fellowship	Mrs Diane Mackle	Medical Research Institute of New Zealand
17/148	Intensive care	To suction or not to suction – that is the question	\$0.24	Clinical Research Training Fellowship	Ms Eileen Gilder	Auckland DHB Charitable Trust
17/141	Cardio / cerebrovascular disease	Improving outcomes after cardiothoracic surgery	\$0.85	Clinical Practitioner Research Fellowship	Dr Shay McGuinness	Auckland DHB Charitable Trust

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17/134	Health services – delivery	Medicine optimisation in older adults in primary care: multidisciplinary approach	\$0.24	Clinical Research Training Fellowship	Ms Joanna Hikaka	The University of Auckland
17/103	CNS/ Neurological Disorders	Naturally biased? Exploring neuropeptide signal pathway bias in pain	\$0.50	Sir Charles Hercus Fellowship	Dr Christopher Walker	The University of Auckland
17/086	Child development	Korero mai: taitamariki Māori development of healthy relationships	\$0.25	Clinical Research Training Fellowship	Ms Terry Dobbs	Auckland University of Technology
17/058	Infectious disease	Novel metabolic processes to target persistent tuberculosis	\$0.50	Sir Charles Hercus Fellowship	Dr Ghader Bashiri	The University of Auckland
17/050	Bone disease	Novel osteoprogenitor cell populations involved in bone healing	\$0.50	Sir Charles Hercus Fellowship	Dr Brya Matthews	The University of Auckland
17/039	CNS/ Neurological Disorders	Dementia and Parkinson's disease: tau pathology and cerebrovascular health	\$0.50	Sir Charles Hercus Fellowship	Dr Tracy Melzer	University of Otago
17/035	Gastrointestinal disease	The rectosigmoid brake and its utility as a neuromodulation target	\$0.25	Clinical Research Training Fellowship	Dr Anthony Lin	The University of Auckland
17/018	Ageing	Improving outcomes for support workers in aged care	\$0.25	Clinical Research Training Fellowship	Mr Karol Czuba	Auckland University of Technology
17/016	Oncology / Cancer	The effects of comorbidity on breast cancer care and outcomes	\$0.17	Clinical Research Training Fellowship	Dr Melissa Edwards	The University of Auckland
17/496	Child development	Key influences for bed sharing and the relationship with SUDI	\$0.38	Māori Health PhD Scholarship	Mrs Melanie MacFarlane	The University of Auckland
17/011	Intensive care	Prevention and treatment of fever in the ICU	\$0.72	Clinical Practitioner Research Fellowship	Dr Paul Young	Capital and Coast District Health Board
17/009	Obesity	Deciphering gender and ethnic disparity in obesity and cardiometabolic disease	\$0.50	Sir Charles Hercus Fellowship	Dr Jennifer Miles-Chan	The University of Auckland
17/007	Nutrition	Impact of sugar-sweetened beverage taxation in the Pacific	\$0.25	Clinical Research Training Fellowship	Dr Andrea Teng	University of Otago
17/001	Health services – delivery	Mahi Ngātahi - Culturally responsive ways of working together	\$0.11	Māori Health PhD Scholarship	Ms Zoe Tipa	Auckland University of Technology
16/785	Wellness	WellConnectedNZ – Improving individuals' health by strengthening community connectedness – a proof of concept initiative	\$1.13	Joint Research Partnership Project	Dr Michael Epton	Canterbury District Health Board
16/736	Diabetes	Mana Tū: a whānau ora approach to long term conditions	\$2.38	Joint Research Partnership Project	Dr Matire Harwood	National Hauora Coalition
16/726	Diabetes	Innovative management of diabetes with a comprehensive digital health programme	\$1.59	Joint Research Partnership Project	Professor Diana Sarfati	University of Otago
16/724	Diabetes	Preventing type 2 diabetes with probiotics and prebiotics (PDP2)	\$1.80	Joint Research Partnership Project	Professor Jeremy Krebs	University of Otago
16/713	Diabetes	The Pasifika prediabetes youth empowerment programme (PPYEP)	\$1.00	Joint Research Partnership Project	Dr Tupa'ilevaililigi Ridvan Firestone	Massey University
16/555	Health services - delivery	Ambulatory sensitive hospitalisations of Pacific children in New Zealand; the parents' perspectives	\$0.11	Pacific Health PhD Scholarship	Mrs Ellaine Ete Rasch	Research Trust of Victoria University of Wellington
16/452	Infectious disease	Inflammation or infection? The role of biomarkers after colon surgery	\$0.17	Pacific Health Clinical Training Fellowship	Dr Bruce Su'a	The University of Auckland

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16/440	Wellness	Taiora taimau	\$0.30	Ngā Pou Senior Fellowship	Dr Mihi Ratima	Te Pou Tiringa Incorporated
16/125	Respiratory disease / asthma	High flow nasal cannulae therapy in COPD and heart failure	\$0.25	Clinical Research Training Fellowship	Dr Steven McKinstry	Medical Research Institute of New Zealand
16/083	Child development	IL-1 signalling and developmental programming of offspring metabolic health	\$0.41	Sir Charles Hercus Fellowship	Dr Clare Reynolds	The University of Auckland
16/072	Reproduction / fertility / sexual health	Prescription medicine use in pregnancy	\$0.25	Clinical Research Training Fellowship	Dr Sarah Donald	University of Otago
16/058	Health services – knowledge resources	Ethnic differences in energy metabolism among New Zealanders	\$0.25	Clinical Research Training Fellowship	Dr Patricia Whitfield	University of Otago
16/054	Oncology / Cancer	Predicting brain tumour prognosis from cell immortality pathways.	\$0.50	Sir Charles Hercus Fellowship	Dr Tania Slatter	University of Otago
16/045	Health services - clinical	Serotonin agonists to prevent post- operative ileus after abdominal surgery	\$0.25	Clinical Research Training Fellowship	Dr Tony Milne	The University of Auckland
16/043	Child development	Can placental stem cells be used to improve fetal outcomes?	\$0.50	Sir Charles Hercus Fellowship	Dr Joanna James	The University of Auckland
16/037	Infectious disease	Vitamin C requirement and mechanisms of action in severe infection	\$0.50	Sir Charles Hercus Fellowship	Associate Professor Anitra Carr	University of Otago
16/034	CNS/ Neurological Disorders	Taking charge after stroke (TACAS)	\$0.25	Clinical Research Training Fellowship	Dr Vivian Fu	Medical Research Institute of New Zealand
16/022	Rheumatology / arthritis	Osteoarthritis: a case of cellular mismanagement?	\$0.50	Sir Charles Hercus Fellowship	Dr Raewyn Poulsen	The University of Auckland
16/003	Child development	Extending the window of opportunity for saving babies brains	\$0.50	Sir Charles Hercus Fellowship	Dr Joanne Davidson	The University of Auckland
15/678	Wellness	Association between Māori cultural identity and health	\$0.19	Ngā Kanohi Kitea Project	Mrs Teresa Kirkwood	Ngati Tamaoho Tru
15/642	Oncology / Cancer	Understanding the role of aspirin in breast cancer treatment	\$0.20	Joint Research Partnership Project	Dr Anita Dunbier	University of Otago
15/476	Health services – delivery	Towards medical education that addresses Indigneous rights to health	\$0.06	Māori Health PhD Scholarship	Ms Anna Fay	The University of Auckland
15/471	Reproduction / fertility / sexual health	Iho - a cord between two worlds. Traditional Māori birthing practices	\$0.08	Māori Health PhD Scholarship	Ms Kelly Tikao	University of Canterbury
15/454	Rheumatology / arthritis	Lipid profiles as a risk factor for metabolic disease in Polynesians	\$0.11	Pacific Health PhD Scholarship	Miss Jaye Moors	University of Otago
15/447	Child development	Developing a Pacific youth health model	\$0.11	Pacific Health PhD Scholarship	Ms Hana Tuisano	Massey University
15/446	Oncology / Cancer	Teaching immune cells old tricks: an innovative strategy for treating cancer	\$0.39	Māori Health Postdoctoral Fellowship	Dr Kimiora Henare	The University of Auckland
15/413	Health services – delivery	"Created equal": Investigating health system perspectives of disparities	\$0.07	Māori Health PhD Scholarship	Mrs Tania Huria	University of Otago
15/403	Wellness	Food availability for Māori children – A rights-based approach	\$0.12	Māori Health PhD Scholarship	Ms Christina McKerchar	University of Otago

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
15/081	Respiratory disease / asthma	Registry based clinical trials	\$0.80	Clinical Practitioner Research Fellowship	Professor Dr Ralph Stewart	Auckland DHB Charitable Trust
15/030	Surgery	Towards the treatment of toxic thoracic lymph in critical illness	\$0.25	Clinical Research Training Fellowship	Dr Alistair Escott	The University of Auckland
14/568	Obstetrics complications / perinatal care	Healthy pregnancy, healthy babies	\$4.99	Programme	Professor David Grattan	University of Otago
14/547	Mental health	Characterising Cannabinoid Receptor 2 polymorphisms implicated in mental illness	\$0.15	Emerging Researcher First Grant	Dr Natasha Grimsey	The University of Auckland
14/538	Oncology / Cancer	Biomarker-guided drug targeting of the tumour microenvironment in radiotherapy	\$4.92	Programme	Professor William Wilson	The University of Auckland
14/527	Rheumatology / arthritis	Urate and gout: genetic control, environmental and drug interactions	\$5.00	Programme	Professor Tony Merriman	University of Otago
14/521	Cardio / cerebrovascular disease	Heart failure: markers and management	\$4.98	Programme	Professor Mark Richards	University of Otago
14/512	Cardio / cerebrovascular disease	Samoan peoples' experiences of CVD pathways of care	\$0.11	Pacific Health PhD Scholarship	Victoria Lesatele	Massey University
14/474	Respiratory disease / asthma	Non-inflammatory mechanisms in asthma	\$1.20	Project	Professor Jeroen Douwes	Massey University
14/440	CNS/ Neurological Disorders	Genetics, brain imaging, and cognitive decline in Parkinson's disease	\$1.18	Project	Professor Tim Anderson	University of Otago
14/429	CNS/ Neurological Disorders	Incidence study of status epilepticus in the greater Auckland region	\$0.67	Project	Dr Peter Bergin	Auckland DHB Charitable Trust
14/368	Cardio / cerebrovascular disease	Restoring high-density lipoprotein levels	\$1.04	Project	Professor Sally McCormick	University of Otago
14/331	Infectious disease	Is the family pet a risk factor for multidrug-resistant bacterial infections?	\$1.13	Project	Professor Nigel French	Massey University
14/276	Birth defects / congenital conditions	Degradable metallic mini-plate and screw system for craniofacial osteosynthesis	\$0.69	Project	Dr Mark Staiger	University of Canterbury
14/174	Obstetrics complications / perinatal care	ProViDe RCT: Does better early nutrition in preterm babies improve development?	\$1.19	Project	Professor Frank Bloomfield	The University of Auckland
14/160	Birth defects / congenital conditions	Quality of care and outcomes in children with cleft lip and/or palate	\$1.01	Project	Associate Professor John Thompson	The University of Auckland
14/117	Renal disease / urology	CKD-FIX: trial of xanthine oxidase inhibition to slow kidney disease progression	\$0.99	Project	Dr Janak de Zoysa	Waitemata District Health Board
14/104	Obstetrics complications / perinatal care	Gestational diabetes trial of detection thresholds: Impact on health and costs	\$1.20	Project	Professor Caroline Crowther	The University of Auckland

HRC Ref	Focus area	Proposal title	\$m	Contract type	Lead researcher	Host organisation
14/081	CNS/ Neurological Disorders	A kaupapa Māori intervention for stroke-related communication disorders	\$0.37	Māori Health Postdoctoral Fellowship	Dr Karen Brewer	The University of Auckland
14/064	Mental health	Cook Island youth views toward positive mental wellbeing and suicide prevention	\$0.11	Pacific Health PhD Scholarship	Miss Eliza Puna	The University of Auckland
14/052	Oncology / Cancer	Testicular cancer in Māori men: what is driving the disparity?	\$0.36	Māori Health Postdoctoral Fellowship	Dr Jason Gurney	University of Otago
14/016	Child development	Pathways to healthy development in New Zealand preschool children	\$0.25	Clinical Research Training Fellowship	Dr Cordelia Russell	The University of Auckland
14/015	Vision / hearing / speech	Spatially-resolved metabolomics of cataractogenesis	\$0.50	Sir Charles Hercus Fellowship	Dr Angus Grey	The University of Auckland
13/213	Intensive care	PulMoDS: Pulmonary Model-based Decision Support to Optimise ARDS/ ALI Care	\$0.67	Project	Professor Geoff Chase	University of Canterbury
13/177	Respiratory disease / asthma	Can Azithromycin Prevent Bronchiectasis in Infants with Cystic Fibrosis?	\$0.71	Project	Associate Professor Catherine Byrnes	The University of Auckland
13/049	Oncology / Cancer	Switching off tumour-promoting immune cells to develop novel cancer therapies	\$0.50	Sir Charles Hercus Fellowship	Associate Professor Bridget Stocker	Research Trust of Victoria University of Wellington

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The release of this HRC Annual Report 2020 was delayed due to two technical accounting matters relating to the 30 June 2020 financials, these being the application of Public Benefit Entitites Standards (PBE) IPSAS 19 (Provisions, contingent liabilities and contingent assets) and IPSAS 37 (Joint venture arrangements). These matters were unable to be resolved in time for the HRC to finalise the annual accounts and table this Annual Report in Parliament by 18 December 2020.



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