



Health Research
Council of
New Zealand

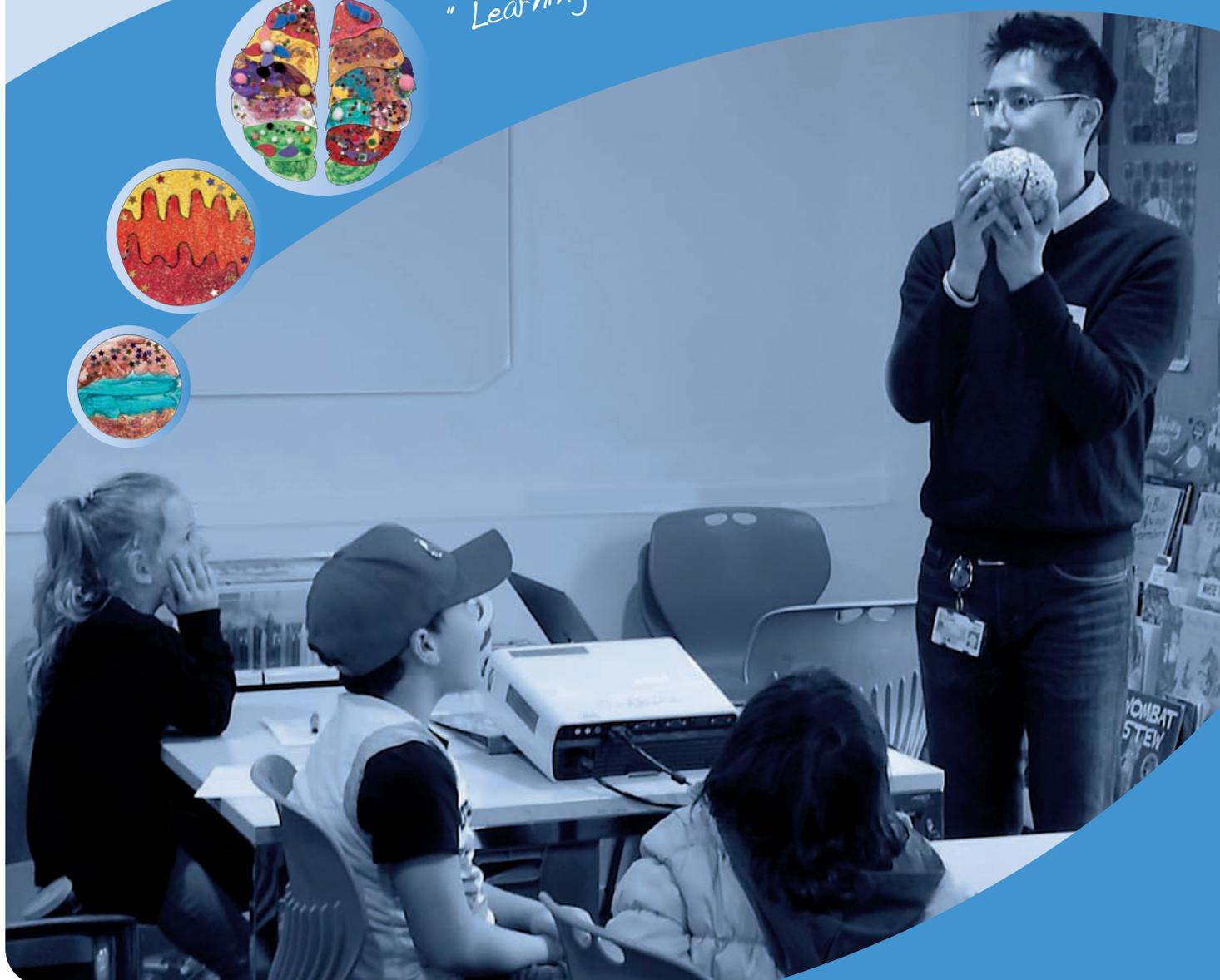
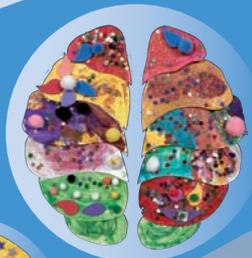
Te Kaunihera Rangahau Hauora o Aotearoa

Annual Report

For the year ended 30 June 2017

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

" Learning about my amazing brain "



About the cover

In 2017, the HRC organised an 'our amazing brain' event with siblings of children in Starship Hospital, Auckland. The goal was to share the wonder and resilience of the human brain and excite them about health research. Dr Thomas Park of the University of Auckland Centre for Brain Research Centre gave an inspiring lesson on the brain and students built on this information to produce the artwork presented on the cover and section pages of this report. The art work (right) has been framed and presented to Ronald McDonald House (RMH).



A word from the children's teacher....



'The Amazing Brain' session was a lesson like no other in RMH classroom! The team from the Health Research Council of New Zealand worked with Dr Thomas Park from the University of Auckland to give the students a wonderful, interactive experience.

The students varied in ages and abilities from 5-15 years and everyone were totally involved with the PowerPoint discussion, Memory Test and the artwork. The highlight for everyone was being able to observe and handle 'real brains'. This brought the facts to life.

There has been wonderful feedback from parents saying how much their child absorbed and talked about their session. In fact, two students from Vanuatu have since returned to their island to spread their knowledge. Their sponsors pass on their thanks for giving the boys a life-changing experience.

In class we have followed up the lesson with brain gym exercises, making 'brain snacks', taking 'brain breaks' and deep breathing to give our brains fresh oxygen. Everyone is aware how precious their brain is and the importance of its care.

Thanks so much to Dr Thomas Park and the team at HRC for such an enriching and fun session.



Marion

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Chairman's Report

This has been an important year for health research in New Zealand. We have increased our investment in excellent research and supported development of the first New Zealand Health Research Strategy (NZHRD). The Strategy charges the HRC with funding excellent health research, reducing disparities in health outcomes for Māori and Pacific peoples, and sustaining a strong health research workforce.

For me, what is really exciting about the NZHRS is that the work was led by MBIE and the Ministry of Health, who are also taking action to make the vision a reality. MBIE will lead work on strengthening our national health research infrastructure and systems, whilst the Ministry of Health will institute measures to make the health sector ready to engage in and respond to results of the excellent research that we fund.

The Strategy recognises that the HRC cannot make the changes needed in isolation, and has responded with a unified approach that goes further than ever before to support health research. The injection of an additional \$97m to increase HRC investment to \$120m per annum by 2020, further underlines the commitment.

The additional \$10m that we received in 2016/17 meant that we could support more vitally important research, detailed in this report. Of particular note, we invested in seven research projects focused on improving the health of New Zealand's Pacific community – worth over \$6 million. Five of these projects were led by Pacific researchers, with the remaining two having strong representation from Pacific researchers on the team. I am delighted to see that our efforts to build Pacific health research capacity are now beginning to make a difference.

The success rate for Project contracts increased from 9 percent to 15 percent – funding rates that we have not seen for over a decade. We were also able to fund a third of the applications for our Emerging Researcher First Grants, so crucial in fostering the next generation of the HRC workforce.

The new funding comes with obligations, which we are ready to take on, having spent much of the last year examining needs and issues we should address. Over the next year we will work hard to put in place the best ways to make more strategic investments and develop areas of national focus to guide planning, investment and conduct of health research for the greatest benefit in New Zealand. We are focused on investing in health research that strengthens our country and our country's health.

I would like to thank the Board members that completed their service in May this year – Ms Elspeth Ludemann; Dr Matire Harwood and Dr Conway Powell. Their contribution to the HRC has been invaluable and their hard work and dedication has been greatly appreciated by the Board and the HRC Team. I look forward to working with our new members - Dr Monique Faleafa; Mr Tony Norman and Dr Will Barker, who have been chosen because of the considerable skills they bring to the Board table.



Dr Lester Levy, CNZM
Chair



Chief Executive's Summary

The past 12 months have been the most challenging, and yet the most rewarding since I joined the HRC in 2015 – a major development being that New Zealand now has its first ever Health Research Strategy, clearly noting the government commitment to investing in health research to benefit our country and our people.

Working with our two ministries (Ministry of Health and MBIE) to develop the strategy provided me with a number of incredibly valuable opportunities to meet with dedicated researchers, clinicians and other stakeholders at the series of consultation meetings throughout the country. Their ideas and input has been invaluable in guiding the final strategy document, and also our thinking on how best to implement that strategy in how we work.

While our investment largely focuses on supporting research in New Zealand, we have been working to strengthen connections with international research programmes where working together will achieve things we could not do separately. Research leaders and funders in many countries are interested in the value and quality of New Zealand health research and researchers. Two significant new international partnerships are:

- The Global Alliance for Chronic Diseases, which includes three of our major research partner countries: Australia, Canada, and China. Our first initiative as part of GACD is to partner with the Ministry of Health to discover better strategies to support Māori and Pacific youth with mental health problems.
- In March 2017, the HRC signed a formal agreement with the Natural Science Foundation of China, paving the way for new scientific collaborations in biomedical research. We have already had a series of meetings to underpin future investment aimed at realising these ventures.

This year we have also been working to develop valuable national partnerships, with just two examples being the launch of a new partnership with PHARMAC for a Joint Pharmaceuticals Research Fund, and a strategic fund with the Ministry of Health and the Healthier Lives National Science Challenge to tackle areas where new approaches are urgently needed to improve outcomes in long-term conditions like diabetes.

Within the organisation, we continue to be committed to high standards, and commissioned an independent audit of our investment processes. Results showed we have sound processes and that there are no major problems to address. Nevertheless, we will continue to build evaluation into all that we do. I would like to acknowledge all the HRC team, and our extended family around NZ and globally, who contribute to ensuring we invest in the best health science for New Zealand.

Another first – we held an event designed to get our youngest citizens involved in, and passionate about, health research, and this produced our cover art this year. Children staying at Ronald MacDonald House in Auckland (siblings of children at Starship Hospital) were inspired by neuroscientist Dr Thomas Park to learn about 'our amazing brain'. Pictures of this 'creative team' at work herald each new section of the report. Who knows – maybe there is a future health researcher in the mix?



Professor Kathryn
McPherson
Chief Executive



Part 1.

Our Role and Outcomes

" My brain helps me play soccer "



Part 1. Our Role and Outcomes

Our vision: improved health and quality of life for all

About the HRC

What we do

The Health Research Council of New Zealand (HRC) is a **Crown agent** (since 2005) and the government's principal funder of health research. We are answerable to the **Minister of Health, as our ownership minister**, and the **Minister of Science and Innovation, who provides the majority of our funding**.

As a Crown agent, **we are required to give effect to the general policy of the Government in relation to health research when performing our role**. The HRC's relationships with the Minister of Health and Minister of Science and Innovation are addressed in a memorandum of understanding between the two Ministers, dated 30 August 2001, and updated in 2016.

We were created by the Health Research Council Act as a Crown Entity in 1990, which set out some clear functions for the HRC. Put simply, **our key functions** are:

1. To advise the Minister of Health on **national health research policy and commission research to implement it**;
2. To **negotiate funding** for health research from the government every 3 years;
3. To **foster the national health research workforce**, recruiting, training, and retaining researchers;
4. To **both support** researchers with good ideas **and initiate research** in areas considered high priority;

5. To **consult widely when setting the priorities for health research**, including with our Ministers, the District Health Boards, stakeholders, and consumers; and
6. To ensure that all our committees **use appropriate assessment standards**.

Appendix 1 provides the exact wording of our full functions under the Act.

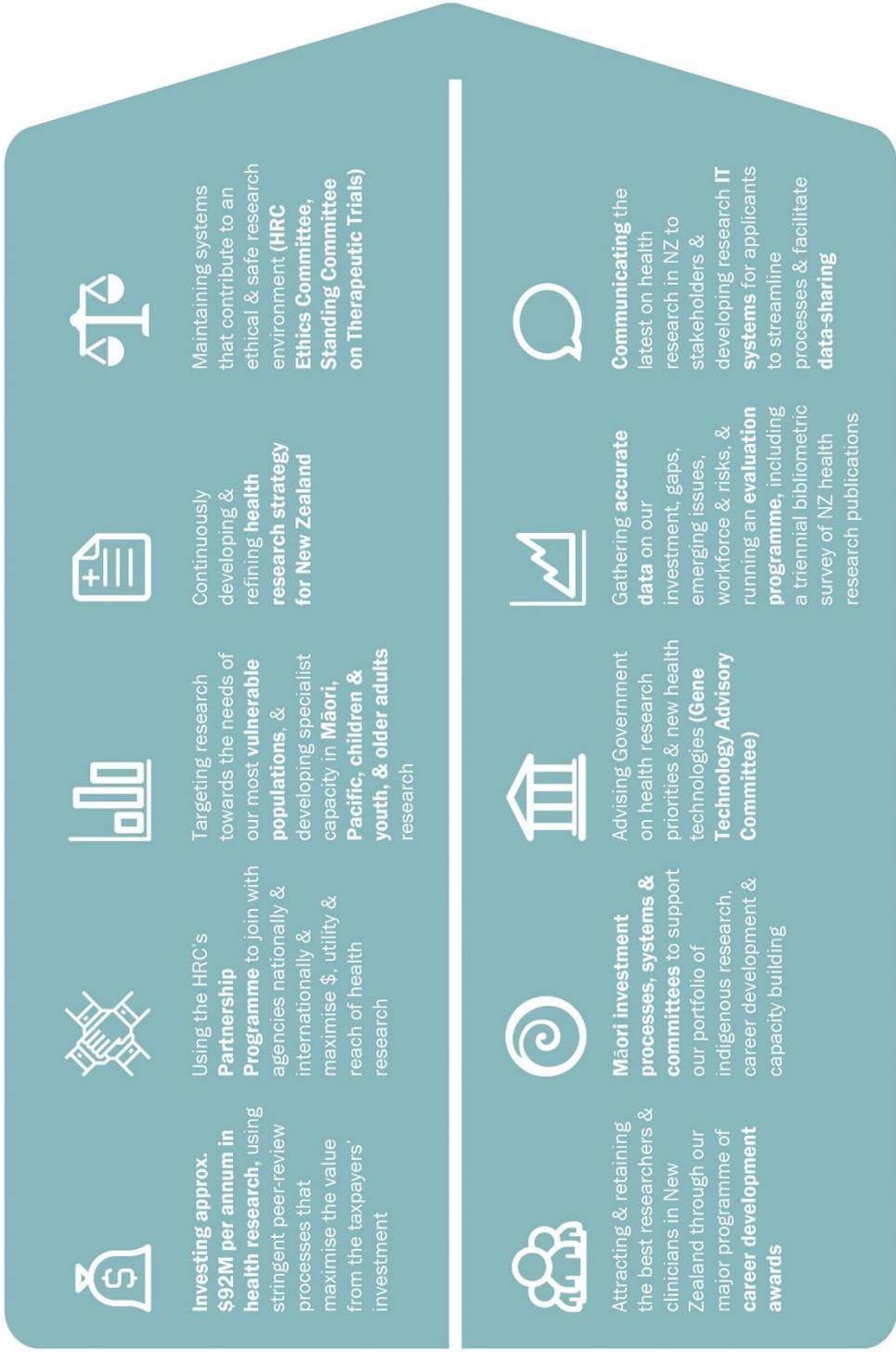
The HRC has been operating for 27 years in 2017. We had our genesis in the Medical Research Council of New Zealand, which was established in 1951, and so **we have over 60 years of institutional knowledge to build upon**. We have built rigorous, robust, and equitable investment processes over this time that ensure taxpayers' dollars are well spent on the research and the people that will make a real difference to New Zealand. We regularly review and update our processes in light of evidence of how to do it better.

At any one time, **we manage in the region of 300 research contracts, and 100 targeted on career development**. These contracts are mostly with universities, but also with non-government organisations, Māori and Pacific research organisations and communities, and private research institutes.

We also have a role in maintaining a safe and ethical health research environment in New Zealand, and advising the government on adopting new technologies and procedures.

The HRC at a glance

Our Vision: Improved health and quality of life for all



What we aim to achieve

The HRC is the Crown entity with the primary responsibility for facilitating the government's investment in health research.

We generate the knowledge and discoveries needed to bring a healthier future for New Zealanders. We need better evidence to enable New Zealanders to live healthier lives and prevent disease, and to get the optimal, most cost-effective treatments when illness does affect us. Whilst thousands of people live with conditions for which there is currently no effective treatment or cure, we want to give them, and our society, hope that things will be different in the future – for their family/whanau – and our researchers are part of future solutions that will work for our people.

We want New Zealanders to understand and celebrate the skills and achievement of our health research community and support health research as a critical part of our future success.

We need to anticipate the knowledge needs of our stakeholders and work with them, so that we can provide the evidence to underpin sound policy development and strategic planning in both the government and non-government sectors.

We want to support our researchers to explore exciting innovations, even if this involves some degree of investment risk (see our Explorer Grants, p43), so that our population can be the first to benefit and our economy boosted by access to the global health market.

We aim to improve the quality of our healthcare system through embedding a research ethos in everyday practice and drawing our clinicians into multi-disciplinary teams that will find solutions to our specific national issues.

We work to do everything we can to ensure that our taxpayers' dollars support only the things that are most likely to make a positive difference, and so we will continue to put every effort into ensuring we have the processes in place to back the best. We also take every opportunity to partner with other

funders to maximise the use of limited resources and share our investment processes and expertise for the best result possible.

We want to train, maintain, and retain a research workforce with the skills and capability to address our current and future health challenges. To do this we must have a 'fit-for-purpose' career-development programme and offer the range of research opportunities that will allow promising health researchers and clinicians to advance their careers in New Zealand.

We must build a system that 'plays the long game', because it often takes 20 years to realise the impact of our research investment. This has been the case with some of the recent landmark achievements arising from HRC funding, such as the development of a new vaccine for cancer and major breakthroughs in the treatment for heart failure.

How we go about it

Most of the funding for our operational costs and investments is provided by Vote Business, Science and Innovation, with additional contributions made by Vote Health and stakeholders involved in the HRC's Partnership Programme.

Our funding allocations are divided into four Outputs, outlined below.



Supporting NZ research:
Output 1 — Health
Research Contracts



Building Research Careers:
Output 2 — Career
Development



Partnering with stakeholders:
Output 3 — Co-funding
Relationships



Keeping NZ health research ethical and safe:
Output 4 - Policy, Regulatory,
and Ethical Frameworks and
Relationships

These Outputs provide the framework for reporting in our Statement of Service Performance.

Our core activity is to identify the research that will make the biggest impact on the health of New Zealanders, and support innovations that will boost the New Zealand economy. What is less widely known is that **we have a crucial role in advising the Minister of Health on the uptake of new health technologies and ensuring the safety of large clinical trials**. We are also recognised internationally as **leaders in building indigenous health research capacity** through the targeted processes we have developed to support Māori research paradigms.

We are the conduit that connects health research activity in New Zealand, working with other funders, charities, and stakeholders. This is a role that we take very seriously and the need for better co-ordination and co-operation in the sector is increasingly shaping our strategic thinking.

Another major area of focus for the HRC is the **translation of research findings** into improvements in healthcare at every level. We do this by training and engaging clinicians in research, partnering with our stakeholders to involve them in designing knowledge solutions, and communicating our findings to our ultimate stakeholder – the New Zealand public.

Our environment and drivers

While **the HRC is the government's principal funding agency for health research**, significant public funds are also invested in health research through the Marsden Fund, the Science and Innovation Group within the Ministry of Business, Innovation and Employment, and the Tertiary Education Commission.

We are heavily focused on working collaboratively wherever possible to maximise the resources available for health research and capacity building.

Our strategy is firmly rooted in the health needs of the New Zealand population, Government priorities, the knowledge needs of our stakeholders, and emerging threats.

How are we addressing Government goals, priorities, and recommendations?

The overarching outcome that the HRC seeks to achieve is improved health and quality of life for all New Zealanders. Our efforts to meet this outcome ultimately contribute to New Zealand's two health and disability system outcomes:

- New Zealanders living longer, healthier, and more independent lives, and
- the health system is cost-effective and supports a productive economy.

Health research creates new knowledge, solutions, and innovations, and improves the quality and cost-effectiveness of the healthcare system. By keeping New Zealanders healthy and productive, we support economic growth. The HRC also funds innovative research that results in new products and processes with commercial value. This is achieved by investing in a balanced combination of basic and applied research that ensures impact is achieved over the short and longer terms.

The Government has recognised the importance of health research in the National Statement of Science Investments (NSSI). The HRC works with the science and innovation sector to deliver research within the priority framework (*see the diagram on p8*).

Our efforts to attract and retain the best health researchers in New Zealand also directly deliver to the need to increase the number of excellent scientists, as outlined in the NSSI. Increasing the impact, responsiveness and uptake of the excellent research we fund is a key part of what we do, and impact and excellence are the two pillars on which the NSSI is built.

In the 2016/17 Letter of Expectations from the Minister of Health, particular emphasis was placed on:

- working with other agencies across the health and disability system to improve efficiency and effectiveness and combine efforts where it is necessary to achieve results;

MBIE's National Statement of Science Investment 2015-2025 – how we build on the pillars of excellence and impact to bridge the gaps and support the vision

Showing the key components of MBIE's strategy (green text) in realising the vision for 2025, based on the pillars of impact and excellence, and the ways in which the HRC is working to bridge the gap (black text).



Excellence

- The best people** The prestigious **Sir Charles Hercus Health Research Fellowship, builds future research leaders**
- A rigorous approach** **Our investment processes involve over 700 national & international experts, doing both external & internal review of applications**
- Optimal results** Our results contribute to improving the health of our country and our economy with **new diagnostics, pharmaceuticals & vaccines coming on stream & bringing the latest treatments to our people, as well as returns from commercialisation**

Impact

- Improved population health & health status - especially for disadvantaged groups** World-leading indigenous health research capacity-building & funding processes, only govt Pacific health research funding & career development programme in NZ, monitoring & oversight of HRC research relevant to Māori, Pacific peoples, older adults, children & youth, & people with disability. Dedicated investment for **large, diverse portfolio of research on health & wellbeing - with emphasis on prevention**
- Reduction in health maintenance costs** **HRC-funded research highlights potential saving worth millions of dollars for our health system. bring researchers, clinicians & decision-makers together** through our Partnership Programme activities & our **dedicated funding for NZ health-delivery research**
- Early detection & mitigation of health risks** Agile processes with **rapid response funding for emerging health threats, large portfolio of applied biomedical research on biomarkers & diagnostics, major investment in prevention & early diagnosis of diabetes, cancer and heart disease.**

Horizons of research activity

Generate new ideas
Our targeted-basic research **fuels NZ's innovation machine** with novel discoveries - with **Explorer Grants for transformational, high-risk research**

Develop emerging ideas
We have a track record of **supporting research over decades, resulting in new treatments for cancer & major breakthroughs** for cardiovascular disease patients & the understanding of dementia

Leverage proven ideas
Our investment feeds MBIE's health innovations portfolio with knowledge & **novel technologies for the global market, & adapts MBIE supported advance for direct applications in health.** We work with health decision-makers on vital **health technology**

- showing a commitment to ongoing improvement in public services and look for ways to improve how business is done and deliver value for taxpayers' investment – including making use of formal or self-review methodologies;
- Working closely with the Ministry of Health (MoH) and the Ministry of Business, Innovation and Employment (MBIE) on implementation of the recommendations of the Strategic Refresh, ensuring that health research generates both significant health benefits and wider economic benefits for New Zealand, and on lifting the HRC's profile.

Along with all Crown entities, we are also asked to focus on fiscal discipline, to demonstrate the difference that we make, and to shift resources if necessary to improve service delivery.

We have worked very closely with MBIE and the Ministry of Health this year, assisting in the development of the New Zealand Health Research Strategy (NZHRS).

Addressing the Recommendations of the Government's Strategic Refresh of the HRC

In early 2015, the Ministry of Health, in conjunction with MBIE, undertook a strategic Refresh of the HRC. The resulting report, published in early 2016, provided us with some clear recommendations. Addressing them has been a strategic priority in the last year – and will continue to focus our activities into 2017/18. Many of these recommendations were made explicit in the New Zealand Health Research Strategy, published in June 2017, in terms of the actions that the HRC is responsible for.

We lead the work under Strategic Priority 1 – Invest in excellent health research that addresses the health needs of all New Zealanders. The NZHRS has provided us with an excellent opportunity to look at what we do and how we fit within the health sector and science system, with a view to recognising what we are doing well and what we can do better. We have found the process very valuable and the input we have received, along

with that from the consultation process for the NZHRS, will shape work going forward.

In the 2016/17 Budget, we received a substantial increase that will see investment rise to \$120m per annum by 2020. In 2016/17, our budget for allocation increased by \$10m. These new funds have enabled us to fund some truly ground-breaking research and enter into more national collaborations that will advance the Government's goals for the health and disability sector. Details of these initiatives are provided throughout this report.

The schematic on the following page details how HRC delivers to the New Zealand Health Strategy. The HRC has funded research of relevance to all of the themes, and continues to look for high-quality proposals that will address knowledge gaps, create new systems and tools, and contribute to best practice in these areas. HRC-funded research is also underpinning advances against the Government's Better Public Service Goals, in particular supporting vulnerable children by increasing infant immunisation rates and reducing the incidence of rheumatic fever.

Health research benefits New Zealanders only if the findings are valued, taken up, and used. Increasing the utility and uptake of health research is an enduring priority for the HRC. In addition to our other measures to directly involve end-users in research, we provide a range of regular publications for our stakeholders in the research, policy, and Māori and Pacific communities, and are currently updating our information systems to provide the additional resource of an online database of HRC-funded research and research teams.

Tackling the areas of greatest need

The Ministry of Health produces a detailed analysis of the burden of disease in New Zealand in disability-adjusted life-years (DALYs) – which integrate fatal and non-fatal impacts into a measure of health loss.¹ We aim to fund research in areas where the burden of disease is greatest and where the best opportunities lie for prevention and improving screening, diagnosis, and treatment. This includes research to mitigate changes in New Zealand's burden of disease profile as our population changes.

¹ Ministry of Health. 2013. *Health Loss in New Zealand: A report from the New Zealand burden of*

diseases, Injuries and risk Factors Study, 2006-2016. P12, Wellington: Ministry of Health.

How the HRC is delivering to the New Zealand Health Strategy



People Powered

We are:

- Reaching out to New Zealand public using innovative ways to increase understanding of what we do & levels of 'health research literacy'
- Supporting development of public health interventions delivered through personal technology - such as mobile phones
- Raising the expectation that consumers will be involved in creating the research agenda, planning projects & disseminating the results



Closer to home

We are:

- Promoting a shared & co-ordinated research agenda across government agencies - through the National Health Research Strategy & through our Partnership Programme
- Working with the National Science Challenges to improve outcomes in long-term conditions
- Supporting the generation of a wealth of knowledge, diagnostics, predictive tools, interventions & treatments that will keep New Zealanders happy, healthy & living independently for longer



Value & performance

We are:

- Improving health services through working with stakeholders to ask the right questions, fill knowledge gaps, improve the quality, reach & parity of services, & generate an evidence-based culture to promote innovation & evaluation
- Directly plugging gaps in knowledge by providing a conduit between policy-makers & researchers through our Partnership Programme



One Team

We are:

- Fostering collaboration across research disciplines, institutions & government departments
- Principal funder of research on health systems, with a Research for New Zealand Health Delivery investment stream designed to bring researchers & stakeholders together as teams



Smart system

We are:

- Supporting the development of decision-support systems in primary care
- Resourcing the population of major research databases of risk factors for serious health conditions that can be used as a national & international resource
- Working with the Ministry of Health to undertake health technology assessment for fast, cost-effective implementation of innovations
- Collecting & sharing large amounts of data on New Zealand health research and the health research workforce

All New Zealanders

Live Well

Stay Well

Leadership

A core principle for the HRC is to provide leadership, signal clear direction, and ensure stability in the sector so that strong research platforms and areas of core capability can perform at their best — *and* we work hard to ensure we are agile so we can effectively respond to emerging opportunities, proactively identify and target support to meet current and future priority health needs, and build capability where new evidence, skills, and approaches are needed. Getting the balance 'right' is a constant and ongoing challenge — one that involves continuous, incremental improvement.

Continuous improvement in investment processes

Gaining maximum impact for the taxpayer's research dollar

Ensuring that research proposal assessment and contracting is equitable, free from conflict of interest, and addresses the areas of greatest need are critical to maintaining the trust and support of the health research community and forms a major part of our work.

Assessment through the Annual Funding Round takes about 9 months in total, involves approximately 240 expert committee members, and a further 450–500 specialist reviewers. Applications are assessed by expert peer-reviewers on scientific quality, the track record of the research team, and the potential for impact. The impact criterion assesses the extent to which the proposed research meets the goals of the Investment Signal, the degree of health and economic benefit, and the planned pathway to ensure uptake of results.

Our investment processes are regularly reviewed to ensure they are fit for purpose, efficient, and meet best-practice standards.

Process upgrades range from implementing new grant types to improving application and assessment processes. Options for change are identified from sources both internal and external to the HRC.

Managing organisational health and capability

The HRC has a ten-member Board appointed by the Minister of Health with a range of expertise defined by the HRC Act 1990. Members of the Board Chair three of the HRC's four Statutory Committees (the Biomedical,

Public Health and Māori Health Research Committees).

The HRC has five Standing Committees:

- the Pacific Health Research Committee;
- the Grant Approval Committee;
- the Risk Management Committee;
- the Standing Committee on Therapeutic Trials (SCOTT); and
- the Gene Technology Advisory Committee (GTAC).

The HRC's committees provide advice and recommendations on HRC policies and procedures and provide oversight of the peer-review processes used to assess research proposals and applications for career-development awards.

The HRC team

A strength of the HRC continues to be its highly skilled staff, many of whom have post-graduate qualifications and research experience. This provides credibility with research providers and helps HRC shape, in a practical way, its investment processes and policy development. The organisation is committed to enhancing and making best use of the skills and strengths available, engaging the HRC team in achieving organisational goals. The HRC will continue to use a transparent and impartial employment process to guarantee that there is no barrier to employing the best people for the job, and offer flexible working practices to attract and retain a quality workforce.

The HRC is focused on acting with high standards of integrity, ensuring all outcomes are perceived as being fair, impartial, responsible, and trustworthy. We employ a comprehensive induction process, and organisational policies and procedures in order that all staff meet and deliver on the State Services Commission Standards of Integrity and Conduct.

The HRC has a Conflicts of Interest Register for staff, in addition to the one that has always been kept for members of the HRC Board.

The HRC team works closely with both the Board and the HRC's statutory and standing committees. Relationships between the HRC team, MoH, MBIE, and other funding agents are important. The Chief Executive and members

of the management team participate in regular and productive meetings with MoH and MBIE at which matters germane to the health research environment are discussed.

Accountability to our Ministries

No surprises from the HRC

In addition to the specific reporting and accountability requirements, the Board, to the extent practicable, ensures that the Ministers are adequately warned in advance about any issue affecting the HRC that is likely to attract external attention or represent potential risk to the Government.

Annual reports

The HRC provides the following documents as part of our monitoring, reporting and accountability agreements:

- An **Annual Report** – as per the Crown Entities Act 2004 requirements.
- The **Statement of Intent** – as per the Crown Entities Act 2004 requirements.
- The **Statement of Performance Expectations** – contains the annual forecast of performance and financial information as per the 2013 amendments to the Crown Entities Act 2004.
- A **Data Information Report** provided to MBIE, for the purpose of monitoring the performance of Vote Business, Science and Innovation's investment in research.

6-monthly and quarterly reports

- Exceptions-based, 6-monthly reports against the Statement of Performance Expectations and Output Agreements with the Ministry of Health (MoH), and the Ministry of Business, Innovation and Employment (MBIE).

Other reports

- **Investment Impact Report** – provided to MBIE and MoH every 3 years, the purpose of which is to demonstrate the effectiveness of the investment made by the Council, and to provide advice on the future effectiveness of these investments.

Scope of the HRC's functions and intended operations

The framework for the HRC's work is provided by the Health Research Council Act 1990. The HRC undertakes two broad functions mandated by the Act.

1. Invest in high quality health research that will benefit New Zealand.

The HRC issues contracts for research proposals that are aligned with the HRC's areas of strategic investment. The Universities of Auckland and Otago are the two major health research providers because of their scale and research strengths, but there is an increasing number of other organisations delivering health research supported by HRC. These include other universities, Crown Research Institutes, District Health Boards, independent research organisations, and a range of other public and private research providers. In 2016, more than 30 different organisations received HRC funding, ensuring that investment is directed to those best placed to conduct research in specific areas and apply research findings.

The HRC uses a rigorous process of peer review to ensure that funding is transparent and fair, and guarantee that contracted research is of high quality. This best-practice model involves international peer-reviewers and expert committees comprising experienced New Zealand and Australian researchers. Scrupulous attention is paid to avoiding conflicts of interest during the process. Details of the HRC investment strategy and assessment processes are publicly available (www.hrc.govt.nz), and funding decisions are ultimately made by the HRC Board.

To ensure contracted research meets its objectives, funded researchers are required to report at least annually, and progress towards outcomes is reviewed.

2. Support the recruitment, retention, and training of the health research workforce.

Workforce support is provided through a variety of mechanisms. Salaries of researchers are paid as part of health research contracts, and there are specific schemes which aim to engage and support frontline clinicians and promising emerging researchers. The HRC also

provides targeted career-building opportunities in areas where there is a demonstrable gap in capacity of the workforce, with the purpose of ensuring that New Zealand's health research sector is sustainable and can address the needs of our unique population.

Equity Position

From a financial perspective, the goal of the HRC is to ensure that all funds appropriated by Parliament to the HRC are fully utilised in health research.

The HRC has reserves or Public Equity in its balance sheet totalling \$12.9m at 30 June 2017 (\$14.1m at 30 June 2016). This has occurred for two main reasons.

1. Research is unpredictable in terms of its execution and outcome. This drives changes in planned research timeframes. We have improved our modelling of financial commitments to better cope with the variability.
2. The HRC has ring-fenced funding for partnerships with other organisations. However, the rate at which research expenditure has taken place has not been as rapid as expected. We are currently reviewing our approach to partnership.

The focus of the HRC Board and Management is to manage these reserves in a prudent fashion, ensuring they are invested in high-

quality research and therefore reduce as rapidly as possible.

As at June 2017, the HRC has undertaken to provide grant funding to successful applicants in future years totalling some \$259m (30 June 2016 \$241m) – subject only to parliamentary appropriated funds being made available and applicants successfully meeting the grant criteria (and ongoing contractual requirements once the grant has been awarded). The funding of these undertakings will come from existing funding streams and the recently announced increase in funding for the HRC of \$97m over 4 years from June 2017.

In addition, the HRC Board and Management have developed a strategy which will see reserves reduce to around \$3.0m by June 2020. This will be done by:

- the implementation of a new research contract that will enable better reporting on impact and research progress to the HRC;
- education of the research community about the importance of timely execution of contracts and good communication;
- a redirection of reserves from the Partnership Programme into the HRC's Annual Funding Round;
- short-term increases in the numbers of approved applications through the HRC's Annual Funding Round; and
- more timely and efficient contracting processes.

Part 2.

Progress against outcomes
and strategic intentions

"My brain is for loving, hugging and playing"



Part 2. Progress against outcomes and strategic intentions

How we have built our performance story

New Zealanders highly value health research for its contribution to the health of our people and our nation.² Health research underpins improvements in health outcomes and productivity; increases the quality and cost-effectiveness of healthcare delivery; and produces innovations that have commercial value. Yet it is extremely difficult to **quantify the impact of health research** in a reliable and meaningful way. Human health is affected by so many different and diverse factors that it is impossible to isolate health research discoveries and attribute observed improvements to research alone.

Capturing the breadth and diversity of health research outcomes is challenging. To address this, we have developed an **outcome framework** for our Operating Intentions through which we can show our overall progress towards the outcomes we are trying to achieve. Many of our traditional performance indicators are *output*, rather than *outcome*, measures. We have clustered them in such a way that each group collectively provides a surrogate measure of our progress towards meeting our goals. We provide case studies throughout the report that highlight outcome achievement in a more meaningful and tangible way than simply quantifying outputs.

Under each outcome, we have identified key **impacts** that we will track through our annual and medium-term **key performance indicators (KPIs)**. We have given as much context around the measures chosen, and the levels that we expect to achieve, as practicable. Some of this discussion centres on the balance of our investments and what is the ideal mix. There is no 'right' answer, and there will always be trade-offs between desirable outcomes as we continue to refine our indicators and track our progress towards meeting our goals.

We have set **targets** that will challenge us but which are achievable within the funding levels currently available. We have only set incremental targets in areas that we expect to change because of initiatives that we already have in place, or that we can influence through expectations set through our investment tools.

The HRC's outcome framework

The schematic overleaf shows the HRC's Outcome Framework, and provides the structure for reporting our medium-term information and annual performance. The HRC has identified four outcomes it seeks to contribute to or influence in the medium-term. The four outcomes are:

- *new knowledge, solutions, and innovations for health are created;*
- *the healthcare system is improved through research evidence and innovation;*
- *the best clinicians and health researchers are attracted, supported, and retained in New Zealand; and*
- *the impact, responsiveness, and uptake of health research is increased.*

Our four **Research Investment Streams (RIS)** are the mechanism through which we communicate New Zealand's health research needs to the community. The RIS cover the entire spectrum of health research activity in New Zealand. Our funding framework is designed to capture bright, innovative ideas of high quality that will make both a national and international impact. Through the streams, we prioritise research translation and uptake, with a strong focus on our at-risk populations and the areas of greatest need. There is a different emphasis in each stream – the key points of difference and the links between the RIS and our outcome framework are summarised in Appendix 3.

² New Zealand speaks! New Zealanders for Health Research Opinion Poll 2017.

The key elements of the HRC's performance framework

Vision

Improved health & quality of life for all



The NZ people, at the centre of everything we do

4 Outcomes

1
New knowledge, solutions, and innovations improve health

2
The healthcare system is improved through research, evidence, and innovation

3
The best clinicians and health researchers are supported & retained in NZ

4
The impact, responsiveness, and uptake of health research is increased

17 Impacts we report against
(and the Outcome &/or Output with performance measures against that impact)

1 A strong research focus on **keeping New Zealanders healthy and productive**

1 NZ contributes to national and international **advances**

1 Innovative health **technologies and therapies** develop

High-quality, high-impact original research is conducted

2 HRC contributes to earlier diagnosis and better treatments for New Zealanders living with **serious conditions**

2 Research improving the **quality, cost-effectiveness, and sustainability** of NZ's health system is prioritised

2, 3 **Research is easily accessed, understood, and applied** by end-users

The HRC works in partnership to ensure NZ's investment in health **research meets sector needs** and represents best value

3 Promising emerging researchers gain valuable **research experience**

3 NZ has the research capacity to address the needs of our **unique populations**

2 Actively involve end-users, health-managers and decision-makers in research

More **front-line clinicians** are engaged in research
Sustainable career pathways enhance the skills of researchers & clinicians

4 Strategic partnerships **engage end-users**, leverage benefit, and improve research uptake

4 NZ has a high-quality and consistent system of **ethical review**

4 The health research funding environment is transparent, fair & ensures quality research

The ethical framework for reviewing **new technologies and trials** is sound

NZ has access to well-informed and independent **ethical advice**

4 Outputs
(and Outcomes they support)

1
1 2 3 4
Health research contracts

2
2 3 4
Career development contracts

3
1 2 4
Co-funding relationships

4
4
Contribution to policy, regulatory, and ethical frameworks

The three key Government strategies that guide us:
The NZ Health Strategy, the National Statement of Science Investment, and Vision Mātauranga
(The NZ Health Research Strategy was released on 30 June 2017.)

Outcome 1: New knowledge, solutions, and innovations improve health

Why is this important?

This outcome is about gaining the knowledge needed to keep people well, combat disease, and create new tools to help us do this. Health research has brought about such a knowledge revolution that it is easy to forget how complex the human body is, and how much of how it functions in health and disease is still poorly understood. We urgently need this knowledge to generate new approaches and treatment strategies. We need to know how our evolving environment, technologies, and lifestyle impact on our physical and mental wellbeing and develop effective prevention strategies. We need to harness unprecedented technological advances that can revolutionise the way that healthcare is delivered. If we are successful in meeting this outcome, we will ultimately contribute to the economy through the creation of new medical technologies and a healthier, more productive population.

Our key impacts and performance indicators for 2016/17

Impact 1: A strong research focus on keeping New Zealanders healthy and productive

One hundred percent of the research we fund contributes to our economic goal of supporting a healthy and productive New Zealand. To do this we focus a significant proportion of our funds on addressing New Zealand's top five health risk factors – smoking, diet/obesity, physical inactivity, and high blood pressure. These risk factors account for about 40 percent of the DALYs lost in New Zealand.³ A summary of some of the things that our researchers have managed to achieve in the area of tobacco control is on the next page.

In 2014, we set a goal that at least one public-health intervention developed with our funds would have been rolled out to multiple centres by 2017. In fact, seven of the fourteen that have been assessed at two years have been rolled out in some way. One of the most successful is the SPARX e-therapy intervention – a fantasy game.

³ <http://www.healthmetricsandevaluation.org> GBD Profile: New Zealand.

Our KPIs for Impact 1:

New Zealanders benefit from the HRC's focus on prevention research

Annual 2016–17 **Performance indicator** Number of public-health intervention contracts tracked by the HRC



2016/17
20

It is important that we identify and track interventions so that we can follow-up after each contract is completed to see what impact they have had

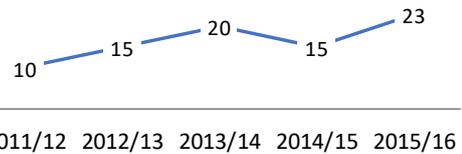
Actual



2016/17
22
Exceeded

8 are active contracts, 5 have been surveyed 2 years post-completion, and 7 are being surveyed in 2017. This has given us valuable data to gauge the impact of our interventions

Trend



Medium-term 2014–18

Performance indicator A public-health intervention is implemented across multiple centres as a result of HRC-funded research



2016/17
1

Prior to setting these two measures, we had no way of knowing what happens with interventions after the contractual reporting period. We needed to know if they are making a real difference

Actual



2016/17
7
Exceeded

50% of the public-health interventions that we have followed-up have resulted in some form of roll-out (see text and infographics)

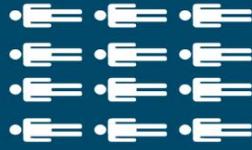
SPARX - NZ youth 'game' their way out of depression

Number of young people in NZ with depression

50,000

battle depression every year

SPARX launched in 2012



10,400

registered by end of 2016

National uptake

2014 National roll-out through Prime Minister's Youth Mental Health Project, supported by Youthline & Lifeline * & Ministry of Health



Online learning module for GPs, practice nurses, psychiatrists, school guidance counsellors ...

App for smart phones & tablets in 2017

* University of Auckland



International uptake



Translated into Japanese & Dutch



Tested in a clinical trial in Nunavut, Canada - where researchers want to develop a version for the indigenous Inuit community.



Currently being tested in a depression prevention trial in Australian high schools, with promising results.



How does it work?

The SPARX realm has been infested by GNATs (Gloomy Negative Thoughts), which have caused an imbalance. The player chooses an avatar, and then undergoes a series of challenges to save the world.

Each challenge uses cognitive behaviour therapy to help young people cope with negative thoughts & feelings

A guide is incorporated into the game - a virtual therapist - who talks directly to the young person through dialogue boxes.

The player rates their mood at the beginning of the game, and at different levels. If they aren't improving or are seriously depressed, the game directs them to where they can get help.

A survey of 12-19 year olds showed clinically significant reductions in depression, anxiety, and hopelessness.

Funded by the HRC. SPARX was developed by a research team at the University of Auckland, led by Professor Sally Merry - in partnership with Kapiti Youth Support



Commercially available in Japan

How we've been fighting a Kiwi killer ...

The Tūranga Tobacco Control Research Programme

Over 10 years the percentage of Kiwis who smoke has dropped by a fifth...



Statistics New Zealand 2017

Estimated health & disability costs to New Zealand in 2009:

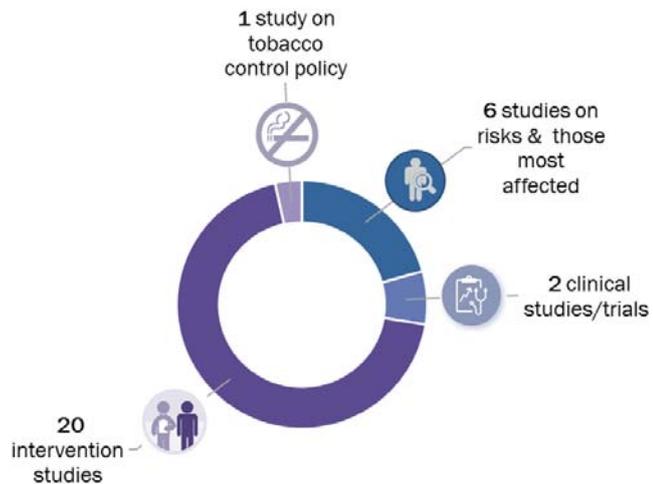
\$1.9 billion

Ministry of Health, 2009

Over the past 10 years, we've invested over

\$33m

in evidence and tools to help people to stop smoking



Some big wins from investment

The highest quit rates yet seen in a New Zealand intervention – 25% at 3 months.

The WERO group 'stop smoking' programme allowed groups of Māori and Pacific smokers to compete for a prize for the charity of their choice – a website allowed them to visualise progress. It was then funded as a national programme by the Ministry of Health for 3 years until mid-2016. The same model is now being used to tackle obesity in Māori.

A change in Government policy reducing the number of duty free cigarettes that can be brought in to New Zealand from overseas.

A novel computer-generated 3D fetus that shows the impacts of mother's smoking during pregnancy, and the benefits on baby's growth if she stops.



Some great ideas for the future

Using all the data gathered from 500,000 quit attempts on The Quit Line, to create a model that will help future quitters

Understanding the risks as well as potential benefits of electronic cigarettes

Rapid, needle-free delivery of nicotine for smoking cessation therapy

Taking nicotine out of tobacco – a very low nicotine-content cigarette policy in New Zealand

Introducing e-cigarettes in clinical practice for smokers with multiple addictions

*The Tūranga Tobacco Control Research Programme was led by Professor Chris Bullen, University of Auckland

Other successful interventions include:

- Reducing the influence of ethnicity and comorbidity on cancer survival between Māori and non-Māori. This included training of 19 cancer-care providers on the importance of co-morbidity in survival.
- ISAFE – an Internet-based intervention to improve mental health outcomes for abused women. The ISAFE team joined with the NZ Police to develop and pilot-test a prototype of the online ISAFE decision aid.
- An intervention for prevention of overweight in infancy led to the publication of childhood obesity guidelines by the Ministry of Health, and insufficient sleep being officially recognised as an important contributing factor.

Impact 2: Innovative technologies and therapies develop

We see a key part of our role as supporting the discoveries that feed New Zealand's innovation pipeline. In 2011, we set ourselves measures that would help us to track that this is happening. First, we tracked our investment to ensure that we're funding innovative biomedical research, and then we worked with MBIE to analyse the health-related research contracts that they have funded since 2011/12. The results exceeded our expectations, and show a strong link between HRC investment and MBIE's innovation and commercialisation research portfolio. We also found that health research funded through the National Science Challenges was largely built on a platform of HRC investment (see the summary on the next page), and Callaghan Innovation is now reaping the benefit of nearly 20 years of HRC support for the development of vaccines and diagnostic tools for cancer.

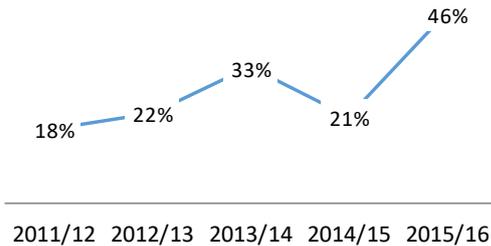
A great example of the strong synergies between the investment of the two agencies is the work of Professor Simon Malpas. His work on the physiology of hypertension using animal models meant that he had to develop technology to monitor the vital signs of animals whilst they were roaming. This wireless, implantable technology was developed for other uses with funding from the Foundation for Research, Science and Technology, and then picked up again when Professor Malpas and the team developed it

Our KPIs for Impact 2:

'Cross-pollination' of innovative research between HRC and MBIE

Annual 2016–17	Performance indicator Percentage of new HRC contracts focused on discovery/development for improved detection, screening, diagnosis, and treatment
Target  2016/17 18%	HRC investment in innovative biomedical research leads to new products, diagnostics, and treatments that MBIE can take through to the development phase
Actual  2016/17 34% <i>Exceeded</i>	A third of our 59 new contracts in 2016/17 were focused on discovery/development in this area. We are pleased with this result which shows a strong investment in the innovation space this year

Trend

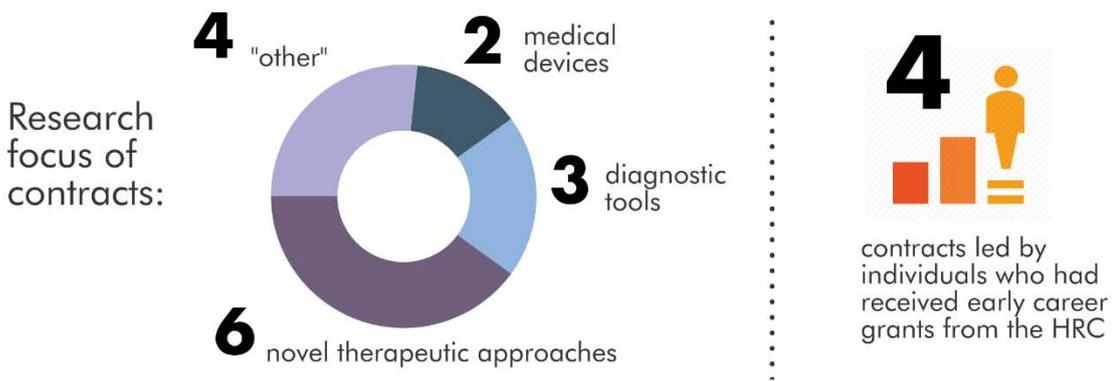


Medium-term 2014–18	Performance indicator 8 MBIE contracts underpinned by HRC-funded research since 2011/2012
Target  2016/17 8	A key role for the HRC is to generate the discoveries that power MBIE's commercialisation machine. We set an ambitious target in the hope of showing that we are playing a key role in this regard
Actual  2016/17 15 <i>Exceeded</i>	We identified 15 MBIE contracts since 2011 that were underpinned by HRC funding (see text). This does not include the research MBIE funds through the health-related National Science Challenges (see text)

15

MBIE contracts underpinned by HRC research since 2011

From novel technologies for functional foods ... to homelessness



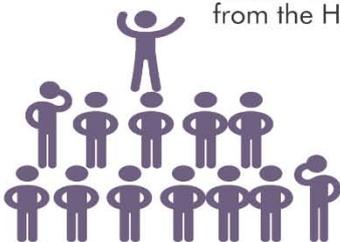
2

contracts have already resulted in demonstrable health and economic benefits for New Zealand

What about the National Science challenges?

13

of the Principal Investigators on the 14 health-related Challenge contracts have had support from the HRC in the past 10 years



HRC contracts involving these 13 individuals in the past 10 years

further to create implantable wireless heart pumps for patients – which will revolutionise the field.

Another great example of innovative technology that was developed with HRC funding and announced in 2016/17 is the

launch of the Avalia Immunotherapies company. Avalia was launched to commercialise cancer treatments developed with over 20 years of HRC support of Professor Graham Le Gros and his team at the Malaghan Institute. The team first learned how to harness the body's own immune cells to

attack cancer cells – and developed New Zealand’s first successful cancer vaccine. This showed considerable promise in reducing tumours, but not all individuals responded to the treatment completely. The team discovered that a competing group of immune cells in the body – designed to prevent autoimmune diseases from developing – were blocking the body’s increased immune response to the cancer vaccine. Next, they tested the vaccine with a treatment that reduced the number of these competing immune cells – and achieved the hoped-for improvement in response. **The company will focus on translating these advances into drugs that can be tested in patients in the next two years.**

Impact 3: New Zealand contributes to national and international advances

In 2015, we produced a study of New Zealand publications in health research that was very valuable in illustrating the international impact of HRC-funded research. It showed that HRC-funded research was making a particularly strong international contribution in the areas of Paediatrics and Reproductive Medicine, Immunology, Genetics, and Clinical Sciences. None of the other research funding sectors we looked at performed anywhere near as strongly in these areas, in terms of New Zealand publications.

Here are three examples of HRC-funded discoveries in publications that were ranked in the top 1–2% world-wide in their field in the year that they were published – meaning that they had a major influence around the globe.



Fat is not just the body’s storage locker – it secretes proteins that affect our metabolism. Adiponectin is one of these proteins, and protects us against heart disease and diabetes. Testosterone blocks the action of adiponectin. Now we have some insight into why men have higher rates of these conditions than women, and can start addressing it.

(Research team lead by Professor Garth Cooper, University of Auckland, with international collaborators)

Our KPIs for Impact 3:

HRC-funded researchers maintain a high international profile

Triennial measure 2017–18	Performance indicator Average citations per publication for HRC-funded research
Target  2017/18 6	This indicator is derived from a study of all NZ health research publications indexed by the Web of Science. Due to the expense of the data, it is set as a triennial measure.
Actual  2016/17 n/a	Not due to be measured until 2017/18.
Medium-term 2014–18	Performance indicator Average number of citations per HRC-funded publication exceeds the world average and the average for other NZ university-based health research by at least 30% (55% in 2001/02)
Target  2016/17 ≥30%	This measure of citations per publication (cpp) relates to the bibliometric study completed in 2015. The target was set on the basis of the previous study.
Actual  2016/17 44% > than world average 20% > than University sector <i>Met for world average only</i>	We used baseline bibliometric data to estimate the difference in citations per publication for HRC-funded publications and those supported by the University sector alone. The data demonstrate an increase in quality from the University sector on what was predicted, and the HRC has maintained our strong performance, at 44% higher than the world average. This combined result is good for NZ health research overall.



One version of a single gene puts adolescents that use cannabis at risk of serious mental illness as adults – including psychosis and schizophrenia. This major breakthrough boosted global understanding

of gene–environment interactions and the risks of adolescent drug use.

(Research team lead by Professor Richie Poulton, The Dunedin Multidisciplinary Health & Development Study, University of Otago)



Preterm babies are often given steroids to help their lungs develop – a potentially life-saving treatment. Worries arose that this may put them at risk of cardiovascular

disease in later life. We invested in proving that this treatment was safe, by funding research that showed no increase in risk 30 years on, compared to those who did not have the treatment. This has informed treatment guidelines for preterm infants all over the world.

(Research team lead by Professor Jane Harding, University of Auckland)



Outcomes from the last five years of investment include research looking at the needs of children born very preterm, which for the first time linked abnormalities in

developing brain tissues with social challenges which these children face when entering

school – including fewer friendships, fewer face-to-face interactions, and increased rates of victimisation and bullying. The more preterm the child, the greater the risk of these social challenges. The team then developed a tool to determine the likelihood that these children will develop serious learning difficulties in their first 4 years of school, so that the proper support can be put in place before serious problems occur.

(Research team lead by Professor Lianne Woodward, University of Canterbury)



In Alzheimer's disease, damage occurs when cholinergic cells in the brain are injured, causing devastating loss of memories. The cholinergic

cells produce acetylcholine – the hormone that serves as the body's primary transmitter of nerve impulses. The female hormone oestrogen can protect these cells, but there are too many adverse effects to give oestrogen as a treatment. An HRC-backed team has found that synthetic oestrogens (ANGELS) are also protective, but without unwanted side-effects. These findings are being used to develop new therapies to treat Alzheimer's disease, and have made a major contribution to the global research community developing therapies for the disease.

(Research team lead by Professor Istvan Abraham and Dr Andrea Kwakowsky University of Otago)

Outcome 2: The healthcare system is improved through research evidence and innovation

Why is this important?

Health research has a critical role in ensuring that our healthcare services are informed and of the highest quality. We know that the quality of healthcare and healthcare delivery is largely determined by the extent to which they are underpinned by research evidence. We also know that providing clinicians with the opportunity to engage in research has a positive impact on their practice, and that being a research-active country means that New Zealanders have early access to world-wide medical advances (new treatments, technologies, and innovations). Health research also has a key part to play in improving the efficiency, cost-effectiveness, and sustainability of our healthcare system – a role that is becoming increasingly important in light of our ageing population and the escalation of chronic conditions, such as diabetes, obesity, cardiovascular disease, and cancer.

Our key impacts and performance indicators for 2016/17

Impact 1: Research that improves the quality, cost-effectiveness, and sustainability of New Zealand's health system is prioritised

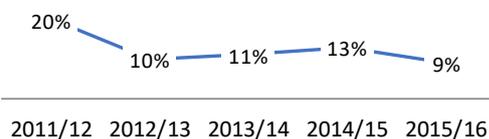
We have two funding vehicles that are specifically designed to meet this objective. The first is our New Zealand Health Delivery (NZHD) Research Investment Stream (RIS). Research that is funded through this RIS must have a positive impact within five years of the contract commencing, and the scope is limited to innovations in health-service delivery, disease prevention, and treatments. The second is Research Partnerships for New Zealand Delivery (RPNZHD, which we run as part of our Partnership Programme. Applicants must directly partner with service providers, securing co-investment and buy-in for their research, and increasing the likelihood that their findings will be taken up and used.

Our KPIs for Impact 1:

Research that improves the quality, cost-effectiveness, and sustainability of New Zealand's health system is prioritised

Annual	Performance indicator
2016–17	Percentage of the HRC's annual investment under NZHD and RPNZHD
Target	We want to grow the investment in high-quality research that makes an immediate contribution to our health system through these tools
 2016/17 13%	
Actual	This is a key indicator for us, because these contracts impact on health and/or service delivery within five years of funding commencing. We have previously been unable to meet our target because of the sector's inability to respond, and the same issues have occurred this year. We will be looking at additional approaches to increase investment.
 2016/17 9% <i>Not met</i>	

Trend



Medium-term	Performance indicator
2014–18	HRC-funded research contributes to improved clinical practice, decision-making and healthcare policy in New Zealand
Target	10 new clinical guidelines or policies based on HRC-funded research since 2010/11
 2016/17 10	
Actual	HRC investment has made a strong contribution to evidence-based policy and practice in New Zealand.
 2016/17 43 <i>Exceeded</i>	

Guiding health services

Two examples of important guidelines or policies from HRC investment

Setting national targets for emergency departments

How did a mandatory national target for length of stay in emergency departments affect patient outcomes?



7-year study

- Four hospitals
- 18/20 DHBs

~
700

fewer deaths - due to reduction in overcrowding.

No adverse outcomes.

 **\$50m**

spent by DHBs to meet the target - despite no additional funding.

National guidelines and tools for MoH



Guideline on choosing and measuring clinical quality indicators

Data collection tools - used to develop quality indicators introduced to complement targets in 2015



Gearing other systems

Data dictionary for the project contributed to developing a minimum common data set for emergency departments

The Kaupapa Māori research principles guiding the research were explained in a podcast by the Australasian College of Emergency Medicine on 'indigenous health and cultural competency' which won the Australia & New Zealand 'Diversity & Digital Skills Award'.

Research led by A/Professor Peter Jones, Auckland City Hospital

Improving outcomes after stroke

Putting the process in recovery - the Predicting REcovery Potential (PREP) model

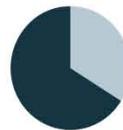
Two-step process



- 1 Simple 2-minute assessment of strength in a person's upper limb



- 2 Non-invasive test to see how well signals are travelling from the stroke side of the brain to the arm



Two thirds of patients only need step 1. Step 2 is needed if a patient scores low on strength test.

80%

success rate for predicting recovery of a patient's hand or arm.



Rehabilitation programmes can be tailored based on PREP.

Earlier discharge for PREP patients

1 week

PREPping the stroke rehab sector



The process is in use in both the USA & Denmark



Enduring partnerships formed with therapy teams at DHBs across NZ.

Research led by A/Professor Cathy Stinear, University of Auckland

This is best illustrated by New Zealand's top intensive care specialists. The HRC has supported national networks of intensive care physicians to link nationally to produce critical care guidelines and internationally to generate the data needed to answer vital questions about the care of patients who require life support. Major national and international collaborations with the HRC's critical care researchers have led to major cost-savings for health services in recent years, both in New Zealand and internationally. The work focuses on answering questions that specialists have been struggling with for years, because no hard data exists on which to make a decision. On the basis of this work, they have reduced the use of costly intravenous rehydration therapy in the ICU, that actually worsened patient outcomes – saving District Health Boards millions of dollars annually.

Impact 2: Actively involve end-users, health-managers, and decision-makers in research

The HRC supports a number of very senior clinical researchers with the networks, experience and mana to influence outcomes with their research findings. One such researcher is Professor Jane Harding. Professor Harding is a specialist in the care of newborns, as well as being a senior academic at the University of Auckland's Liggin's Institute. Over two decades we have supported Professor Harding to study preterm birth and infant health. A body of her more recent work is addressing very-low blood-sugar (hypoglycaemia) in newborns. It serves to illustrate how sustained investment in clinical research can make a major difference in the treatment and outcomes for our most vulnerable citizens, and reduce the immediate and longer-term costs of care for health services.

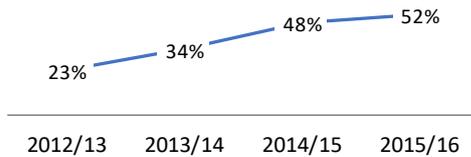
Professor Harding and her team have set robust guidelines for the treatment of high blood-sugar in infants, showing that a simple \$2 application of a glucose gel can safely reverse it – with no adverse effects on the baby's ability to breast-feed. They are gaining valuable knowledge about the consequences of both under-treated and over-corrected low glucose levels in newborns, showing just how susceptible to damage the brains of new babies are.

Our KPIs for Impact 2:

Actively involve end-users, health-managers, and decision-makers in research

Annual 2016–17	Performance indicator Percentage of current contracts with a named investigator based at a DHB or PHO
Target  2016/17 20%	We specifically want to increase the level of research activity at DHBs and PHOs, and need to know how many of our research contracts provide research opportunities for front-line staff
Actual  2016/17 58%	We have exceeded our target with over half our contracts involving a practising clinician. Research that involves a team member who is involved in health delivery are more likely to be taken up and used, and so we are very pleased with this result.

Trend



Medium-term 2014–18	Performance indicator HRC engages with the health sector to deliver solutions
Target  2016/17 35%	35% of new contracts are led by a principal investigator engaged in health delivery (33% in 2013/14)
Actual  2016/17 28% <i>Not Met</i>	This result is lower than we had hoped. It likely reflects the difficulty that practising clinicians have in finding the time to undertake clinical research, and especially lead a clinical research project. Many clinicians do not have access to research leave, and must find the time on top of their clinical duties. Leading a contract is particularly demanding – we have exceeded our target for the number of contracts that involve a practising clinician. Creating a clinical environment conducive to health research is an issue that is being addressed by the New Zealand Health Research Strategy. The Ministry of Health is leading the action to strengthen the clinical research sector and address barriers.

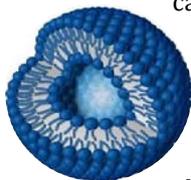
Impact 3: Innovative health technologies and therapies develop

We tend to associate the development of new technologies with major investment, but it is incredible what can be achieved just with an HRC Māori Health Masters Scholarship. For his Masters degree at the University of Waikato, **Mahonri Owen developed a prosthetic hand that can be completely controlled by the brain, using computer-aided design, 3D printing, and cotton from his mother's sewing machine.** The picture below shows Clive illustrating his invention to Duncan Garner on Story – showing how it can be made to move just by thinking.



Mahonri Owen demonstrates his prosthetic hand to Duncan Garner on Story

What if we could revolutionise the treatment of Parkinson's disease? Professor John Reynolds (University of Otago) has shown that this is only a matter of time. He used his HRC Explorer Grant to develop a means to restore movement in Parkinson's disease (manifested by the brain's inability to produce sufficient dopamine). His team developed a technology to mimic natural pulses of dopamine, using drugs released from a tiny bubble that is made of the same material as a cell membrane (liposomes). The current mainstay of therapy is L-DOPA, which has significant and debilitating side-effects. It can lead to abnormal movements in many people taking it, within five years. Dopamine therapy



can also lead to problem behaviour, with some even developing problem gambling. This new system holds the promise of lifelong treatment for Parkinson's disease without these side-effects, because dopamine replacement can be customised to mimic the natural dopamine signal in targeted brain areas – using ultrasound signals through the skull. The work is ongoing, but the grant showed proof of

principle, and the team have taken out patents on the liposome-controller technology.



Another exciting project came from the HRC's joint initiative with the National Health Committee – the Health Innovations Partnership. Dr Elizabeth Broadbent and her team looked

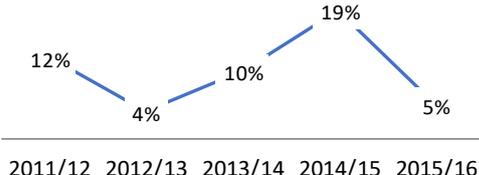
at whether **robots could enhance care for patients with Chronic Obstructive Pulmonary Disease (COPD).** The study ran at Counties Manukau DHB, Southland DHB, and Gore Health. Sixty participants received either standard care, or standard care plus a robot. The robot was programmed to provide medication management, telemedicine, monitoring of blood pressure, blood oxygen, and COPD questionnaires, and to be linked to Smart inhaler devices to monitor adherence. Health professionals could see if medication use increased, and phone patients. The findings are being prepared for publication, but the team hope that using the robot will reduce hospital admissions and bed-care days compared to standard care. They also hope that the robot will improve mental health and adherence to treatment regimens, since those patients who worked with the robot reported feeling less lonely. At a cost of \$3000 each, the robots do not come cheap, but are still half the cost of a COPD admission, for which New Zealand has the highest rate in the OECD.

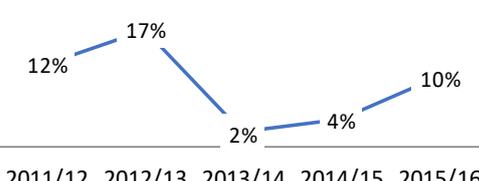
No-one wants to have an injection into their eyeball, and yet for many people with degenerative eye diseases, this is what has to happen several times a year. The HRC invested in some pivotal research by Dr Ilva Rupenthal that provides a means of delivering drugs inside the eye without a needle. Working with a team of clinicians, she developed eye implants that release drugs slowly, in response to light. These implants can greatly improve quality of life for patients living with common problems such as macular degeneration. They will also



reduce the cost of treatment and demand on already over-stretched services. Ilva was the recipient of both an HRC Emerging Research First Grant and a Sir Charles Hercus Research Fellowship. In 2016, the HRC recognised Ilva's contribution with a Celebrating Research Excellence Award, for her outstanding contribution to health research excellence as an emerging researcher.

Our KPIs for Impact 3:
 Innovative health technologies and therapies develop

<p>Annual 2016–17</p>	<p>Performance indicator Percentage of new contracts focused on clinical application of innovations for improved prevention, detection, screening, diagnosis, or treatment.</p>												
<p>Target 2016/17</p>  <p>20%</p>	<p>This measure was designed to monitor the level of HRC support for applied health technologies and help us to better track their development and impact. Our target is for one-fifth of new contracts to be in this area, and to maintain this level.</p>												
<p>Actual 2016/17</p>  <p>15% <i>Not met</i></p>	<p>We have not met our target in this area, despite this being a major focus of our New Zealand Health Delivery RIS. This is partly because we had a large number of excellent proposals in the discovery area this year, research that will hopefully provide the applied health technologies for the future. This is the problem we face when setting performance measures based on proportion of the investment. We want to track our expenditure and balance our investment, and we have addressed this in our performance measures going forward.</p>												
<p>Trend</p>	 <table border="1"> <caption>Trend Data</caption> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2011/12</td> <td>12%</td> </tr> <tr> <td>2012/13</td> <td>4%</td> </tr> <tr> <td>2013/14</td> <td>10%</td> </tr> <tr> <td>2014/15</td> <td>19%</td> </tr> <tr> <td>2015/16</td> <td>5%</td> </tr> </tbody> </table>	Year	Percentage	2011/12	12%	2012/13	4%	2013/14	10%	2014/15	19%	2015/16	5%
Year	Percentage												
2011/12	12%												
2012/13	4%												
2013/14	10%												
2014/15	19%												
2015/16	5%												

<p>Annual 2016–17</p>	<p>Performance indicator Percentage of new contracts focused on innovative clinical decision-making tools and models of care</p>												
<p>Target 2016/17</p>  <p>12%</p>	<p>This measure was designed to monitor the extent to which research is being used to test and implement systems for streamlined, efficient management of health conditions at the patient or organisational level. We aim to increase the rate at which we grow clinical research capacity and planned investment in co-funding relationships</p>												
<p>Actual 2016/17</p>  <p>7% <i>Not met</i></p>	<p>The same issues described for the previous target also apply to this one. It is also important to note that when a large increase in investment is announced, it can affect the balance of proposals received, with some disciplines reacting more quickly to take advantage of the increase in funds with new projects. More applied research can often require a greater degree of consultation and collaboration, and so take longer to develop. As a result, the increase in quality proposals in this area may lag behind that of less applied projects in response to new funds. Varying levels of capacity in the workforce also affect the response to new funds.</p>												
<p>Trend</p>	 <table border="1"> <caption>Trend Data</caption> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2011/12</td> <td>12%</td> </tr> <tr> <td>2012/13</td> <td>17%</td> </tr> <tr> <td>2013/14</td> <td>2%</td> </tr> <tr> <td>2014/15</td> <td>4%</td> </tr> <tr> <td>2015/16</td> <td>10%</td> </tr> </tbody> </table>	Year	Percentage	2011/12	12%	2012/13	17%	2013/14	2%	2014/15	4%	2015/16	10%
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Medium-term 2014–18	Performance indicator HRC-research underpins the creation of new health technologies and innovations
Target 2016/17 1	 One new health technology and three new clinical innovations/decision-making tools arise from HRC-funded research
Actual  2016/17	64 health technologies 26 Clinical innovations <i>Exceeded</i> This result far exceeds the targets that we set for clinical innovations and health technologies from 2011/12 until 2016/17. It gives us confidence that over the medium-term, we have made a significant difference under this impact, despite not meeting our annual targets this year.

Outcome 3: The best clinicians and health researchers are supported and retained in NZ

Why is this important?

A strong health research sector depends on a highly-skilled, experienced workforce which can deliver quality research and drive innovation. By targeting support to front-line clinicians and the most promising emerging researchers in priority health areas, we ensure that the research workforce has the capacity to meet the needs of the healthcare system and our unique population, both now and into the future.

Our key impacts and performance indicators for 2016/17

Impact 1: Supporting promising emerging researchers to gain valuable research expertise

We place a strong emphasis on supporting emerging research talent. **We were delighted to fund a third of applications for our Emerging Researcher First Grant in the 2016/17 funding round** – providing a boost for 14 promising individuals to start their careers (see Output 2).

Fostering future research leaders is also a key priority for us – with the prestigious Sir Charles Hercus Research Fellowship an important tool for achieving this. Associate Professor Chris Pemberton of the Christchurch Cardioendocrine Research Group (University of Otago) received the Fellowship in 2007. Since then he has gone on to win two Programme contracts, one Programme Extension, and four Project grants. He is part of a team that has made major breakthroughs in the understanding and treatment of heart failure and heart disease, identifying biological markers of heart injury that can be used for early diagnosis in the clinical setting (the topic of his Fellowship).

Our annual survey of 26 former Fellows showed that all of them had at least one further HRC contract and one had as many as 22, indicating that we have met our goal of picking those that will be competitive in future funding rounds. **All our former Fellows have remained active in New Zealand health research**, another positive

Our KPIs for Impact 1:

Supporting promising emerging researchers to gain valuable research expertise

Annual 2016–17	Performance indicator
	Percentage of former Sir Charles Hercus Fellowship recipients named on current HRC contracts

Target 2016/17



58%

This fellowship is aimed at identifying future research leaders, and is a prestigious award. If we have identified them well, they should be able to compete in HRC rounds once their contract is completed

Actual 2016/17



73% Exceeded

This result gives us confidence that we are picking the right individuals to develop as future leaders. Clearly these individuals are either leading a highly competitive team or remain involved in one. This is vital for succession planning.

Trend



2012/13 2013/14 2014/15 2015/16

Medium-term 2014–18	Performance indicator
	The HRC nurtures new talent – 100% of former Sir Charles Hercus Fellowship recipients retained in research

Target



2016/17 100%

Again, if we have indeed picked future research leaders for this award, the majority will remain active in the research sector

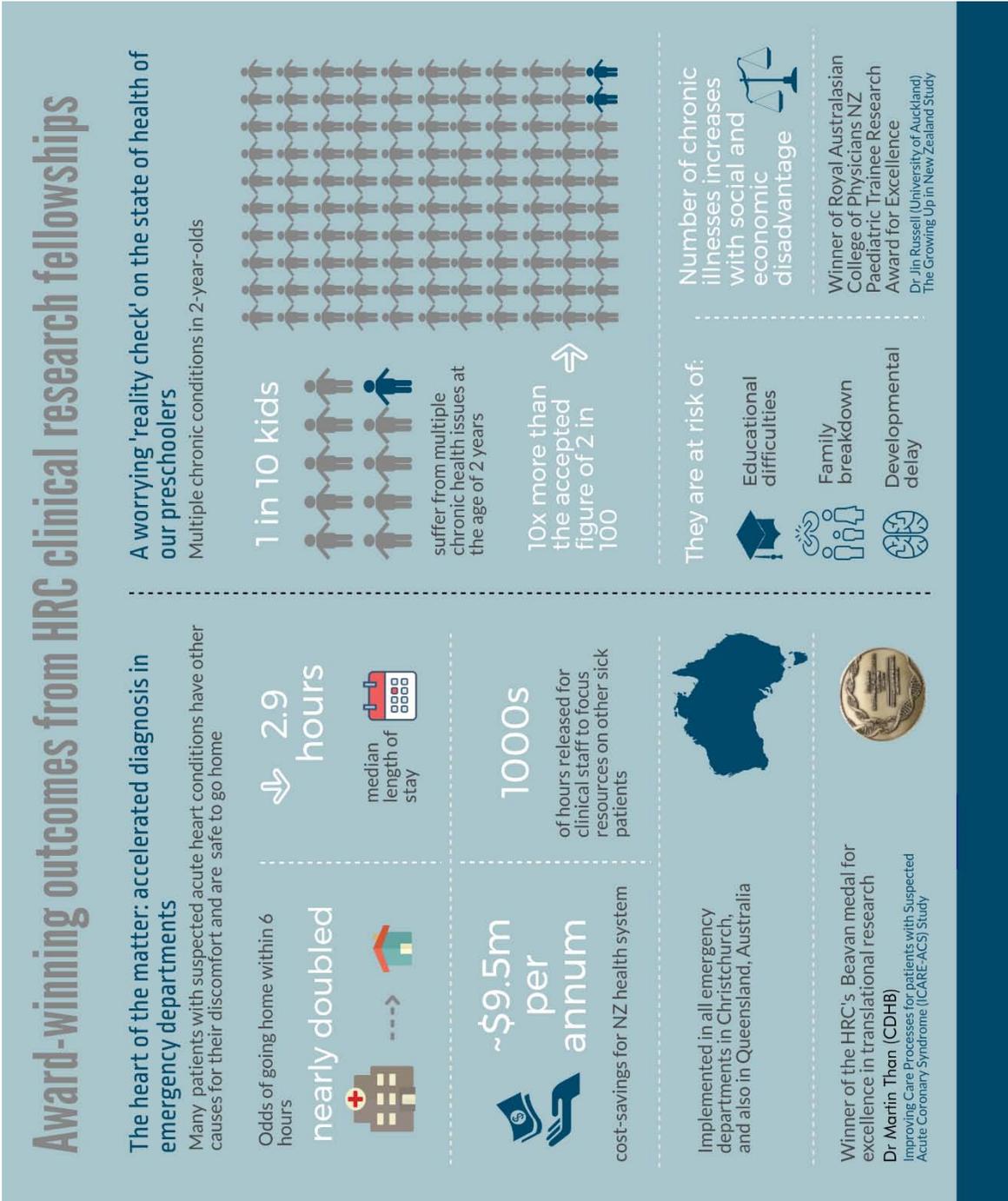
Actual



2016/17

100% Met

Every former recipient of this award is still active within the research sector, contributing to endeavours and advancing their research careers



sign that we have picked future research leaders who will be able to step forward when our current leaders are ready to retire.

Ensuring that clinicians have access to formal research training opportunities is one of the ways we ensure they are engaged in health research. This improves the quality and efficiency of treatment and services, but it also

improves career satisfaction and advancement. This is key to keeping the best clinicians in New Zealand healthcare. Our Clinical Researcher Fellowships and our Clinical Practitioner Fellowships are two of the tools we use to do this. These individuals are at the 'front-line' of services and the projects they have chosen to pursue have a significant impact on service delivery (see infographic).

Impact 2: New Zealand has the capacity to address the needs of our unique population

Over the past 20 years we have focused on building the Māori health research workforce to create the capacity and capability needed to address indigenous health issues. Our models have been recognised internationally and we have greatly increased the number of Māori health researchers that we fund and train. One of our goals is to create the means for Māori researchers to progress their research careers by offering varied opportunities along the career spectrum (see the schematic of the awards we offer under Output 2). However, until this year, we had no data on whether we were actually creating career pathways, or just isolated opportunities that were not being taken up in a consistent way. In 2017, we undertook a major survey of all previous Māori recipients of HRC career-development awards. Here's what we found.

Analysis of recipients of HRC Māori Career Development Awards (CDAs) since 2008

217	Total number of Māori recipients of an HRC CDA
58%	Progressed their career with an HRC-funded opportunity in the past 5 years
85%*	Have had more than one HRC-funded research opportunity
7	Went through all of the levels available and were successful in the annual funding round
28%	Were successful in gaining Project/Programme or IRO funding
64	Received the award in the past 5 years, and so have not really had time to progress

* Excluding individuals that only received a Summer Studentship Award

Our KPIs for Impact 2:

New Zealand has the capacity to address the needs of our unique population

Annual 2016–17 **Performance indicator**
Percentage of named researchers on HRC contracts who identify as Māori

Target 2016/17



13%

Through investing in a broad range of Māori research opportunities, including career development contracts, community research contracts, projects, and programmes, we have sought to reach our medium-term goal for the composition of the Māori workforce by 2017

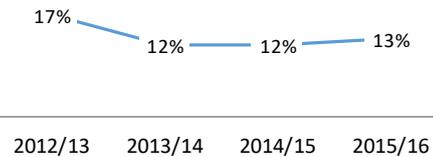
Actual 2016/17



13% Met

We have maintained the proportion of the workforce that identify as Māori, but we have not managed to increase it. Perhaps this is because we have had an increase in funding in the last financial year, and more non-Māori researchers have been poised to take advantage of that.

Trend



Medium-term 2014–18 **Performance indicator**
The HRC supports Māori to develop the workforce and skills needed to address indigenous health issues

Target

Percentage of Māori on current contracts:



2016/17

Senior researchers (with PhD): 18%
Emerging researchers: 18%
Principal investigators: 25%

Actual



2016/17

Met

Senior researchers (with PhD): 26%
Emerging researchers: 29%
Principal investigators: 35%
We have met our targets for composition of the Māori workforce

We are also working hard to build Pacific health research capacity, although this has proved more challenging and is an area of increasing focus for the HRC. In this regard, we were pleased to support five Pacific health research projects through the 2017 Annual Funding Round, and the highest number of proposals led by Pacific investigators for many years.



Alana McCambridge was supported by the HRC to do her PhD at the University of Auckland. Her research aims to help patients to rehabilitate after a stroke. She studies a novel, non-invasive brain-stimulation technique that shows promise for patients with impaired arm co-ordination and control following strokes.

Alana, who is of Samoan and Cook Island descent on her mother's side and Irish descent on her father's side, received an HRC Pacific Health Research PhD Scholarship in 2012. With the help of this scholarship she, along with her supervisor Professor Winston Byblow, have been investigating the effects of transcranial direct current stimulation (tDCS) on the excitability of motor pathways from the brain to the arm.

This technique induces a weak direct current to the brain via electrodes placed over a person's scalp. This can stimulate the brain to adapt to the injury and transfer functions to an undamaged part of the brain. However, the technique is not 'one size fits all', so Alana has been working on ways to optimise the brain-stimulation parameters to achieve the best effect for a particular individual.

Outcome 4: The impact, responsiveness, and uptake of health research is increased

Why is this important?

It is important that New Zealand derives health, social and economic gains from our investment in health research. The HRC strives to maximise the benefit and add further value by:

- focusing the research effort in areas of specific priority, strength and opportunity;
- developing mechanisms and running processes that ensure the relevance, responsiveness, and quality of the research we fund;
- working across sectors to develop health research and ensure New Zealand's investment meets sector needs and represents best value;
- partnering with our stakeholders to deliver the evidence needed for policy and practice and to leverage benefit;
- working to improve the relevance, impact, translation, and uptake of health research; and
- being effective, efficient, and accountable in what we do.

Our key impacts and performance indicators for 2016/17

Impact 1: The health research funding environment is transparent, fair, and ensures quality research

For a small country, New Zealand has a very broad and diverse array of funding bodies involved in health. With finite public resources, it is important to create linkages and foster relationships to ensure that scarce resources are used well and investment is not duplicated. The HRC works across the health and science and innovation sectors to deliver investment and support in agreed priority areas, and has maintained strong stakeholder engagement and support.

Productive partnerships with the Ministry of Health and MBIE are critical to our success. In the past year, MBIE, MoH, and the HRC have been working very closely together, developing shared data systems, discussing better alignment of funding tools, and reducing transaction costs for the research community. The development of the New Zealand Health

Research Strategy aids this work by giving each agency a strong area of focus. The HRC must focus on providing leadership and supporting excellent health research and a strong research workforce; The Ministry of Health on making health providers 'research ready' for the results that are generated and strengthening the clinical research sector; and MBIE on underpinning the whole endeavour by ensuring that the infrastructure, processes, and resources are there to sustain New Zealand health research endeavours and maximise the national and global contributions to knowledge and innovations that improve health.

Transparent and fair processes that identify excellent research

We run fair, transparent, and robust peer-review processes that meet international standards for best practice. Health research funding in New Zealand is highly competitive, and our processes, which use around 700 national and international reviewers, ensure that we fund research that is of high quality, and support researchers who have the capability to deliver (*see the results of the internal review of our processes, conducted by Deloitte on p41*).

The strong contribution that the HRC makes to ensuring that the research environment is ethical, safe, and fair is detailed in Output 4, p50. None of our research contracts can commence without ethical approval from an ethics committee accredited by the HRC.

The results of our bibliometric evaluation emphatically tell us that we are funding the best. Perhaps one of the clearest indicators that we are also funding the highest priority research is the fact that **65 percent of our research contracts align with one or more of the Government's National Science Challenges** – research areas identified by New Zealand as critical to our current and future needs and success.

Addressing the greatest research needs

HRC's primary objective is to invest in the health research that matters to New Zealand and makes the biggest difference to our health and wellbeing. To do this we need an investment framework that encourages research of the highest relevance, and we need investment processes that are robust and identify research of the highest quality.

Research that contributes directly to improved health outcomes and improved health equity for those with the greatest need is prioritised across all four of the HRC's Research Investment Streams. Additionally, the introduction in 2009 of an assessment criterion which scores the likelihood of research to make an impact ensures the research we fund is focused on, and likely to attain, improved health outcomes for New Zealanders.

We review all our investments for responsiveness to Māori, and this will become a part of the assessment process that is formally scored in the coming year (incorporating different levels and facets of responsiveness, appropriate to the nature and level of the research).

Promoting translation of research findings

Health research only benefits New Zealanders if the findings are valued, taken up, and used. The HRC is working to improve the impact, translation, and uptake of health research. This work includes an in-depth review of the assessment of impact in our funding processes and the pathways to achieving it. (We introduced an 'impact' criterion in 2009, but this has not proved as effective as we hoped.) The results will lead to a change in the way we assess applications. By making knowledge transfer an acknowledged and important part of research that is formally assessed, we are encouraging and incentivising researchers to look beyond the outputs of their work and understand specific areas where they can proactively help in the dissemination and, where appropriate, the implementation of their results. We also award two science medals on an annual basis which recognise, encourage and promote research translation.

We are currently in the process of developing a completely new website that is designed to increase engagement with the end-users of the knowledge that we generate, engaging them in the process of influencing the research agenda, participating in research, and promoting uptake of the findings. This will be launched in early 2018.

Engaging with communities

Addressing New Zealand's greatest health challenges means engaging and working with communities. Engaging communities and end-users is therefore a key priority for the HRC.

Our KPIs for Impact 1:

The health research environment is transparent, fair, and ensures quality research

Annual 2016–17	Performance indicator Number of appeals for reconsideration of an HRC funding decision by the Council
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Target
2016/17



No
appeals

This is a surrogate measure of the trust and confidence HRC applicants have in an assessment process that is based upon the review of their peers.

Actual
2016/17



No
appeals
Met

Despite a historically low success rate, the HRC Board has not been asked to reconsider any funding decisions. We attribute this to a transparent approach to working through complaints – resulting in no applicants lodging a formal appeal

Trend

There have been no appeals against HRC funding decisions since the measure was set in 2010/11

Medium-term 2014–18	Performance indicator HRC continues to attract the number and quality of experts needed to run a best-practice, peer-reviewed funding process
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Target



2016/17
0

Zero appeals against HRC funding decisions during the period

Actual



2016/17
0
Met

There have been no appeals during the period of this report (see Trend line above)

We support iwi, hapū, and Māori communities to address community-identified health needs through a specific funding opportunity – Nāga Kanohi Kitea – the purpose of which is to develop the capacity of communities to engage in research in order to better address their health needs.

All HRC applicants are encouraged to engage stakeholders and end-users from the outset of the research, while some research funding opportunities require our researchers to work in collaboration with health-service providers and decision-makers.

Impact 2: Strategic partnerships engage end-users, leverage benefit, and improve research uptake

We achieve the greatest impact, value, and benefit when we work with others. The HRC regularly partners to meet sector needs. In recent years, we have had over 30 partners spanning healthcare providers such as DHBs, government ministries, charities, and non-government organisations. Highlights of our current partnership investment include **working with the Ministry of Health and Healthier Lives National Science Challenge to support three projects, and our new partnership with PHARMAC (see Output 3 for more details, p47).**

Over the past 15 years, we have developed important and valuable relationships with research providers (from universities to charitable trusts), healthcare organisations (including all 20 DHBs), professional and regulatory bodies (such as PHARMAC), the Health and Disability Ethics Committees, NZBIO, Medsafe, local bodies and councils, and public and private enterprises (such as the Crown Research Institutes and the commercialisation arms of the universities).

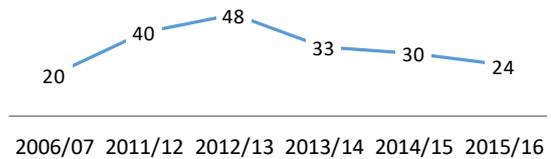
By working in partnership, the HRC is currently leveraging an additional \$1.22 for every dollar we invest. Although in previous years we have leveraged three times this amount (\$3.91 in 2014/15), this is still a good result. Department budgets have been tight in recent funding cycles, with research being the first activity that is cut back. We have also put a hold on new ventures in the past year, pending the results of a review. We have been fortunate to work with a large number of partners since 2002, but we now need to take time to build strategic oversight into the funding process to make sure that we are

Our KPIs for Impact 2:

Strategic partnerships engage end-users, leverage benefit, and improve research uptake

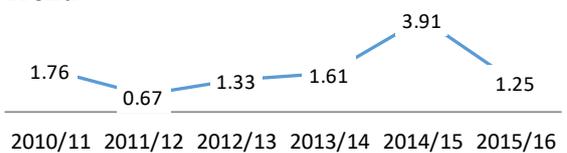
Annual 2016–17	Performance indicator Number of active research partnerships with end-users and providers
Target 2016/17	Through this measure, we monitor the HRC's level of engagement in strategic partnerships that involve end-users and respond to their needs.
 40	
Actual 2016/17	We have been reviewing the Partnership Programme in 2016/17 and have decided not to commit to new partnerships until the strategic review is complete. A smaller number of larger, more strategic partnerships is what we will work to establish going forward.
 18 Not met	

Trend



Annual 2016–17	Performance indicator Dollar value of co-funding leveraged through the Partnership Programme
Target 2016/17	We have been reviewing the Partnership Programme in 2016/17 and have decided not to commit to new partnerships until the review is complete. In the coming year, the Programme will have a much greater strategic focus
 \$1.00	
Actual 2016/17	We aim to gain matching investment through our Partnerships and so this is a good result. It is also worth noting that many partners also bring valuable in-kind support to a project.
 \$1.22 Met	

Trend



making the best possible use of the opportunities available.

We have relationships and key contacts with a number of international health research funding agencies, and our Chief Executive, Professor Kath McPherson, is a member of the Heads of International Research Organisations (HIROS), which includes 18 of the major health research funding organisations around the globe. This international body meets to share good practice, to discuss global health research challenges, and identify opportunities to work collaboratively.

Responding to urgent or emerging health issues

We have developed flexible processes that allow for the immediate commissioning of research to meet urgent health sector and Government needs. In the past we have commissioned research to assist the Ministry of Health in dealing with the H1N1 flu epidemic and most lately, the campylobacter outbreak in Havelock North.

Our KPIs for Impact 2:

Strategic partnerships engage end-users, leverage benefit, and improve research uptake

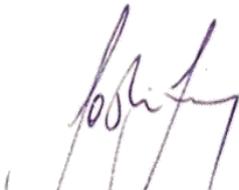
<p>Medium-term 2014–18</p>	<p>Performance indicator HRC forms strategic partnerships to maximise the utility and benefit of health research</p>
<p>Target</p>  <p>2016/17</p>	<p>1) Two new partnerships with end-users 2) Two new health technologies/treatments implemented as a result of research funded in partnership with the National Health Committee</p>
<p>Actual</p>  <p>2016/17</p> <p>1 new partnership <i>Not met</i></p> <p>1 new health technology <i>Not met</i></p>	<p>We have been reviewing the Partnership Programme in 2016/17 and have decided not to commit to new partnerships until the strategic review is complete.</p> <p>When we set this target, we envisaged that the Health Innovation Partnership would endure for a number of years. In reality, we have funded no new contracts since 2014/15 and so have very few contracts to yield outputs needed to meet this measure.</p>

Statement of responsibility

For the year ended 30 June 2017

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 2017.



Dr Lester Levy, CNZM
Chair
Date: 30 October 2017



Professor Andrew Mercer
Deputy Chair
Date: 30 October 2017

Part 3.

Statement of objectives and service performance

For the year ended 30 June 2017

"My brain remembers fun days at the beach"



HRC Outputs

Introduction

The funding the HRC receives from the Government to achieve our Outcomes, is administered through four Outputs. These Outputs provide the framework for reporting in our Statement of Service Performance. The first Output incorporates the research contracts we support; the second our career-development opportunities; the third our co-funding relationships with stakeholders; and the fourth covers the role the HRC has in health research ethics.

In the following section, we describe the four Outputs, what the HRC has delivered, and measure our performance in reaching our targets.

Output 1: Health research contracts

Income and expenditure in 2016/17 under this output

Cost 2016/17	Actual 2017 \$(000)	Budget 2017 \$(000)	Actual 2016 \$(000)
Funding from Crown	81,891	82,690	73,031
Interest Received	218	270	256
Other	-	-	-
Total Revenue	82,109	82,960	73,287
Cost of Output	83,604	86,375	73,256
Surplus (Deficit)	(1,495)	(3,415)	31

What we fund under 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 (AFR).

Our Annual Funding Round

The annual funding round is our major opportunity to support the best ideas of our research community. Ensuring that the assessment and contracting processes for research are equitable, free from conflict of interest, and identifying the best ideas is a major part of the work of the HRC.

The HRC supports four different contract types through the annual funding round (see Table 2).

Table 2. HRC research contract types offered through Output 1.

Contract type	Duration	Value
Projects (AFR)	Up to 3 years	\$1.2m max
Programmes (AFR)	Up to 5 years	\$5.0m max
Feasibility Studies (AFR)	Up to 2 years	\$250k max
Emerging Researcher First Grants (AFR)	Up to 3 years	\$250k max
Explorer Grants	Up to 2 years	\$150k max

The process of assessment, leading to funding decisions, consists of a two-stage process for most grants, approximately 240 expert committee members, and a further 450–500 specialist reviewers.

All new contracts are selected using our international best-practice method of peer review and are subject to ongoing monitoring to ensure delivery of contracted outcomes. *(Note: the HRC is not obligated to pay the full value of the contract, as payment is made in accordance with satisfactory progress.)*

Internal audit

In 2017, we commissioned Deloitte to undertake an independent review of our investment processes, as the first in a series of internal reviews aimed at ensuring that we are operating in the most efficient and effective way possible. The report found that ***“overall, there is a comprehensive application assessment process for the awarding of grants. We have rated HRC’s grant award process as ‘well controlled’ ”.***

Deloitte found that the HRC has:

- clear investment principles and strategic outcomes;
- comprehensive processes and procedural guidelines; and
- well-controlled application of grant award policies and processes.

Some areas where the HRC could improve processes were identified and these included mitigating ‘key person risk’ (where organisations become heavily reliant on certain individuals) – because the HRC is a small organisation and the technical expertise and experience of the Research Investment Managers is not easily replaced by other staff.

The HRC will adopt all the recommendations to fine-tune our processes.

Funding research to improve Māori and Pacific peoples' health outcomes

We have specific processes for funding research relevant to Māori and Pacific peoples. The HRC's statutory Māori Health Research Committee and standing Pacific Health Research Committee advise on the strategic direction and oversee the process, making the final funding recommendations to the Council. As far as possible, we make sure that there is appropriate expertise available to review culturally specific research paradigms and methods and to understand the context and drivers of research.

Our Research Investment Streams – supporting high-quality, high-impact research

Applicants apply to one of four different Research Investment Streams (RIS). These represent broad priority areas for HRC's research investment, and reflect our drive to deliver value for money by ensuring that investment is directed to areas of greatest research need and opportunity. The four Research Investment Streams, and the indicative proportion of new investment, are detailed below.

New Zealand Health Delivery (approximately 20% of funds)



Better care



Better outcomes



Optimal costs

This is our portfolio for research that will have an immediate impact on our health system, delivering better care and systems or reducing costs. Teams include health professionals and stakeholders to increase the utility and uptake of the research.



Improving Outcomes for Acute and Chronic Conditions in NZ (approximately 35-40% of funds)

Research supported in this stream will contribute to the understanding, prevention, diagnosis and management of non-communicable conditions.

Rangahau Hauora Māori (approximately 10% of funds)

Our KPIs for Output 1

Annual 2016–17	Performance indicator Average number of expert reviewers engaged in assessing each research proposal for the annual funding round
--------------------------	---

Target 2016/17	One of the key tenets of the HRC's approach is ensuring applications are reviewed by experts. Many funders are struggling to maintain a rigorous peer-review process. We are proud of the standard we maintain
	
3–5	

Actual 2016/17	Despite the international competition, we continue to maintain this strict standard. We believe that this is a pivotal part of the system that ensures the quality of our investment decisions
	
3.7 <i>Met</i>	

Trend: 3.5 in 2015/16

Annual 2016–17	Performance indicator Time between receipt of Expressions of Interest to invitation to proceed to full proposal
--------------------------	---

Target 2016/17	Timeliness in making funding decisions is critical. Applicants need to know as early in the process as possible if they are not likely to be supported
	
2–3 months	

Actual 2016/17	We have never failed to meet this target, and met it again this year – despite receiving a record number of funding applications (due to the announcement of new funding being available)
	
2.7 <i>Met</i>	

Trend: 2.5 in 2014/15
2.7 in 2015/16

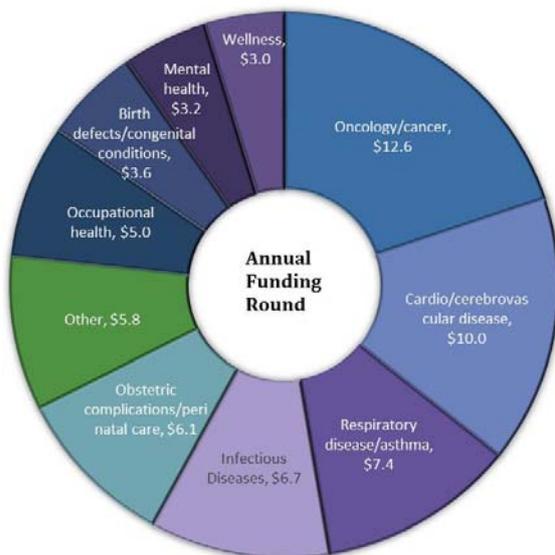
The stream supports Māori health research improving Māori health outcomes, health equity and quality of life.



Health and Wellbeing in NZ
(approximately 30-35% of funds)

Research funded through this stream will contribute to health and wellbeing throughout the life-course. The stream recognises that enhancing health and wellbeing is the best long-term strategy to reduce demand on the health system.

Investment in 59 contracts by health issue in 2016/17 (\$m)



Explorer grants

The aim of Explorer Grants is to provide seed-support, enabling researchers to explore transformative research ideas at an early stage, ahead of an application for greater investment through standard funding mechanisms.

Our KPIs for Output 1

Annual 2016-17 **Performance indicator**
Percentage of Māori reviewers on the Rangahau Hauora Māori committee assessing research proposals that are led by Māori

Target 2016/17



100%

If we are to generate research findings that are accepted and taken up by the Māori community, we must maintain specialised funding processes that incorporate Māori values, knowledge and expertise. We do this by tailoring our peer-review process specifically to Māori research, so that applicants know that the cultural importance and relevance of their methodologies and ideas will be understood and appreciated. The number of Māori reviewers involved in this process is a good measure of how successfully we are doing this

Actual 2016/17



100% Met

We place great importance on culturally appropriate funding models, and are committed to maintaining the quality of our processes in this regard

Trend: This measure has been at 100% since we started recording it in 2010

Ngā Kanohi Kitea

HRC supports iwi, hapū, and Māori community groups to address community-identified health needs through a specific funding opportunity. Funding will be derived from the Vision Mātauranga Capability Fund. An important component of the scheme will be the development of capacity to engage in research.

The HRC is the main sponsor of New Zealand's health research workforce. To this end, we have set targets for the number of full-time equivalent positions that we support, and we undertake an analysis every year of all the individuals supported on current contracts. This gives us vital, and unique, information on the health research workforce in New Zealand, and strengths and gaps in capacity and capability.

We have evaluated our success in creating career pathways for Māori in 2017 (see the summary of results on p32).

The HRC has awarded an unprecedented seven research projects focusing on improving the health of New Zealand's Pacific community (with a combined value of \$6.3m).

Alignment with HRC's outcome framework

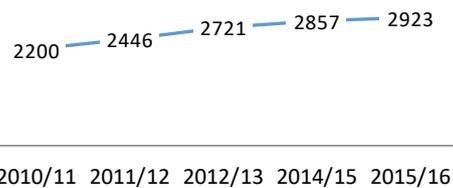
Health research contracted through this Output delivers to the following outcomes:

- Outcome 1: New knowledge, solutions and innovations improve health;
- Outcome 2: The healthcare system is improved through research evidence and innovation;
- Outcome 3: The best clinicians and health researchers are supported and retained in New Zealand, and
- Outcome 4: The impact, responsiveness, and uptake of health research is increased.

Our KPIs for Output 1:

Annual 2016–17	Performance indicator
	Number of research positions on HRC contracts
Target 2016/17	The HRC has a critical role in supporting and building the health research workforce in New Zealand. Our goal is to support approximately 2000 positions on contracts at any given time.
 2500–3000	
Actual 2016/17	We have met our target for workforce positions. This figure includes individuals who are contributing to a contract, but do not require salary support.
 3187 <i>Met</i>	

Trend



Output 2: Career-development contracts

Income and expenditure in 2016/17 under this output

Cost 2016/17	Actual 2017 \$(000)	Budget 2017 \$(000)	Actual 2016 \$(000)
Funding from Crown	7,073	6,953	5,898
Interest Received	147	236	239
Other	-	-	-
Total Revenue	7,220	7,189	6,137
Cost of Output	7,431	8,225	6,900
Surplus (Deficit)	(211)	(1,036)	(763)

What we fund under this output

The HRC offers a programme of career-development awards, each aimed at addressing a gap in the health research workforce and building vital capacity. All career-development awards are made after expert review of the potential and record of the applicants and their proposed research.

In 2016/17, six Sir Charles Hercus Postdoctoral Fellowships (SCHPF) were awarded. This is the highest number that we have ever supported in one year. The SCHPF are among the HRC's most prestigious fellowships, and are available to outstanding emerging researchers (4–8 years post PhD) who wish to establish careers in health research in New Zealand. The aim of this scheme, established in 2003, is to support future leaders in health research, and to build capacity for world-class research that contributes to health and economic gains for New Zealanders.

A recent evaluation of the Fellowship scheme demonstrated that it plays an important role in advancing the careers of New Zealand's most talented health researchers. Former Hercus Fellows said that the awards had helped them to establish themselves as independent researchers, form research teams, and build relationships with collaborators. Fellows had received significant recognition of their work, including the Zonta Science Award, the Prime Minister's Prize for Science Media Communication, the Royal Society of New Zealand's Callaghan Medal, and the HRC's Liley Medal.

In 2016/17, 55 Career Development Awards were approved, including Clinical Research Training Fellowships, Disability Research

Our KPIs for Output 2

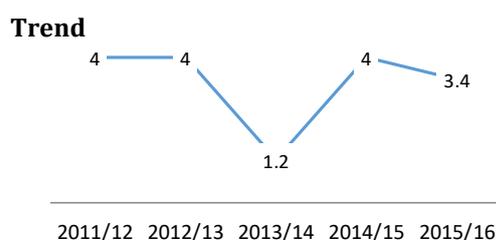
Annual 2016–17
Performance indicator Average number of HRC Project or Programme contracts awarded to Sir Charles Hercus Postdoctoral Fellowship (SCHPF) award recipients

Target 2016/17

2–5
The SCHPF is awarded to future research leaders. We track the careers of recipients to see if they remain in health research (see performance indicator in Outcome 3, p30). If we have identified strong candidates they should compete successfully in future HRC funding rounds.

Actual 2016/17

3.2
Met
This is well within the range that we hoped to see. Our SCHPF Fellows are achieving great things and demonstrating that they are continuing to attract HRC support shows we are addressing future workforce capacity – and assisting research providers with succession planning



Placement Awards, Māori and Pacific Health Research Career Awards, Foxley and Girdlers Fellowships, and Practitioner Research Fellowships. The HRC recognised 11 researchers with the first HRC Established Researcher Awards, for outstanding contributions to health research excellence, leadership, and impact.

In 2016/17, the Council also approved a further \$1.0m to support two fellowships for leaders in Māori health research, which will be actioned in August 2017. We have evaluated our success in creating career pathways for Māori in 2017 (see the summary of results on p32).

In addition to awarding an unprecedented seven research projects focusing on improving the health of New Zealand's Pacific community in the past year; we have also met our higher target for the number of Pacific Career-Development Awards funded.

Alignment with HRC's outcome framework

Career development contracts supported through this Output, deliver to the following outcomes:

- Outcome 2: The healthcare system is improved through research evidence and innovation.
- Outcome 3: The best clinicians and health researchers are supported and retained in New Zealand, and
- Outcome 4: The impact, responsiveness, and uptake of health research is increased.

Our KPIs for Output 2:

Annual	Performance indicator
2016–17	Number of Pacific Health Research Scholarships awarded (including Masters, PhD, and postdoctoral awards)

Target
2016/17



8–14

We have increased our focus on Pacific workforce development with the introduction of two new types of scholarships. Last year we funded 11, and so increased our targets

Actual
2016/17



11
Met

We were able to maintain the higher number of Pacific career development contracts awarded that we achieved in 2015/16. Together with the higher number of research contracts awarded to Pacific investigators this year, this indicates that we are making progress in building capacity to address Pacific health issues.

Trend: 6 in 2014/15, 11 in 2015/16

Annual	Performance indicator
2016–17	Number of Māori Health Research Scholarships awarded (including Masters, PhD, and postdoctoral awards)

Target
2016/17



8–14

We have had a sustained focus on Māori health research workforce development and aim to achieve a steady increase in the size of the Māori health research workforce

Actual
2016/17



13
Met

We were able to further increase the number of Maori career development contracts awarded in the 2016/17 year.

Trend: 9 in 2014/15, 11 in 2015/16

Output 3: Co-funding relationships

Income and expenditure in 2016/17 under this output

Cost 2016/17	Actual 2017 \$(000)	Budget 2017 \$(000)	Actual 2016 \$(000)
Funding from Crown	4,155	3,353	4,163
Interest Received	389	336	330
Other	362	679	646
Total Revenue	4,906	4,368	5,139
Cost of Output	4,420	5,192	2,942
Surplus (Deficit)	486	(824)	2,197

Scope of the Output

HRC co-funds research through our Partnership Programme – which delivers research that meets the needs of policy-makers and those involved in healthcare delivery.

Our partnership model allows us to pool our resources with those of our funding partners so that the research we're able to support is more substantive than each agency could afford to commission alone. Having multiple agencies involved increases the utility and uptake of the resulting research. 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.

Co-funding is a useful tool to promote the 'ownership' of health-research outcomes by other agencies, thereby increasing the likelihood that there will be transfer of research knowledge and translation into tangible change in policy or practice. The HRC invests in co-funding relationships through the Partnership Programme and the International Relationships Fund.

The Partnership Programme

The HRC established the Partnership Programme in 2000 to deliver research that more effectively meets the knowledge needs of policy-makers, planners, and those involved in healthcare delivery.

Through the Programme, the HRC partners directly with stakeholders to commission research. Since the inception of the scheme, we have entered into funding agreements with a wide range of partners – both government and non-government agencies.

Use of the HRC's expertise and processes for commissioning research is a prerequisite in all funding agreements. We also commission

Our KPIs for Output 3

Annual 2016–17	Performance indicator
	Number of Research Partnerships for NZ Health Delivery (RPNZHD) contracts awarded

Target
2016/17



4

These partnerships deliver research that is needed by the health sector for planning, service delivery, or patient care. Researchers team with health-sector stakeholders to increase the utility of the research. These projects are a key part of our strategy to achieve this impact and so we will continue to fund four new projects per year.

Actual
2016/17



5

Exceeded

We have maintained our investment in these contracts and are currently reviewing them to establish how we can better integrate this investment with our New Zealand Health Delivery Research Investment Stream

Trend: 4 in 2014/15; 4 in 2015/16

health research on behalf of other funders who wish to take advantage of these processes, but do not require co-funding from the HRC.

In 2016/17, the **HRC**, **Ministry of Health**, and **Healthier Lives National Science Challenge** funded three contracts designed to generate an evidence-base to support innovative, effective approaches to the prevention and management of diabetes.

In 2016/17, the **HRC** and **PHARMAC** have partnered to improve knowledge of medicines use in New Zealand. Under the new **Joint Pharmaceuticals Research Fund**, the HRC has funded two projects.

In 2016/17, the tripartite initiative between the **HRC**, **Breast Cancer Cure**, and **The New Zealand Breast Cancer Foundation** announced funding for three contracts.

Global Alliance for Chronic Diseases

The Global Alliance for Chronic Diseases (GACD) funds joint programmes that target lifestyle-related or chronic problems such as heart disease, diabetes, certain cancers, lung diseases, and mental health. The HRC joined the Alliance in 2017, with the support of MBIE. The GACD includes public funding agencies, from three of New Zealand's major research partners: Australia, Canada, and China.

The GACD has committed to making mental health a global development priority, and the HRC's first initiative as part of GACD is to fund research worth up to \$2 million into mental health for Māori and Pacific youth. In partnership with the **Ministry of Health**, the HRC will fund researchers to develop innovative strategies to support at-risk young people who have mental health problems, such as depression, anxiety, schizophrenia, or bipolar affective disorders.

Catalyst Crown Fund

The Catalyst Crown Fund (CCF, previously The International Relationships Fund) has been created by MBIE to foster international collaboration for science and technology-linked activities which advance New Zealand's national interests.

The HRC administers several Catalyst Fund programmes, which are detailed below.

In 2016/17, the HRC assessed applications for funding under the **NZ-China Strategic Research Alliance**. The purpose of this fund is

to develop collaboration opportunities through the creation and sharing of knowledge, insights, networks, and research and commercial partnerships. The HRC has made recommendations to MBIE to enable it to make final funding decisions in collaboration with its Chinese counterpart.

In 2016/17, the HRC has allocated several **NZ-US Enabling Grants** according to a work plan on non-communicable diseases in the Pacific region, with a specific focus on prevention of childhood obesity. These are seeding grants, designed to support the development of linkages and collaborations between researchers in New Zealand and the United States of America.

The Human Frontier Science Program (HFSP)

The Human Frontier Science Program aims to fund frontier research in the life sciences. The current members of the International Human Frontier Science Program Organization (HFSP) are New Zealand, Australia, Canada, France, Germany, India, Italy, Japan, Republic of Korea, Norway, Singapore, Switzerland, the United Kingdom, the United States of America, and the European Union.

New Zealand's membership of HFSP is via the HRC, with funding support from MBIE. The HRC's current Crown Funding Agreement for the 17/18 financial year provides funding support for another year. The HRC is continuing to support New Zealand researchers to apply to HFSP rounds, which are very competitive.

E-Asia

The **E-ASIA Joint Research Programme** is a multilateral funding scheme designed to support joint research projects among the ASEAN +8 countries. Members have prioritised funding in scientific or technological fields, or solutions to environmental and societal challenges. The Programme also aims to raise research capacity in the East and South East Asian regions by promoting collaborations through workshops and other means. The HRC represents New Zealand as a Member Organisation, and in 2016 hosted a meeting of the E-ASIA network and administered a funding round for research on infectious disease.

In 2016/17, \$0.45m will be invested in one three-year research project on either

infectious diseases or cancer. The project will involve New Zealand researchers in collaboration with individuals from at least two other E-Asia members.

International collaborations

Other new developments in 2016/17 include:

- The HRC has negotiated a **Memorandum of Understanding** on scientific cooperation with the **National Natural Science Foundation of China** (NSFC). The arrangement paves the way for establishing new scientific partnerships and strengthening existing collaborations, to foster breakthroughs in biomedical research and to promote career development for researchers from both countries.
- The HRC is facilitating a pilot for the **European Commission** with researchers in Australia on how to implement its **Joint Program Initiative** “A healthy diet for a healthy life” with countries in the Asia-Pacific region.
- The HRC is supporting MBIE in its development of a new strategy for international science collaboration.

Alignment with HRC’s outcome framework

Career development contracts supported through this Output, deliver to the following outcomes:

- Outcome 1: New knowledge, solutions and innovations improve health.

Our KPIs for Output 3

Annual 2016–17	Performance indicator
	Number of new contracts supported through the Health Innovation Partnership fund
Target 2016/17	This partnership provides much needed evidence on the utility and cost-effectiveness of health technologies
	
Maintain relationship	
Actual 2016/17	We have managed to maintain and grow the partnership with the Ministry of Health to create a broader, strategic portfolio of co-investment (<i>see text</i>)
	
<i>Met</i>	

- Outcome 2: The healthcare system is improved through research evidence and innovation.
- Outcome 4: The impact, responsiveness and uptake of health research is increased.

Output 4: Contribution to policy, regulatory and ethical frameworks

Income and expenditure in 2016/17 under this output

Cost 2016/17	Actual 2017 \$(000)	Budget 2017 \$(000)	Actual 2016 \$(000)
Funding from Crown	285	285	285
Interest Received	-	-	-
Other	-	-	-
Total Revenue	285	285	285
Cost of Output	293	249	240
Surplus (Deficit)	(8)	36	45

Scope of the 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. Our impacts for this output are detailed below.

We make our contribution to the national ethics and regulatory environment for health



research primarily through the work of our 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).

The HRC Ethics Committee

The HRC Ethics Committee (HRCEC) provides advice on urgent or emerging ethical issues to provide value to partners, to champion the integrity of health research, and to manage its potential risks and benefits. These might include issues arising from genetic research, inequities or disparities in health, or from strategies on health and/or health research. The HRCEC also reviews the annual reports of approved Institutional Ethics Committees and advises on any issues raised. HRCEC is responsible for accrediting all the Health and Disability Ethics Committees (HDECs) and Institutional Ethics Committees (IECs) in New Zealand.

Informed consent

In 2017, the Health and Disability Commissioner sought advice from the HRCEC about research with participants who are unable to provide informed consent (e.g. those in intensive care). The Committee considered both the ethical dimensions and the legal framework in NZ, and advised that since evidence-based care could improve health outcomes in these patient groups, research should be allowed, with important restrictions. These restrictions should include proof that research questions couldn't be answered another way; that consent has been sought where possible; that an independent clinician has provided consent in consultation with whānau; that the research has been reviewed and approved by an accredited research ethics committee; and that all safety risks have been minimised in relation to benefits for current or future participants.

Further, the Committee recommended a review of NZ's legal framework, with changes to the Protection of Personal and Property Rights Act and to the Code of Rights. These changes would establish the lawfulness of

research involving non-consenting participants; institute legally binding safeguards; clarify the accountability and function of researchers and ethics committees; and incorporate the attitudes and values of tangata whenua, including notions of collective decision-making.

Big data

In 2017, the HRC EC provided advice to Precision Driven Health, a partnership between Orion Health, the University of Auckland, and Waitemata District Health Board, which has support from MBIE. Precision Driven Health is a commercial entity which aims to apply new data-science techniques to enable individuals to better manage their own health. It uses and links data from a range of sources including health information systems, consumer devices, social networks, and genetic testing. Potential ethical challenges associated with these massive volumes of data include collection, consent, privacy, data linkage, security interpretation, and managing the range of potential options for research.

The HRC is offering appropriate guidance on these issues, and may help Precision to establish a governance group or process for managing ethical questions, including recognition of the rights and interests of Māori. The HRC can also link NZ entities like Precision with work that has been done by international counterparts overseas, such as organisations in the UK which are currently implementing recent European legislation in this area.

Alignment with HRC's outcome framework

Activities supported through this deliver to the following outcome:

Outcome 4: The impact, responsiveness and uptake of health research is increased.

Our annual KPIs for Output 4

1. Number of *Ethics Notes* published to inform researchers of issues on ethics in health research

Target
2016/17



1

These notes are an important tool for reaching the health research community and so we have used their publication as a metric for disseminating key information and advice.

Actual
2016/17



1

Met

We have reduced the number of publications per year so that we can focus on increasing the quality and relevance of the content. One quality publication is sufficient to communicate the key messages and updates annually

Trend: 3 in 2013/14; 2 in 2014/15, and 2 in 2015/16.

2. Percentage of appeals resolved within the target timeframe of 6 weeks from acceptance of the appeal

Target
2016/17



100%

Timeliness is key for responding to appeals on the decision of an HDEC because researchers cannot proceed with their work until a resolution is obtained, funders cannot release the funds, and the HDEC cannot close the case. Although we get few appeals (there has not been one since 2013), this is an important function for the HRC

Actual
2016/17



**No
appeals
received**

*Not
measured*

We were unable to calculate this measure because we received no appeals in the timeframe. This is a positive thing, as it means that no applicants thought that they had been dealt with unfairly and so no intervention was required from the HRC.

Trend: Not calculated in 2014/15 or 2015/16 because there were no appeals.

3. Number of HDECs reviewed and approved by the HRC annually

Target
2016/17



4

Approving HDECs is an important role for the HRC and so we continue to set targets.

Actual
2016/17



4

Met

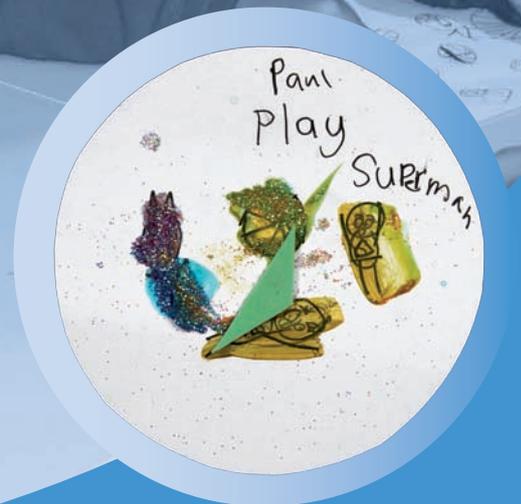
This is an invaluable service for the national health research ethics system, and the HRC has a key role to play in ensuring that all HDEC's meet the same high standard.

Trend: 4 in 2013/14; 4 in 2015/16

Part 4.

Organisational Information

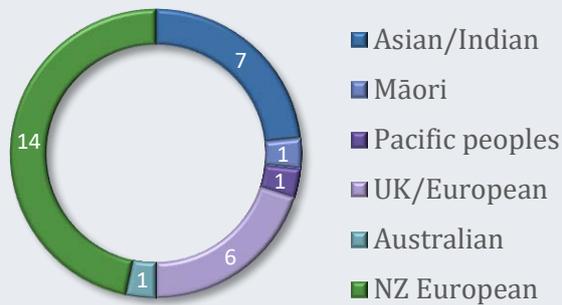
"My brain holds my imagination"



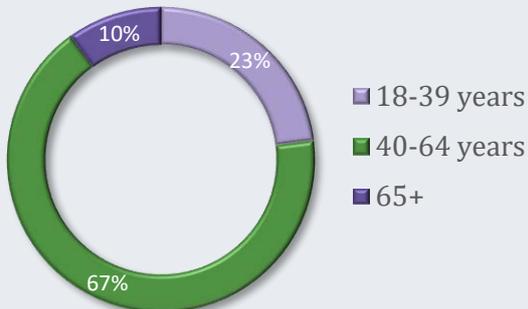
Part 3: Organisational information

Meet Our People

Ethnicity



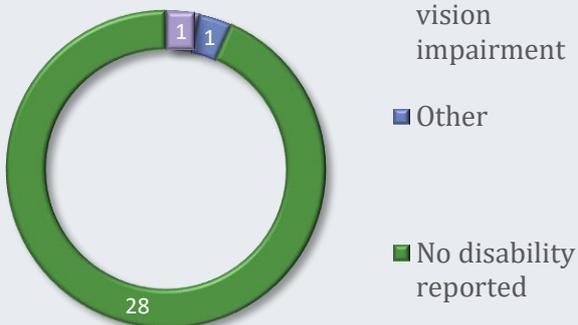
Age



Average length of service **8.5 yrs**

Staff turnover in 2016/17 **10%**

Disability



Employment type



The Health Research Council of New Zealand aims to be an Employer of Choice. To that end, a range of strategic and operational procedures are in place as described below.

Our leadership team and Council regularly review our performance according to the key

elements recognised as required for being a good employer. Employee numbers at the Health Research Council have stayed relatively steady with 27 full-time equivalent staff at the end June of 2017.

The infographic (left) outlines the make-up of our staff which is diverse across all domains; we aim to ensure our workplace is accessible for diversity across these domains. For example, we have some members of staff with specific health needs across a range of conditions (some health conditions and disabilities are not disclosed as is a person's right). We have two staff members who play a key role and who have disclosed their disability to the Council and we work to ensure the worksite is accessible to them. However, we also wish to ensure our workplace is accessible to potential disabled employees. To that end, we have engaged with an independent organisation (Be Accessible) which has helped us identify steps to facilitating the accessibility of our organisation as an employer of choice for disabled people. We are further exploring a programme offered by Be Accessible to support an internship for young disabled people to work with our organisation. We have ensured our work site is accessible to people with mobility impairment (such as wheelchair use). Our health and safety committee regularly reviews aspects of the workplace that might impact on those members of staff and visitors with specific needs, as well as more generally.

As might be expected, given our mandate, we have a high proportion of staff with doctoral degrees and/or degree-level and professional qualifications. We also have a number of staff without formal academic qualifications.

Leadership, accountability, and culture

Following a change in the structure of the leadership team and associated accountabilities in 2016, HRC has enjoyed a period of stability in the senior leadership team.

Leaders of each portfolio of work meet weekly to identify key areas of opportunity, issues of concern, and priority initiatives. Information about key activities and priorities is shared with all staff via reporting lines (face to face and written) to ensure clarity and transparency. Staff have opportunities to give feedback directly to the CE via a monthly meeting (or one-to-one meetings) and through surveys of staff opinion regarding ideas for development, and feedback about the Council as a place to work.

Our most recent 'Ask Your Team' survey signalled extremely high engagement with a

97% response rate and the survey identified a number of areas that staff feel are working extremely well. One area where staff indicated improvement could be made was in better understanding how to access development and training opportunities. This has led to an overhaul of our processes and investment in this regard.

We have a very active Council who monitor performance, challenge the leadership team, and provide a key role in ensuring accountability within the organisation. Representation on our Council is diverse in relation to gender, background, and ethnicity.

We adopt a constant quality-improvement approach to facilitating development of the organisation and ensuring we proactively engage with and respond to our many stakeholders, and facilitate our influence upon the system within which we work. The culture of the organisation is open and friendly, with a clear focus on achieving our mandate. The leadership model is one of inclusivity and transparency in order to support and encourage all staff to perform at their optimum. For the first time, the organisation has identified core values and these are embedded into position descriptions and decision making.

Recruitment, selection, and induction

HRC follows Equal Employment Opportunities guidelines (EEO). Our emphasis is always on recruitment of the best person to do the job regardless of gender, nationality, disability, or age. We receive human resources support from an approved external agency, to enable us to ensure impartial and transparent employment processes that guarantee there is no barrier to employing the best people for the job. The Council has a comprehensive induction and on-boarding process which provides operational and support information. New employees are individually talked through the organisation's policies and procedures, which are reviewed and updated on a regular and scheduled basis that is monitored by the office of the Chief Executive. All staff are invited to comment on and regularly review the Council's EEO policy (and other policies) with the senior leadership team and through our 'Ask Your Team' survey which is anonymous.

Employee development, promotion, and exit

This year, in response to feedback from staff, the process for identifying and supporting training and development opportunities was identified as a priority and updated. All staff members are now actively encouraged to identify their particular needs and interests and develop their skills knowledge through attending in-house and external training courses and attending conferences in their field of expertise.

A positive, equitable approach to staff development is achieved through allocating each staff member a defined training and development budget, and through developing a culture of constant learning.

Employees are encouraged to initiate and take part in development and social opportunities in team building. In the past 12 months, employees have taken part in a range of activities to celebrate both Māori language week and Pacific cultural awareness activities as well as a series of workshops on enhancing communication to strengthen collaborative working.

There is a formalised annual performance review system which is also intended to enable staff to reach the goals and objectives identified for them whilst finding opportunities for their development within the organisation. A twice annual formal appraisal session has been introduced along with all managers engaging informally with their staff around any concerns arising between these formal sessions to ensure performance is acknowledged and difficulties addressed.

As we are a comparatively small, and very stable workplace, opportunities for promotion are somewhat limited. In view of this, opportunities are being provided for a small number of experienced team members to take on more senior roles within their teams. For those in the organisation where opportunities for promotion are not currently available, the leadership team approach is to encourage and facilitate autonomy and to acknowledge success and achievement.

We have extremely high staff retention rates. However, on occasions where staff do resign or retire, our policy is for the reporting manager to ensure the appropriate actions are undertaken to manage the exit, support the staff member who is leaving and address needs that arise for other staff and for the

organisation. On occasions where exit issues arise that are out of the ordinary, we utilise the support of our human resources team.

Flexibility and work design

The organisation offers a flexible approach to personal circumstance through flexible hours; glide time; opportunities for part-time employment to facilitate return for people on parental leave and those with other commitments; and an Employee Assistance Programme. Staff can also request to work from home in special circumstances. Work flow is monitored by managers to ensure appropriate support is given to staff at times of high pressure. Although we have multiple streams of work, we have a 'one HRC' approach so that there is cross-portfolio working and collaboration on new initiatives.

Remuneration, recognition, and conditions

The organisation takes part in regular national salary surveys to ensure its salaries are benchmarked against a range of public and private organisations. In 2016, we initiated a review of all positions to inform development of a Remuneration Strategy to guide changes in remuneration. This process was completed in June 2016 and as roles change or new roles are created, advice on market remuneration guides remuneration offered.

We have a comprehensive set of policies regarding conditions of employment that are regularly updated and reviewed as noted in other parts of this section of the Annual Report. In 2016/17, we have undertaken a full review and update of a number of policies in light of change in legislation or heightened awareness in the sector to protect and support staff. Key examples are our health and safety policy and fraud-prevention policies, where we have instituted access to an anonymous whistleblowing hotline for staff.

Harassment and bullying prevention

Clear policies concerning harassment and bullying prevention are in place, and are regularly discussed and reviewed within the organisation at both the HRC team and Board levels. Our primary prevention strategies are to have a very clear principle of 'zero tolerance', to have an agreed set of values and principles by which staff work, and having a clear and transparent communication approach about new initiatives or change. On

occasions where a behaviour observed by any member of staff is perceived to be a potential precursor to harassment or bullying (such as short temper or anxiety), discussion with the staff members concerned is enacted (by their line manager or the Chief Executive) to address the cause of the issue and make appropriate referral (for example to the Employee Assistance Programme). In cases of bullying or harassment, the policy is adhered to and human resources expertise engaged. All staff and Council members are reminded of the policy and the organisation's zero tolerance.

The Council recently reviewed its harassment and bullying policy, following the recent completion and dissemination of best-practice sexual harassment policy guidelines by the State Services Commission.

A safe and healthy environment

There is an active Health and Safety Committee which meets regularly to ensure a safe and healthy environment. Each member of

the Committee has a specific responsibility, including a specific portfolio for 'health and wellbeing at work'. We encourage reporting of any issues of concern and a register of these is kept along with the Committee's response or recommendation. These reports are provided to the Chief Executive.

There is a review of health and safety at the start of each Board meeting and the Risk and Assurance Sub-committee of the Board considers health and safety in detail including a comprehensive site visit each year and a meeting with the Health and Safety Committee. We provide access for staff to an Employee Assistance Programme with regular updates on that service circulated generally. Specific advice or referral is provided to staff on occasions where a manager feels this is warranted. The organisation provides a number of health and wellbeing supports to staff including ergonomic work station assessment for new staff, or if discomfort is reported, and free flu inoculations are available to all staff at the beginning of winter.

Permission to Act Disclosure of the Council – Crown Entities Act 2004 section 68(6)

Interest/Specified class of interest to which permission relates	Who gave permission to act and date	Permission to act	Conditions
Employment at the institution in the same department of a First Named Investigator <i>submitting an application for funding</i>	G Fraser, Chair, HRC Board 14 June 2006	Remain in the room but not participate in the discussion	As long as minimum interest and not in an administrative role
Employment at the institution which is <i>the subject of an application for funding</i>	G Fraser, Chair, HRC Board 14 June 2006	Take part in discussion relating to the matter	Comment on fact only
Employment at the institution which is <i>the subject of an application for funding</i> whose involvement is deemed to be helpful	G Fraser, Chair, HRC Board 14 June 2006	Remain in the room and participate in the discussion but not in the decision	Particular situation noted in the minutes

None of the permissions were amended or revoked.

Membership of Council and statutory committees

As at 30 June 2017

Council

Dr Lester Levy, CNZM (Chair)	Professor (Adjunct) of Leadership, University of Auckland Business School
Dr Will Barker	Managing Director, Mint Innovation, Auckland
Professor Jeroen Douwes	Director, Centre for Public Health Research, Massey University, Wellington
Dr Monique Faleafa	Chief Executive, Le Va, Wise Trust, Auckland
Professor Parry Guilford	Director, Cancer Genetics Laboratory and the Centre for Translational Cancer Research, University of Otago, Dunedin
Professor Lesley McCowan, CNZM	Head of Department, Department of Obstetrics & Gynaecology, University of Auckland, Auckland
Professor Andrew Mercer	Director, Virus Research Unit, Department of Microbiology and Immunology, University of Otago, Dunedin
Mr Tony Norman, ONZM	Governance and finance advisor, Whangaparaoa
Associate Professor Suzanne Pitama	Associate Dean Māori, MIHI (Māori/Indigenous Health Institute), University of Otago, Christchurch
Ms Suzanne Snively, ONZM	Economic and business entrepreneurialism strategist, Wellington

Biomedical Research Committee

Professor Andrew Mercer, (Chair)	Department of Microbiology and Immunology, University of Otago, Dunedin
Professor Laura Bennet	Department of Physiology, Faculty of Medical and Health Sciences, The University of Auckland, Auckland
Professor Mike Berridge	The Malaghan Institute of Medical Research, Wellington
Associate Professor Bronwen Connor	Centre for Brain Research, Faculty of Medical and Health Sciences, The University of Auckland, Auckland
Professor John Kolbe	Department of Medicine, Faculty of Medical and Health Sciences, The University of Auckland, Auckland
Associate Professor Patrick Manning (Co-opted)	Dunedin Hospital, Dunedin
Associate Professor Sally McCormick	Department of Biochemistry, University of Otago, Dunedin
Associate Professor Julia Horsfield	Department of Pathology, Dunedin School of Medicine, Division of Health Sciences, University of Otago
Associate Professor Alexander McLellan	Department of Microbiology & Immunology, Otago School of Medical Sciences, University of Otago, Dunedin

Public Health Research Committee

Professor Jeroen Douwes (Chair)	Centre for Public Health Research, Massey University, Wellington
Associate Professor Jacqueline Cumming	Health Services Research Centre School of Government, Victoria University of Wellington, Wellington
Dr Hinemoa Elder	Māori health, Auckland
Professor Merryn Gott	School of Nursing, The University of Auckland, Auckland
Professor Jane Koziol-McLain	School of Nursing, Auckland University of Technology
Associate Professor Patricia Priest	Department of Preventive & Social Medicine, Dunedin School of Medicine, University of Otago, Dunedin
Professor Robert Scragg	Section of Epidemiology and Biostatistics, School of Population Health, The University of Auckland, Auckland
Professor Mark Weatherall	Department of Medicine, University of Otago, Wellington

Māori Health Committee

Ms Suzanne Pitama (Chair)	Māori Indigenous Health Institute, University of Otago, Christchurch
Dr Meihana Durie (co-opted)	Postdoctoral Fellow
Dr Shiloh Groot	Department of Psychology, Faculty of Science, University of Auckland, Auckland
Dr Ricci Harris	Senior Research Fellow, Te Ropu Rangahau Hauora a Eru Pomare, Department of Public Health, University of Otago Wellington, University of Otago
Professor Helen Moewaka Barnes	Director, Whariki Research Group, Massey University Albany Campus, Auckland
Dr Sarah-Jane Paine	Research Fellow, Te Kupenga Hauora Maori, School of Population Health, Faculty of Medical and Health Sciences, University of Auckland, Auckland
Dr Mohi Rua	Senior Lecturer, School of Psychology, University of Waikato
Mr Paul White	Director, Torea Tai Consultants Ltd, Northland
Dr Emma Wyeth	Director, Ngāi Tahu Māori Health Research Unit, Dunedin School of Medicine, University of Otago

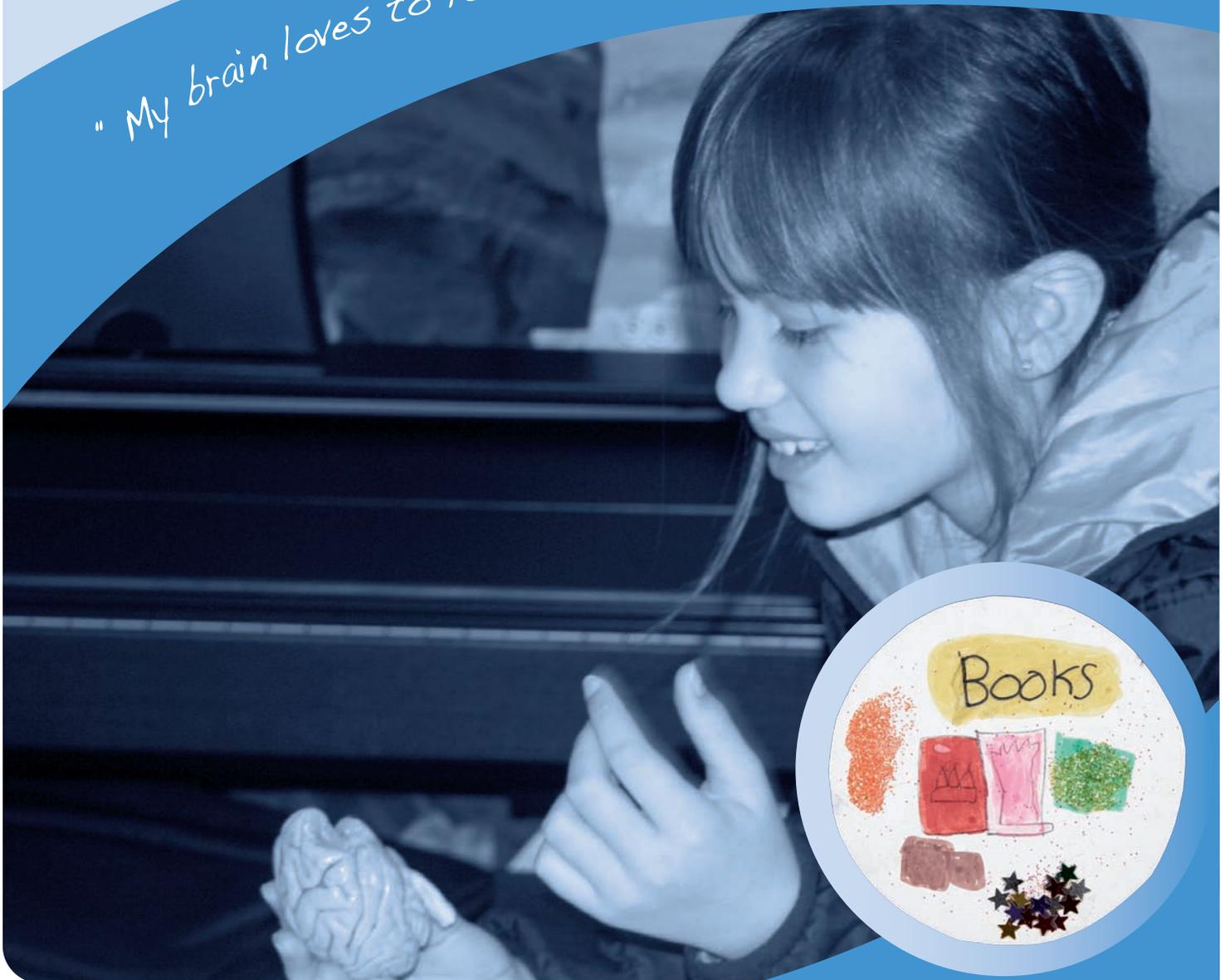
Ethics Committee

Dr Lynley Anderson (Chair)	Bioethics Centre, Medical and Surgical Sciences, Dunedin School of Medicine, University of Otago, Dunedin
Professor Parry Guilford	Director, Cancer Genetics Laboratory and the Centre for Translational Cancer Research, University of Otago, Otago
Professor David Gareth Jones (CNZM)	Department of Anatomy, Otago School of Medical Sciences, University of Otago, Otago
Professor Lesley McCowan, ONZM	Head of Department, Department of Obstetrics & Gynaecology, The University of Auckland, Auckland
Ms Catherine Ryan	Lawyer, Auckland
Dr Barry Smith	Lakes District Health Board, Rotorua
Associate Professor Huia Tomlins Jahnke	Māori Education, Te Uru Maraurau, School of Māori and Multicultural Education, Massey University, Palmerston North

Part 5.

Financials

"My brain loves to read"



Statement of Comprehensive Revenue and Expense

for the year ended 30 June 2017

	Note	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Revenue				
Funding from the Crown	2	93,404	93,281	83,377
Interest Revenue		755	842	825
Other Revenue		363	679	646
Total Income		94,522	94,802	84,848
Expense				
Research Grant costs	3	90,770	94,699	78,796
Operational costs				
Assessment and Council Committee costs		963	1,132	912
Personnel costs		2,965	3,178	2,741
Depreciation and amortisation expense		155	83	76
Fees to Audit New Zealand for the audit of the financial statements		62	61	61
Other costs		835	888	752
Total operational costs		4,980	5,342	4,542
Total Expenses		95,750	100,041	83,338
Surplus/(Deficit)		(1,228)	(5,239)	1,510
Other Comprehensive Revenue and Expense		0	0	0
Total comprehensive revenue and expense		(1,228)	(5,239)	1,510

Statement of Changes in Equity

for the year ended 30 June 2017

		Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Equity at the beginning of the year		15,845	15,957	14,335
Total comprehensive revenue and expense for the year		(1,228)	(5,239)	1,510
Equity at the end of the year	5	14,617	10,718	15,845
Represented by				
Public Equity		12,988	8,961	14,159
Foxley Estate Reserve Fund		1,629	1,757	1,686
Total Equity at 30 June	5	14,617	10,718	15,845

The accompanying accounting policies and notes form part of these financial statements

Statement of Financial Position

as at 30 June 2017

	Note	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Current Assets				
Cash at Bank		1,542	243	812
Short-Term Deposits	4	10,566	11,492	18,371
Short-Term Investments	4	4,800	0	0
Funds held on behalf of – Other Agencies	4	18,387	10,597	16,418
Funds held on behalf of – Foxley Estate	4	1,629	1,757	1,686
Receivables		2,612	398	1,079
Total Current Assets		39,536	24,487	38,366
Non-Current Assets				
Property Plant & Equipment		261	339	348
Intangible Assets		78	161	103
Total Non- Current Assets		339	500	451
Total Assets		39,875	24,987	38,817
Current Liabilities				
Payables		774	203	466
Contract Retentions		3,307	2,704	4,646
Employee Entitlements		190	167	190
Rental Benefit in Advance		21	181	21
Unearned Management Fees		422	417	468
Funds held on behalf of other agencies	4	3,115	1,753	2,346
Total Current Liabilities		7,829	5,425	8,137
Non-Current Liabilities				
Funds held on behalf of other agencies	4	17,270	8,844	14,655
Rental Benefit in Advance		159	0	180
Total Non-Current Liabilities		17,429	8,844	14,835
Total Liabilities		25,258	14,269	22,972
Net Assets		14,617	10,718	15,845
Equity				
Public Equity		12,988	8,961	14,159
Foxley Estate Reserve Fund		1,629	1,757	1,686
Total Equity	5	14,617	10,718	15,845

The accompanying accounting policies and notes form part of these financial statements

Statement of Cash Flow

for the year ended 30 June 2017

	Note	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Cash flows from operating activities				
Cash was provided from				
Receipts from the Crown		93,404	93,281	83,377
Interest received		736	842	871
Other Revenue		844	850	683
		<u>94,984</u>	<u>94,973</u>	<u>84,931</u>
<i>Cash was applied to</i>				
Payments to suppliers		(93,475)	(96,918)	(79,520)
Payments to employees		(2,869)	(2,928)	(2,719)
GST		(348)	0	(279)
		<u>(96,692)</u>	<u>(99,846)</u>	<u>(82,518)</u>
Net cash flow from operating activities	11	(1,708)	(4,873)	2,413
Cash flows from Investing activities				
<i>Cash was provided from</i>				
Funds held on behalf of other agencies		4,635	7,491	3,654
Maturing Term Deposits		102,212	102,200	106,666
		<u>106,847</u>	<u>109,691</u>	<u>110,320</u>
<i>Cash was applied to</i>				
Funds paid on behalf of other agencies		(3,250)	(14,176)	(5,738)
Reinvestment of Term Deposits		(101,117)	(90,867)	(107,140)
Purchase of Property Plant & Equipment		(43)	(131)	(155)
		<u>(104,410)</u>	<u>(105,174)</u>	<u>(113,033)</u>
Net cash flow from investing activities		2,437	4,517	(2,713)
Net increase (decrease) in cash held		729	(356)	(300)
Cash at Bank beginning of year		812	599	1,112
Cash at Bank end of year		<u>1,542</u>	<u>243</u>	<u>812</u>

The accompanying accounting policies and notes form part of these financial statements

Notes to the Financial Statements

For the year ended 30 June

Note 1 - Statement of accounting policies

Reporting Entity

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 HRC's operations includes the Crown Entities Act 2004 and the HRC Act 1990. HRC's ultimate parent is the New Zealand Crown.

HRC's primary objective is to benefit New Zealand through health research. HRC does not operate to make a financial return. 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 2017, and were approved by the Board on 30 October 2017.

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. There are no new standards, amendments to standards and interpretations that have been issued but are not yet effective that are applicable to HRC for the year ended 30 June 2017

Statement of compliance

The financial statements of 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).

Summary of Significant Accounting Policies

Significant accounting policies are included under the note to which they relate. Significant accounting policies that do not relate to a specific note are outlined below.

a) Revenue

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.

Summary of Significant Accounting Policies (continued)

b) Property Plant & Equipment and Intangible Assets

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 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%

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

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 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.

Summary of Significant Accounting Policies (continued)

d) 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 such time as 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 such time as the funding withheld is paid when the final research report is completed and provided to HRC.

e) Employee entitlements

Short-term employee entitlements

Employee benefits that are due to be settled within 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 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. All other employee entitlements are classified as a non-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.

f) Receivables

Short-term receivables are recorded at the amount due, less any provision for impairment. A receivable is considered impaired when there is evidence that HRC will not be able to collect the amount due. The amount of the impairment is the difference between the carrying amount of the receivable and the present value of the amounts expected to be collected.

g) Payables

Short-term payables are recorded at the amount payable.

h) 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.

i) Income Tax

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

Summary of Significant Accounting Policies (continued)

j) 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. Explanation of major variances against budget are provided in note 15).

k) Cost allocation

HRC has determined the cost of outputs using the cost allocation system outlined below. There have been no 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 on the basis of asset utilisation. Personnel costs are charged on the basis of actual time incurred. Property and other premises costs, such as maintenance, are charged on the basis of floor area occupied for the production of each output. Other indirect costs are assigned to outputs based on the proportion of direct staff costs for each output.

l) Critical accounting estimates and assumptions

In preparing these financial statements, 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.

m) 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. HRC has determined no lease arrangements are finance leases.

Research Grant Expenditure

For purposes of making payments 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.

Notes to the Financial Statements (continued)

Note 2 - Revenue from the Crown

	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Non-exchange revenue			
Ministry of Business, Innovation and Employment (MBIE)	93,119	92,996	83,092
Ministry of Health (MoH)	285	285	285
	<u>93,404</u>	<u>93,281</u>	<u>83,377</u>

Accounting Policy

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

Funding from the Crown

HRC is primarily funded from the Crown. This funding is restricted in its use for the purpose of HRC meeting the objectives specified in its founding legislation and the scope of the relevant appropriations of the funder. 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.

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 by Parliamentary Appropriation

	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Vote Health & Society Research	87,677	90,114	77,327
Vote Vision Mātauranga	2,352	3,728	1,084
Vote International Relationships	741	857	385
	<u>90,770</u>	<u>94,699</u>	<u>78,796</u>

Accounting policy

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.

Critical judgements in applying accounting policies

For purposes of making payments 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.

Notes to the Financial Statements (continued)

Note 4 – Cash, 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 short-term deposits which are invested with maturity dates of 4 months or less approximates their fair value.

Interest Rates

In FY2017 the effective interest rates on deposited funds ranged from 2.91% pa to 3.8% pa.

Funds held on behalf of other agencies

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 the HRC and 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 HRC and partners.

Funds held on behalf of – Foxely 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.

Notes to the Financial Statements (continued)

Note 5 - Equity

	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Movements in Equity			
Public Equity			
Balance 1 July	14,159	14,267	12,478
Surplus/(deficit) for the year	(1,228)	(5,239)	1,510
Transfer of Net Income from/(to) Foxely Reserve Fund	57	(67)	171
Balance 30 June	<u>12,988</u>	<u>8,961</u>	<u>14,159</u>
Foxley Reserve Fund			
Balance 1 July	1,686	1,690	1,857
Transfer (to)/from Accumulated Surplus/(deficit)	(57)	67	(171)
Balance 30 June	<u>1,629</u>	<u>1,757</u>	<u>1,686</u>
Total Equity at 30 June	<u><u>14,617</u></u>	<u><u>10,718</u></u>	<u><u>15,845</u></u>

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);
- Foxley Estate Reserve Fund.

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.

Notes to the Financial Statements (continued)

Note 6 - Operating Lease Commitments

	Actual 2017 \$000	Actual 2016 \$000
<i>Operating Leases as lessee</i>		
Not later than 1 year	248	248
Later than 1 year and not later than 5 years	621	869
Later than 5 years	-	-
Total non-cancellable operating leases	869	1,117
<i>Operating Leases as lessor</i>		
Not later than 1 year	83	83
Later than 1 year and not later than 5 years	208	291
Later than 5 years	-	-
Total non-cancellable operating leases	291	374

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 lease office premises. The lease payments recognised as an expense in the period totalled \$248,000 (2016: \$248,000). No restrictions are placed on HRC by any of its leasing arrangements.

Operating Leases as lessor

Part of the office premises are sub-let to a tenant in the same building which HRC occupies.

Notes to the Financial Statements (continued)

Note 7 - Categories of financial assets and liabilities

	Actual 2017 \$000	Actual 2016 \$000
<i>Loans and Receivables</i>		
Cash and cash equivalents	1,542	812
Short-Term Deposits	10,566	18,371
Short-Term Investments	4,800	0
Funds held on behalf of – Other Agencies	18,387	16,418
Funds held on behalf of –Foxley Estate	1,629	1,686
Receivables	2,612	1,079
Total loans and receivables	<u>39,536</u>	<u>38,366</u>
<i>Other Financial Liabilities measured at amortised cost</i>		
Payables	774	466
Contract Retentions	3,307	4,646
Funds held on behalf of other agencies	20,387	17,001
Total other financial liabilities	<u>24,468</u>	<u>22,113</u>

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 Group 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 settlement 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. Subsequent to initial recognition, they are measured at amortised costs using the effective interest method

Notes to the Financial Statements (continued)

Note 8 - 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 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. 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. HRC does not enter into transactions in foreign currency and does not hold any assets or liabilities denominated in foreign currency. 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 ratings 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. HRC's annual revenue from the Crown (note 2) is known at the start for each financial year. Commitments are controlled and limited to this known level and timing of revenue and available cash reserves. In the event that Government funding is not continued, or the progress and or quality of research expected is not achieved then HRC may discontinue contracts at its discretion.

Notes to the Financial Statements (continued)

The table below 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.

	Carrying Amount \$000	Contractual Cash flows \$000	Less than 6 Months \$000	6 to 12 months \$000	More than 1 year \$000
2017					
Payables	774	774	774	0	0
Contract Retentions	3,307	3,307	3,307	0	0
Funds held on behalf of other agencies	20,387	20,387	1,717	1,398	17,272
Total	24,468	24,468	5,798	1,398	17,272
2016					
Payables	466	466	466	0	0
Contract Retentions	4,646	4,646	4,646	0	0
Funds held on behalf of other agencies	17,001	17,001	1,630	716	14,655
Total	22,113	22,113	6,742	716	14,655

Note 9 - 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.

Notes to the Financial Statements (continued)

Note 10 - Employee Remuneration

Employees receiving over \$100,000

	Actual 2017 No. of Staff	Actual 2016 No. of Staff
100,000 to 109,999	1	1
110,000 to 119,999		
120,000 to 129,999	1	3
130,000 to 139,999	1	
140,000 to 149,999		
150,000 to 159,999		2
160,000 to 169,999		
170,000 to 179,999	1	1
180,000 to 189,999	2	
290,000 to 299,999		1
320,000 to 329,999	1	

Councillors' Fees

	Appointed	Retired	Actual 2017 \$	Actual 2016 \$
Sir R Stewart, KNZM	Sept 09	Dec 15		12,000
Dr L Levy, CNMZ	Jan 16		24,000	12,000
Professor R Beasley, CNZM	Sept 09	Jul 16	1,250	15,000
Dr M Harwood	Sept 09	Jun 17	12,000	12,000
Ms E Ludemann	Sept 09	Jun 17	12,000	12,000
Professor L McCowan, ONZM	Feb 14		12,000	12,000
Professor A Mercer	Nov 12		15,000	15,000
Associate Professor S Pitama	Jun 15		15,000	15,000
Dr C Powell	Sept 09	Jun 17	11,000	12,000
Ms S Snively, ONZM	Dec 10		12,000	12,000
Professor J Douwes	Sep 15		15,000	12,500
Professor P Guilford	Oct 16		9,000	
			<u>138,250</u>	<u>141,500</u>

Note 11 - Reconciliation of Operating surplus (deficit) to net cash flow from operating activities

	Actual 2017 \$000	Budget 2017 \$000	Actual 2016 \$000
Surplus/(deficit) for year	(1,228)	(5,239)	1,510
Add non-cash items			
Depreciation and Amortisation expense	155	84	76
Rent recovered	(21)	0	(15)
Add/(deduct) movements in working capital items			
Receivable (increase)/decrease	465	0	(27)
Payables increase/(decrease)	(1,079)	282	869
Net cash flow from operating activities	<u>(1,708)</u>	<u>(4,873)</u>	<u>2,413</u>

Note 12 - 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 reasonable to expect 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.

Key Management personnel compensation

	2017 \$000	2016 \$000
Board Members		
Remuneration	138	142
Full-time equivalent members	0.72	0.72
Leadership Team		
Remuneration	1,003	1,212
Full-time equivalent members	4.42	8.0
Total Key Management Personnel Remuneration	1,141	1,354
Total Full-Time Equivalent Personnel	5.14	8.72

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 \$62,031, 2 staff (2016: \$Nil, Staff, Nil)

Note 13 - Contingencies

As at 30 June 2017 the HRC has no contingent assets or contingent liabilities. (2016: Nil)

Note 14 - Post Balance Date Events

There have been no post balance date events that could impact the financial statements for the year ended 30 June 2017. (2016: Nil)

Notes to the Financial Statements (continued)**Note 15 - Explanation of major variances against budget \$000****Statement of comprehensive revenue and expense***Revenue*

Revenue was below budget driven by lower interest received from short-term deposits \$(87) K and lower joint venture fees \$(317) K offset by additional International Relationship funding provided by MBIE \$117K.

Expenditure

Research Grant Expenditure is lower than budget \$(3,929) K or 4.1% driven by slower than expected progress in finding and establishing effective research partnerships and low number of applications meeting the criteria for Vision Mātauranga grants.

Statement of financial position*Current assets*

The increase in current assets \$14,888K is the result of higher term deposits driven by higher than budgeted levels of partnership funds held \$9,788K and higher equity \$3,899K.

Total liabilities

The increase in total liabilities \$10,990K is the result of higher than budgeted levels of partnership funds held \$9,790K.

Statement of Cash Flow

Operating cash outflows were lower than budget by \$3,165K driven by lower than planned research grant cash paid \$3,443K.

Statement of Resources

As at 30 June 2017

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 \$0.25m including operating costs. The Research Staff occupy space at the University of Otago in Dunedin.

Staff Resources

	FTEs 2017	FTEs 2016
Operational staff		
Chief Executive	1.0	1.0
Senior Managers	3.0	5.0
Manager Pacific Health Research	1.0	1.0
Manager Maori Health Research	1.0	
Support staff	<u>19.1</u>	<u>18.4</u>
	<u>25.1</u>	<u>25.4</u>
Research staff		
Senior research staff	1	1
Other research staff	<u>1</u>	<u>1</u>
	<u>2</u>	<u>2</u>

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

Insurance Cover in respect of Board Members and Employees

The HRC has in place the following Insurance Policies

- 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

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

To the readers of The Health Research Council of New Zealand's financial statements and performance information for the year ended 30 June 2017

The Auditor-General is the auditor of the Health Research Council of New Zealand (the Health Research Council). The Auditor-General has appointed me, JR Smail, using the staff and resources of Audit New Zealand, to carry out the audit of the financial statements and the performance information of the Health Research Council on his behalf.

Opinion

We have audited:

- the financial statements of the Health Research Council on pages 62 to 78, that comprise the statement of financial position as at 30 June 2017, the statement of comprehensive revenue and expense, statement of changes in equity and statement of cash flow 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 15 to 37 and 40 to 52.

In our opinion:

- the financial statements of the Health Research Council on pages 62 to 78:
 - o present fairly, in all material respects:
 - its financial position as at 30 June 2017; and
 - its financial performance and cash flows for the year then ended; and
 - o comply with generally accepted accounting practice in New Zealand in accordance with Public Benefit Entity accounting standards;
- the performance information on pages 15 to 37 and 40 to 52:
 - o presents fairly, in all material respects, the Health Research Council's performance for the year ended 30 June 2017, including:
 - for each class of reportable outputs:
 - its standards of delivery performance achieved as compared with forecasts included in the statement of performance expectations for the financial year; and
 - its actual revenue and OUTPUT expenses as compared with the forecasts included in the statement of performance expectations for the financial year; and
 - o complies with generally accepted accounting practice in New Zealand.

Our audit was completed on 30 October 2017. This is the date at which our opinion is expressed.

The basis for our opinion is explained below. In addition, we outline the responsibilities of the Board and our responsibilities relating to the financial statements and the performance information, we comment on other information, and we explain our independence.

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 Board for the financial statements and the performance information

The Board 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 Board is responsible for such internal control as it determines is necessary to enable the preparation of 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 Board is responsible on behalf of the Health Research Council for assessing the Health Research Council's ability to continue as a going concern. The Board 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 Board's responsibilities arise from the Crown Entities Act 2004 and the Health Research Council Act 1990.

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.

- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board.
- We evaluate the appropriateness of the reported performance information within the Health Research Council's framework for reporting its performance.
- We conclude on the appropriateness of the use of the going concern basis of accounting by the Board 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 Board 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 Board is responsible for the other information. The other information comprises the information included on pages 1 to 14, 53 to 61, 79, 83 to 132, 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 (Revised): 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.



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

Appendix 1: The HRC's functions under the Health Research Council Act 1990

- a) To advise the Minister on national health research policy.
- b) To administer funds granted to the Council for the purpose of implementing national health research policy.
- c) To negotiate, once every 3 years, the bulk funding allocations that may be made to the Council by the Government for the funding of health research.
- d) To foster the recruitment, education, training, and retention of those engaged in health research in New Zealand.
- e) To initiate and support health research.
- f) To encourage initiatives into health research by soliciting research proposals and applications, particularly in areas considered by the Council to have a high priority.
- g) To consult, for the purpose of establishing priorities in relation to health research, with:
 - (i) the Minister of Health;
 - (ii) the Ministry of Health;
 - (iii) District Health Boards;
 - (iv) other persons who fund or produce research, whether in the public sector or the private sector, and
 - (v) persons who have knowledge of health issues from the consumer perspective.
- h) To promote and disseminate the results of health research in ways that will be most effective in encouraging their contribution to health science, health policy, and healthcare delivery.
- i) To advertise actively for applications for grants to support proposals or personal awards in relation to health research.
- j) To appoint the members of the Biomedical Research Committee, the Public Health Research Committee, the Māori Health Committee and the Ethics Committee.
- k) To ensure the development and application of appropriate assessment standards by committees or subcommittees that assess health research proposals.
- l) To administer any additional funds that may be made available to the Council from either public or private sources for the support of health research.

Appendix 2a: HRC contracts current as of 30 June 2017, or expired in the financial year

(Excluding contracts with a start date in the 2016/17 financial year)

Health and Wellbeing in New Zealand Contracts

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
16/679	Wellness	Intelligent Digital Environment for Wellbeing and Healthcare	\$0.15	Explorer Grant	Dr Richard Whiddett	Massey University
16/604	Aging	A life-course study on aging processes to inform early intervention strategies	\$4.99	Programme	Professor Richie Graham Poulton CNZM	University of Otago
16/529	Biomedical - pharmaceuticals/ treatments	New biomaterials from lens crystallin proteins for corneal tissue engineering	\$0.07	Emerging Researcher First Grant	Dr Laura Domigan	The University of Auckland
16/443	Cardio/cerebrovascular disease	BODE3: Modelling preventive interventions to improve health and social outcomes	\$4.95	Programme	Professor Tony Blakely	University of Otago
16/294	Child development	The Next Generation Studies	\$1.20	Project	Professor Bob Hancox	University of Otago
15/599	Wellness	Citizen empowerment for creating healthy community environments in New Zealand	\$0.15	Explorer Grant	Dr Stefanie Vandevijvere	The University of Auckland
15/540	Public health - risk factors	Systematic review and meta-analyses on health effects of dietary carbohydrates	\$0.15	Emerging Researcher First Grant	Dr Lisa Te Morenga	University of Otago
15/527	Occupational health	The effectiveness of a monitor & feedback device for changing postural behaviour	\$0.15	Emerging Researcher First Grant	Dr Daniel Ribeiro	University of Otago
15/513	Diabetes	Diabetes in Pregnancy effects on subsequent generations	\$0.10	Feasibility Study	Dr Rosemary Megan Hall	University of Otago
15/510	Aging	IL-1 signalling and developmental programming of offspring metabolic health	\$0.14	Emerging Researcher First Grant	Dr Clare Reynolds	The University of Auckland
15/429	Environmental health	He Kainga Oranga: translating housing research to practice for children's health	\$4.94	Programme	Professor Philippa Howden-Chapman	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
15/410	Aging	Premature celebration? The late effects of early birth	\$0.15	Emerging Researcher First Grant	Dr Mary Berry	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
15/261	Injury - intentional and unintentional	Older drivers, families and GPs: Navigating the path between mobility and safety	\$1.19	Project	Dr Rebecca Brookland	University of Otago
15/260	Disability	Enabling participation for children and young people with disabilities	\$0.78	Project	Professor Karen Witten	Massey University
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
15/202	Alcohol/drugs of dependence	The combined use of nicotine replacement therapy and e-cigarettes	\$1.20	Project	Associate Professor Natalie Walker	The University of Auckland
15/172	Infectious disease	TeeVax - a novel vaccine against group A streptococcus?	\$1.12	Project	Associate Professor Thomas Proft	The University of Auckland
15/165	Cardio/cerebrovascular disease	Aspirin harm benefit calculator to guide cardiovascular primary prevention	\$0.63	Project	Dr Vanessa Selak	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
15/097	Reproduction/family planning/sexual health	Probing novel pathways mediating Polycystic Ovarian Syndrome	\$0.91	Project	Dr Rebecca Campbell	University of Otago
15/072	Alcohol/drugs of dependence	The New Zealand International Tobacco Control Project	\$1.20	Project	Professor Richard Edwards	University of Otago
14/613	Child development	Growing better placentas for healthy babies	\$0.14	Emerging Researcher First Grant	Dr Joanna James	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/591	Obesity	Carbohydrate-restricted diets in the treatment of obesity in children.	\$0.15	Feasibility Study	Dr Caryn Zinn	Auckland University of Technology
14/581	Cardio/cerebrovascular disease	Which Diet? Dietary interventions and blood pressure	\$0.15	Emerging Researcher First Grant	Dr Katherine Black	University of Otago
14/568	Obstetric complications/perinatal care	Healthy pregnancy, healthy babies	\$4.99	Programme	Professor David Grattan	University of Otago
14/565	Wellness	Built Environment and Active Transport to School: BEATS Parental Survey	\$0.15	Emerging Researcher First Grant	Dr Sandra Mandic	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
14/499	Obstetric complications/perinatal care	Optimal glycaemic targets for gestational diabetes: the randomised trial TARGET	\$1.20	Project	Professor Caroline Crowther	The University of Auckland
14/494	Alcohol/drugs of dependence	Alcohol Policy Interventions in NZ (APINZ) - effects of change in sale & supply	\$1.19	Project	Professor Sally Casswell	Massey University
14/441	Reproduction/family planning/sexual health	AMH regulation of female reproduction	\$1.17	Project	Associate Professor Christine Jasoni	University of Otago
14/412	Alcohol/drugs of dependence	Evaluation of New Zealand's alcohol reform legislation	\$1.19	Project	Dr Brett MacLennan	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
14/262	Wellness	Understanding the impact of racial discrimination on adult health and wellbeing	\$0.45	Project	Dr Ricci Harris	University of Otago
14/203	Nutrition	Food environments in New Zealand: Policies and impacts on health and equity	\$1.16	Project	Professor Boyd Swinburn	The University of Auckland
14/191	Diabetes	Seeking New Insights and New Routes to Diabetes Prevention: PREVIEW NZ	\$1.12	Project	Professor Sally Poppitt	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/167	Mortality	Life-course predictors of mortality inequalities	\$1.09	Project	Professor Peter Davis	The University of Auckland
14/156	Child development	Pacific Islands Families: Understanding growth from birth to fourteen years	\$1.17	Project	Professor Elaine Rush	Auckland University of Technology
14/104	Obstetric complications/perinatal care	Gestational Diabetes Trial of Detection Thresholds: Impact on health and costs	\$1.20	Project	Professor Caroline Crowther	The University of Auckland
13/959	Infectious disease	Identifying risk factors for rheumatic fever in New Zealand	\$0.80	Project - Partnership	Professor Michael Baker	University of Otago
13/724	Nutrition	Effective interventions and policies to improve population nutrition and health	\$4.99	Programme	Professor Cliona Ni Mhurchu	The University of Auckland
13/279	Occupational health	Pesticide exposure and early biomarkers of NHL risk in farmers	\$1.20	Project	Associate Professor Andrea 't Mannelje	Massey University
13/242	Obstetric complications/perinatal care	STRIDER (NZAus): RCT of Sildenafil Therapy in Dismal Prognosis Early-Onset IUGR	\$1.15	Project	Dr Katie Groom	The University of Auckland
13/238	Reproduction/family planning/sexual health	Role of kisspeptin in hyperprolactinemia-induced infertility	\$1.16	Project	Professor David Grattan	University of Otago
13/235	Environmental health	Pesticide Exposure and Neuropsychological Effects in Children	\$1.20	Project	Professor Jeroen Douwes	Massey University
13/135	CNS/neurological disorders	Astrocyte-Neuron Communication in a Novel Homeostatic Form of Metaplasticity	\$0.57	Project	Professor Wickliffe Abraham	University of Otago
13/067	Reproduction/family planning/sexual health	Central regulation of natural birth processes	\$1.00	Project	Professor Colin Brown	University of Otago
12/709	Wellness	The genetics of wellbeing in daily life	\$0.15	Emerging Researcher First Grant	Dr Tamlin Conner	University of Otago
12/670	Reproduction/family planning/sexual health	Neural Control of Fertility	\$4.84	Programme	Professor Allan Herbison	University of Otago
12/380	Oncology and cancer	MOBI-KIDS New Zealand: risk factors for brain cancer in children and adolescents	\$0.47	Project	Associate Professor Andrea 't Mannelje	Massey University

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
12/281	Obesity	Prevention of Overweight in Infancy (POI): follow-up to 5 years	\$1.20	Project	Professor Rachael Taylor	University of Otago
12/256	Research methods	Advanced meta-analysis	\$0.97	Project	Professor Emeritus Peter Herbison	University of Otago
12/223	Diabetes	Determining the health-related impact of dysglycaemia in a local population	\$0.39	Project	Dr Patricia Metcalf	The University of Auckland
12/147	Bone disease	Zoledronic acid and fracture prevention in early postmenopausal women	\$1.16	Project	Associate Professor Mark Bolland	The University of Auckland
12/1081	Biomedical - cell biology	Oxidative Stress in Health and Disease	\$4.24	Programme Extension	Professor Anthony Kettle	University of Otago
11/818	Alcohol/drugs of dependence	The grand challenge: Innovative research to halve smoking prevalence in Aotearoa New Zealand	\$5.00	Project - Partnership	Professor Christopher Bullen	Auckland UniServices
11/792	Mental health	The Christchurch Health and Development Study - Birth to 35 Years	\$3.91	Programme	Associate Professor John Horwood	University of Otago
11/645	Injury - intentional and unintentional	Longitudinal study of development and cessation of self-harm among adolescents	\$1.12	Project	Dr Marc Wilson	Research Trust of Victoria University of Wellington
11/261	SUDI	Sudden unexpected death in infancy (SUDI): a nationwide case-control study	\$1.18	Project	Professor Edwin Mitchell	The University of Auckland
11/1041	Occupational health	Building Research in Occupational Health in New Zealand (BROHNZ)	\$2.81	Programme Extension	Professor Jeroen Douwes	Massey University
10/400	Cardio/cerebrovascular disease	Effect of vitamin D on cardiovascular and respiratory disease event rates	\$4.94	Programme	Professor Robert Scragg	The University of Auckland

Improving Outcomes for Acute & Chronic Conditions in NZ Contracts

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
New Zealand Health Delivery Contracts						
16/654	Vision/hearing/speech	One cell, two phenotypes: capturing pluripotency for tissue repair	\$0.15	Explorer Grant	Professor Trevor Sherwin	The University of Auckland
16/623	Gastrointestinal disease	Reducing gut dysfunction and organ dysfunction in severe acute pancreatitis	\$0.40	International Relationship Fund	Professor John Windsor	The University of Auckland
16/617	Oncology and cancer	Chromatin Nanofibre As a Therapeutic Cancer Vaccine	\$0.15	Explorer Grant	Dr Jeong Park	Massey University
16/608	CNS/neurological disorders	Vascular and inflammatory mediators of neurodegeneration	\$5.00	Programme	Professor Michael Dragnow	The University of Auckland
16/537	Diabetes	The Consequences of Type 2 Diabetes on the Cardiovascular Effects of Aging	\$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
16/434	Oncology and cancer	Oral Cavity Squamous Cell Carcinomas: Cancer Stem Cells and the Role of the RAS	\$0.15	Emerging Researcher First Grant	Dr Tinte Itinteang	Gillies McIndoe Research Institute
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
16/011	Cardio/cerebrovascular disease	Novel Biomarker for Acute Coronary Syndromes	\$1.16	Project	Associate Professor Chris Pemberton	University of Otago
15/696	Oncology and cancer	When is enough, enough? Margins of excision after breast conservation for BCa.	\$0.20	Project - Partnership	Associate Professor Ian Campbell	The University of Auckland
15/690	Oncology and cancer	Using the NZ Breast Cancer Registries for targeted molecular research	\$0.10	Project - Partnership	Associate Professor Michael Black	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
15/648	Infectious disease	Whole-genome sequencing of drug-resistant Mycobacterium tuberculosis strains for diagnostics and outbreak detection	\$0.45	Project - Partnership	Professor Gregory Cook	University of Otago
15/642	Oncology and cancer	Understanding the role of aspirin in breast cancer treatment	\$0.20	Project - Partnership	Dr Anita Dunbier	University of Otago
15/639	Oncology and cancer	Identifying breast cancer patients with clinically relevant mutations	\$0.20	Project - Partnership	Dr Logan Walker	University of Otago
15/636	Oncology and cancer	Testing a new drug target that promises to impair breast cancer cell growth.	\$0.10	Project - Partnership	Dr Evelyn Sattlegger	Massey University
15/623	Rheumatology/arthritis	Discovering novel pathways for gout via functional genetics	\$0.15	Explorer Grant	Associate Professor Julia Horsfield	University of Otago
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
15/604	Biomedical - genes	Squeezing through cracks reprograms cells	\$0.15	Explorer Grant	Dr Justin O'Sullivan	The University of Auckland
15/576	Bone disease	Mechanisms and Management of Musculoskeletal Disease	\$5.00	Programme	Distinguished Professor Ian 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
15/547	Health services - clinical	0.9% saline vs. Plasma-Lyte® as standard fluid therapy in hospitalised children	\$0.15	Feasibility Study	Dr Brent James McSharry	Auckland District Health Board
15/541	Oncology and cancer	The efficacy and feasibility of modifying tumour metabolism for therapeutic gain	\$0.10	Feasibility Study	Professor Margreet Vissers	University of Otago
15/517	Infectious disease	Mucosal associated invariant T-cells: mechanisms of bacterial control in humans	\$0.15	Emerging Researcher First Grant	Dr James Ussher	University of Otago
15/500	Oncology and cancer	p53 and variants in inflammatory disease and cancer	\$4.90	Programme	Professor Antony Braithwaite	University of Otago
15/496	Obesity	Professional rugby clubs as a vehicle to deliver weight loss programmes for men	\$0.15	Feasibility Study	Professor Ralph Maddison	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
15/494	Oncology and cancer	Magnesium for Endocrine Related Cognitive Problems in Breast Cancer	\$0.15	Feasibility Study	Professor Michael Findlay	The University of Auckland
15/491	Aging	Developing a diagnostic tool for myelodysplastic syndrome	\$0.14	Emerging Researcher First Grant	Dr Euan Rodger	University of Otago
15/485	CNS/neurological disorders	The Nose Knows the Way: An Intranasal Approach to Treat Drug-resistant Epilepsy	\$0.14	Emerging Researcher First Grant	Dr Shakila Bano Rizwan	University of Otago
15/483	Aging	Growth Factors Delivery System for Bone Regeneration and Vascularisation	\$0.15	Emerging Researcher First Grant	Dr Khoon Lim	University of Otago
15/479	Infectious disease	Neutrophil oxidants in infection and inflammation	\$4.83	Programme	Professor Anthony Kettle	University of Otago
15/402	Rheumatology/arthritis	Effects of tart cherry concentrate on gout flares and serum urate	\$0.14	Feasibility Study	Professor Lisa Stamp	University of Otago
15/401	Child development	PINTO: Pre-diabetes in pregnancy, can early intervention improve outcomes?	\$0.15	Feasibility Study	Dr Ruth Hughes	University of Otago
15/400	Respiratory disease/asthma	Anti-inflammatory effects of oral and transdermal clonidine in bronchiectasis	\$0.15	Feasibility Study	Dr Conroy Wong	Middlemore Clinical Trials
15/347	Oncology and cancer	Role of the Trib1 pseudokinase in breast cancer pathology	\$1.13	Project	Dr Peter Mace	University of Otago
15/333	Respiratory disease/asthma	Oxidative Stress in Cystic Fibrosis	\$0.80	Project	Professor Anthony Kettle	University of Otago
15/331	Diabetes	CaMKII inhibition as a novel therapy for diabetic cardiomyopathy	\$1.05	Project	Dr Jeffrey Erickson	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
15/299	Oncology and cancer	Mitochondrial injury and inter-cellular mitochondrial transfer	\$1.04	Project	Dr Melanie-Jane McConnell	Victoria University of Wellington
15/263	Rheumatology/arthritis	The impact and management of rising osteoarthritis burden	\$1.20	Project	Associate Professor J. Abbott	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
15/247	Oncology and cancer	The chemoprevention and treatment of diffuse gastric cancer	\$1.19	Project	Professor Parry Guilford	University of Otago
15/244	Respiratory disease/asthma	Carrageenan for the reduction of asthma exacerbations in adults	\$1.20	Project	Professor Julian Crane	University of Otago
15/229	Oncology and cancer	Investigating a Novel Drug Target in Acute Myeloid Leukaemia	\$1.15	Project	Associate Professor Julia Horsfield	University of Otago
15/209	Obstetric complications/perinatal care	A healthy life starts with a bio-energetically healthy placenta	\$1.19	Project	Professor Larry Chamley	The University of Auckland
15/186	Injury - intentional and unintentional	Prehospital injury deaths: preventability, service accessibility and equity	\$0.60	Project	Dr Bridget Kool	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
15/091	Injury - intentional and unintentional	Subsequent Injury Study (SInS): Improving outcomes for injured New Zealanders	\$0.59	Project	Associate Professor Sarah Derrett	University of Otago
15/086	Cardio/cerebrovascular disease	Hypertension after stroke - therapeutic or pathological?	\$1.06	Project	Dr Fiona McBryde	The University of Auckland
15/070	CNS/neurological disorders	Gene discovery in epilepsy: the building block of precision medicine	\$1.20	Project	Associate Professor Lynette Sadleir	University of Otago
15/057	Renal disease/urology	The role of the Pax-Notch pathway in kidney disease	\$1.07	Project	Associate Professor Alan Davidson	The University of Auckland
14/840	Respiratory disease/asthma	Using technology to support patients with COPD	\$0.35	Project - Partnership	Dr Elizabeth Broadbent	Auckland UniServices
14/811	Infectious disease	Designing metabiotics to combat multidrug-resistant pathogenic microorganisms	\$0.15	Explorer Grant	Professor Gregory Cook	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/810	Infectious disease	Evolution in Action: a novel model for studying pathogen adaptation in vivo	\$0.15	Explorer Grant	Dr Siouxsie Wiles	The University of Auckland
14/808	CNS/neurological disorders	Temporal and spatial control of drugs for improved treatment of brain disorders	\$0.15	Explorer Grant	Associate Professor John Reynolds	University of Otago
14/805	Infectious disease	Re-thinking the cross talk between bacteria and host cells	\$0.15	Explorer Grant	Associate Professor Anthony Phillips	The University of Auckland
14/751	Rheumatology/arthritis	International Relationship Fund: EU-NZ collaboration	\$0.20	International Relationship Fund	Professor Tony Merriman	University of Otago
14/750	Cardio/cerebrovascular disease	International Relationship Fund: EU-NZ collaboration	\$0.19	International Relationship Fund	Professor Geoff Chase	University of Canterbury
14/709	Oncology and cancer	Developing a molecular "fingerprint" as a non-invasive screen for breast cancer	\$0.20	Project - Partnership	Dr Annette Lasham	The University of Auckland
14/708	Oncology and cancer	Inhibiting the human GH receptor with small molecule antagonists	\$0.19	Project - Partnership	Dr Jo Perry	The University of Auckland
14/706	Oncology and cancer	Synthetic lethal targeting of lobular breast cancer	\$0.20	Project - Partnership	Professor Parry Guilford	University of Otago
14/629	Oncology and cancer	Screening for APOBEC3B inhibitors: a new approach to fighting breast cancer	\$0.15	Emerging Researcher First Grant	Dr Elena Harjes	Massey University
14/603	Oncology and cancer	Bio-orthogonal Prodrug Activation for Targeted Chemotherapy	\$0.14	Emerging Researcher First Grant	Dr Alan Gamble	University of Otago
14/598	Injury - intentional and unintentional	Improving multi-faceted functioning in people after brain injury: a feasibility study	\$0.15	Feasibility Study	Associate Professor Alice Theadom	Auckland University of Technology
14/573	CNS/neurological disorders	Tracking cognitive decline in Parkinson's disease with serial MRI	\$0.15	Emerging Researcher First Grant	Dr Tracy Melzer	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/564	Oncology and cancer	Primary Rectal Cancer Management in Advanced Disease with Chemotherapy	\$0.15	Emerging Researcher First Grant	Dr Christopher Jackson	University of Otago
14/557	Vision/hearing/speech	Digital design of therapies to combat age related nuclear cataracts	\$0.14	Emerging Researcher First Grant	Dr Ehsan Vaghefi	The University of Auckland
14/549	Respiratory disease/asthma	Simvastatin treatment for patients with COPD and elevated CRP	\$0.15	Feasibility Study	Associate Professor Robert Young	Middlemore Clinical Trials
14/538	Oncology and 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
14/502	Oncology and cancer	Synthetic vaccines that exploit the innate immune response	\$1.19	Project	Professor Ian Hermans	Malaghan Institute of Medical Research
14/500	Oncology and cancer	Vaccination and immunomodulation: Creating effective therapy for cancer	\$1.19	Project	Professor Ian Hermans	Malaghan Institute of Medical Research
14/475	Diabetes	Regulating hormone secretion via dynamic modulation of beta-catenin levels	\$1.19	Project	Professor Peter Shepherd	The University of Auckland
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
14/399	CNS/neurological disorders	Prevalence and impact of inherited myopathies in New Zealand	\$1.20	Project	Associate Professor Alice Theadom	Auckland University of Technology
14/368	Cardio/cerebrovascular disease	Restoring HDL levels	\$1.04	Project	Professor Sally McCormick	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/290	Oncology and cancer	Silencing oncogenic signalling in hypoxic tumour cells with the prodrug PR610	\$1.19	Project	Associate Professor Adam Patterson	The University of Auckland
14/289	Oncology and cancer	Colonising tumour necrosis with Clostridium sporogenes for precision therapy	\$1.19	Project	Associate Professor Adam Patterson	The University of Auckland
14/285	Oncology and cancer	Monocyte-derived dendritic cells for tumour immunotherapy	\$1.20	Project	Professor Franca Ronchese	Malaghan Institute of Medical Research
14/281	Vision/hearing/speech	Delivering lens anti-oxidants: a strategy to develop anti-cataract therapies	\$1.20	Project	Professor Paul Donaldson	The University of Auckland
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
14/219	Immune system/allergy	A role for p53 isoforms in inflammatory disease	\$1.18	Project	Professor Antony Braithwaite	University of Otago
14/216	Obstetric complications/perinatal care	Protecting brain development after clinically silent infection before birth	\$1.15	Project	Professor Alistair Gunn	The University of Auckland
14/200	CNS/neurological disorders	Defining genetic regulators of neurogenesis in humans	\$1.19	Project	Professor Stephen Robertson	University of Otago
14/174	Obstetric complications/perinatal care	ProViDe RCT: does better early nutrition in preterm babies improve development?	\$1.19	Project	Professor Frank Bloomfield	The University of Auckland
14/173	Health services - knowledge resources	Multimorbidity: the most common chronic condition of all.	\$1.20	Project	Professor Diana Sarfati	University of Otago
14/168	Birth defects/congenital conditions	Improving hydrocephalus management through an implantable device	\$1.19	Project	Professor Simon Malpas	The University of Auckland
14/158	Gastrointestinal disease	Mechanisms of Gastric Dysmotility: Advances from Cell to Clinic	\$1.19	Project	Associate Professor Leo Cheng	The University of Auckland
14/155	Cardio/cerebrovascular disease	An epigenome-wide study for abdominal aortic aneurysm	\$1.14	Project	Associate Professor Greg Jones	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/153	Obstetric complications/perinatal care	Antenatal magnesium sulphate: mechanisms of fetal neuroprotection	\$1.20	Project	Professor Caroline Crowther	The University of Auckland
14/136	Cardio/cerebrovascular disease	Individualised neuromodulation for motor recovery after stroke	\$1.18	Project	Professor Winston Byblow	The University of Auckland
14/129	Mental health	Clinical translation of an anxiety process biomarker	\$1.04	Project	Professor Dr Neil McNaughton	University of Otago
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
14/115	Health services - clinical	Early goal-directed sedation in mechanically ventilated intensive care patients	\$1.12	Project	Dr Colin McArthur	Auckland DHB Charitable Trust
14/105	Oncology and cancer	Uncovering mechanisms and inhibitors of tumour-induced lymphangiogenesis	\$1.20	Project	Dr Jonathan Astin	The University of Auckland
13/779	Cardio/cerebrovascular disease	Mapping determinants of arrhythmia in structural heart disease	\$4.99	Programme	Professor Peter Hunter	The University of Auckland
13/775	Cardio/cerebrovascular disease	Living with chaos: Structural remodelling and persistent atrial fibrillation	\$0.13	Emerging Researcher First Grant	Dr Jichao Zhao	The University of Auckland
13/774	Immune system/allergy	Exploiting the therapeutic potential of viruses	\$4.94	Programme	Professor Andrew Mercer	University of Otago
13/770	Endocrine disease	Thyrotoxicosis: Assessment of ethnic differences in presentation and outcome	\$0.15	Emerging Researcher First Grant	Dr Marianne Elston	The University of Auckland
13/763	Oncology and cancer	Rational design of kinase inhibitors to target cancer	\$4.92	Programme	Professor William Denny	The University of Auckland
13/330	Oncology and cancer	Adrenomedullin 1 receptor antagonists as novel anti-angiogenic agents	\$1.20	Project	Professor Debbie Hay	The University of Auckland
13/317	Cardio/cerebrovascular disease	Characterising Heart Failure with Clinical Imaging and Structure-Based Modelling	\$1.18	Project	Professor Martyn Nash	The University of Auckland
13/293	Aging	Pakeketanga: Living and Dying in Advanced Age	\$1.19	Project	Professor Merryn Gott	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
13/263	Infectious disease	Structure-directed antifungal discovery	\$1.19	Project	Associate Professor Brian Monk	University of Otago
13/213	Health services - clinical	PulMoDS: Pulmonary Model-based Decision Support to Optimise ARDS/ALI Care	\$0.66	Project	Professor Geoff Chase	University of Canterbury
13/196	Oncology and cancer	Novel small molecule therapeutics for treatment of smoking-related lung cancer	\$1.18	Project	Dr Jeffrey Smail	The University of Auckland
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
13/161	Oncology and cancer	Does the D133p53 isoform promote cancer invasion and metastasis?	\$1.19	Project	Professor Antony Braithwaite	University of Otago
13/104	Cardio/cerebrovascular disease	Renal Denervation in Heart Failure with Preserved Ejection Fraction	\$1.20	Project	Professor Mark Richards	University of Otago
13/1020	Oncology and cancer	Tumour-targeted FGFR therapeutics for smoking-related lung cancer	\$0.40	Project - Partnership	Dr Jeffrey Smail	The University of Auckland
13/065	Rheumatology/arthritis	Predicting response to anti-TNF therapy based on serum cytokine and gene profile	\$1.20	Project	Professor Lisa Stamp	University of Otago
13/064	Renal disease/urology	Understanding kidney injury and the role of HNF1 beta	\$0.88	Project	Associate Professor Alan Davidson	The University of Auckland
12/668	Respiratory disease/asthma	Computing abnormalities in chest x-ray	\$0.10	Emerging Researcher First Grant	Dr Alys Clark	The University of Auckland
12/653	Child development	Comparing ENGAGE and Triple P: treatment programmes for hyperactive preschoolers	\$0.15	Emerging Researcher First Grant	Dr Dione Healey	University of Otago
12/613	CNS/neurological disorders	Pathogenesis, detection and treatment of perinatal brain injury	\$4.84	Programme	Professor Alistair Gunn	The University of Auckland
12/529	Oncology and cancer	Molecular and hypoxia biomarkers of sensitivity to new nitroCBI anticancer drugs	\$1.19	Project	Dr Frederik Pruijn	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
12/308	Health services - clinical	The Influence of Anaesthetic Depth on Patient Outcome after Major Surgery	\$1.20	Project	Associate Professor Timothy Short	Auckland DHB Charitable Trust
12/254	Oncology and cancer	Contribution of OCTN1 to toxicity from oxaliplatin-based cancer therapy	\$1.18	Project	Professor Mark McKeage	The University of Auckland
12/240	Cardio/cerebrovascular disease	The relationship of nano-structure and function of myocytes in heart failure	\$1.09	Project	Professor Christian Soeller	The University of Auckland
12/197	Liver disease	Defining the genetic predisposition to biliary atresia	\$1.20	Project	Professor Stephen Robertson	University of Otago
12/129	Obstetric complications/perinatal care	New Zealand very low birthweight young adults: mapping the road ahead	\$1.15	Project	Professor Brian Darlow	University of Otago
12/1111	Infectious disease	Microbial virulence and pathogenesis	\$4.94	Programme Extension	Professor John Fraser	The University of Auckland
12/1095	Obstetric complications/perinatal care	Perinatal Care and Its Long-Term Consequences	\$3.62	Programme Extension	Professor Frank Bloomfield	The University of Auckland
11/802	CNS/neurological disorders	Neurodegeneration in the human brain - mechanisms and therapeutic targets	\$4.47	Programme	Professor Michael Dragunow	The University of Auckland
11/694	Respiratory disease/asthma	A randomised trial of tiotropium treatment for bronchiectasis	\$1.20	Project	Dr Conroy Wong	Middlemore Clinical Trials
11/516	Mental health	Internet-based Intervention to Improve Mental Health Outcomes for Abused Women	\$1.19	Project	Professor Jane Koziol-McLain	Auckland University of Technology
11/514	Biomedical - physiology	Toxicity of mesenteric lymph in critical illness	\$1.13	Project	Professor John Windsor	The University of Auckland
11/203	Rheumatology/arthritis	Safety and efficacy of high-dose allopurinol in the management of gout: a randomised interventional study	\$1.20	Project	Professor Lisa Stamp	University of Otago

Research for NZ Health Delivery Contracts

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
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
16/133	Occupational health	Implementing a science-based approach for fatigue risk management in nursing	\$0.89	Project	Professor Philippa Gander ONZM	Massey University
15/667	Cardio/cerebrovascular disease	Text4Heart: Improving adherence in people with heart disease	\$0.20	Project - Partnership	Professor Ralph Maddison	Auckland UniServices
15/665	Health services - health delivery	Development and implementation of an app to support antimicrobial prescribing	\$0.20	Project - Partnership	Ms Gayl Humphrey	Auckland UniServices
15/655	Respiratory disease/asthma	Delivering better care for people with severe COPD in the Southern Region	\$0.20	Project - Partnership	Professor Timothy Stokes	University of Otago
15/649	Gastrointestinal disease	Stress ulcer prophylaxis in the Intensive Care Unit	\$0.20	Project - Partnership	Dr Paul Young	Medical Research Institute of New Zealand
15/419	Reproduction/family planning/sexual health	Facilitating partner notification and rescreening for STIs in primary care	\$0.15	Feasibility Study	Dr Sally Rose	University of Otago
15/352	Liver disease	Molecular predictors of liver cancer in Māori with chronic hepatitis B	\$0.53	Project	Professor Edward Gane	Auckland District Health Board
15/297	Cardio/cerebrovascular disease	Self-directed rehabilitation RCT after stroke: a practical, low-cost programme	\$1.20	Project	Dr Harry McNaughton	Medical Research Institute of New Zealand
15/087	Oncology and cancer	Lung cancer genetic testing in New Zealand	\$1.18	Project	Professor Mark McKeage	The University of Auckland
14/730	Health services - health delivery	Integrating patient data to optimise medicines and reduce polypharmacy	\$0.18	Project - Partnership	Dr Alesha Smith	University of Otago
14/724	Diabetes	SMS4BG: self-management support for people with diabetes	\$0.20	Project - Partnership	Associate Professor Robyn Whittaker	Auckland UniServices

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/682	Infectious disease	Effectiveness of maternal pertussis booster in pregnancy - outcomes in infants	\$0.10	Project - Partnership	Dr Helen Petousis-Harris	Auckland UniServices
14/484A	Oncology and cancer	How to improve outcomes for women with breast cancer in New Zealand	\$0.78	Project	Professor Ross Lawrenson	University of Waikato
14/269	Cardio/cerebrovascular disease	Low dose aspirin for venous leg ulcers: a randomised trial	\$1.20	Project	Associate Professor Andrew Jull	The University of Auckland
14/260	Infectious disease	Legionnaires' disease in New Zealand: improving diagnostics and treatment	\$1.00	Project	Professor David Murdoch	University of Otago
14/222	Health services - clinical	Restrictive vs. Liberal Fluid Therapy in Major Abdominal Surgery - The RELIEF study	\$0.77	Project	Dr Shay McGuinness	Medical Research Institute of New Zealand
14/185	Health services - health delivery	Patient Harms in New Zealand General Practices: Records Review Study	\$1.17	Project	Professor Susan Dovey	University of Otago
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
14/152	Rheumatology/arthritis	A randomised controlled trial of nortriptyline in knee osteoarthritis	\$1.19	Project	Dr Ben Hudson	University of Otago
13/970	Infectious disease	Probiotic intervention to reduce streptococcal disease burden in NZ children	\$0.79	Project - Partnership	Professor Julian Crane	University of Otago
13/969	Infectious disease	Which school model for group A streptococci and acute rheumatic fever reduction?	\$0.80	Project - Partnership	Professor Diana Lennon	Auckland UniServices
13/965	Cardio/cerebrovascular disease	The significance of rheumatic heart disease detected by echocardiography	\$0.80	Project - Partnership	Associate Professor Nigel Wilson	Auckland DHB Charitable Trust
13/442	Renal disease/urology	Myocardial microinjury & Arterial Compliance in the SOLID Trial (Mac-SOLID)	\$0.25	Project	Associate Professor Mark Marshall	Middlemore Clinical Trials
13/428	Research methods	Delivering a new measure of neighbourhood disadvantage for New Zealand	\$1.10	Project	Dr Daniel Exeter	The University of Auckland
13/331	Mental health	Modular evidence-based treatment of child and adolescent mental health problems	\$1.67	Project	Professor Sally Merry	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
13/285	CNS/neurological disorders	Living well with a long-term neurological condition	\$1.20	Project	Dr Suzie Mudge	Auckland University of Technology
13/143	Oncology and cancer	The conservative management of young women with CIN2	\$1.20	Project	Associate Professor Peter Sykes	University of Otago
13/131	Obstetric complications/perinatal care	Preventing Neonatal Hypoglycaemia with Oral Dextrose Gel	\$1.20	Project	Professor Jane Harding	The University of Auckland
12/850	Aging	Implementing Models of Primary Healthcare for Older Adults with Complex Needs	\$1.20	Project - Partnership	Associate Professor Timothy Kenealy	The University of Auckland
12/525	CNS/neurological disorders	RCT of levetiracetam vs. phenytoin for status epilepticus in children	\$1.20	Project	Dr Stuart Dalziel	Auckland DHB Charitable Trust
12/372	Obstetric complications/perinatal care	Multi-centre case control stillbirth study	\$0.54	Project	Professor Lesley McCowan CNZM	The University of Auckland
12/306	Health services - clinical	Randomised trial of hydrocortisone in critically ill patients with septic shock	\$0.77	Project	Dr Colin McArthur	Auckland DHB Charitable Trust
11/626	Alcohol/drugs of dependence	M-health Delivery for Reducing Alcohol in the Trauma Environment (MoDeRATE) Trial	\$1.19	Project	Professor Shanthi Ameratunga	The University of Auckland
11/583	Renal disease/urology	Sodium Lowering in Dialysate (SOLID) Study	\$1.17	Project	Associate Professor Mark Marshall	Middlemore Clinical Trials
11/545	Cardio/cerebrovascular disease	Low-cost telerehabilitation to improve outcomes for people with chronic stroke	\$0.99	Project	Professor Denise Taylor	Auckland University of Technology
11/270	Cardio/cerebrovascular disease	TRIO: Targeted Rehabilitation, Improved Outcomes	\$1.13	Project	Associate Professor Cathy Stinear	The University of Auckland
11/259	Mental health	Health Anxiety CBT vs TAU for Patients with Non-cardiac Chest Pain	\$0.73	Project	Professor Roger Mulder	University of Otago
10/588	Health services - health delivery	Implementing performance improvement in NZ EDs: the six-hour time target policy	\$1.14	Project	Associate Professor Peter Jones	Auckland DHB Charitable Trust

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
10/510	Respiratory disease/asthma	Intervention study of children at high risk of chronic lung disease	\$1.20	Project	Dr Adrian Trenholme	Middlemore Clinical Trials
10/354	Renal disease/urology	Dialysis Outcomes in Those Aged 65 Years and Over	\$0.77	Project	Professor Robert Walker	University of Otago

Rangahau Hauora Māori Contracts

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
16/587	Child development	Te Kura Mai i Tawhiti	\$0.15	Feasibility Study	Dr Mihi Ratima	Te Pou Tiringa Incorporated
15/688	Wellness	Kokiritia te Ora: Promoting Vitality, Enhancing Belonging for Ngatiwai Tamariki.	\$0.20	Ngā Kanohi Kitea Project	Mr Wi Pirihi	Ngatiwai Education
15/685	Child development	Improving Māori child health outcomes through Māori father involvement	\$0.20	Ngā Kanohi Kitea Project	Dr William Edwards	Te Kaahui Mana Ririki Charitable Trust
15/682	Reproduction/family planning/sexual health	He Pūkenga Kōrero: Rangatahi and Sexually Transmitted Infections in the Waikato	\$0.20	Ngā Kanohi Kitea Project	Dr Jillian Tipene	Te Puawai Tapu Trust
15/681	Mental health	Te Ara Ririki	\$0.17	Ngā Kanohi Kitea Project	Ms Ngaropi Cameron	Tu Tama Wahine o Taranaki
15/646	Wellness	The health benefits of karanga	\$0.20	Ngā Kanohi Kitea Project	Ms Naida Glavish	Te Runanga O Ngati Whatua
15/644	Aging	Catalysts of Health and Wellbeing: A Retrospective Study of West Auckland Whanau	\$0.20	Ngā Kanohi Kitea Project	Dr Tanya Lee Allport	Te Whanau o Waipareira Trust
15/643	Aging	Haunui, haurua, hauora!	\$0.20	Ngā Kanohi Kitea Project	Mr Jonathan Kilgour	Waikato-Tainui College for Research and Development
15/315	Respiratory disease/asthma	Whakapai e te Ara Hä: A health literacy approach to Tamariki Asthma	\$1.20	Project	Dr Tristram Ingham	University of Otago
15/153	Wellness	Te whakahawea tangata: decoding discrimination	\$0.33	Project	Dr Donna Cormack	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
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
14/371	Obstetric complications/perinatal care	Addressing avoidable harm suffered by Māori babies	\$1.20	Project	Associate Professor Beverley Lawton	University of Otago
14/146	Health services - Community	Preventing chronic conditions: Learnings from participatory research with Māori	\$1.20	Project	Dr Heather Gifford	Whakauae Research Services
13/490	Wellness	Māori health identities: affecting and driving health?	\$0.67	Project	Professor Helen Moewaka Barnes	Massey University
13/394	Mortality	Preventable Māori Mortality	\$1.20	Project	Mr Andrew Sporle	The University of Auckland
13/099	Respiratory disease/asthma	He Kura: Asthma Support for Māori Tamariki at School	\$1.20	Project	Mrs Bernadette Jones	University of Otago
12/470	Research methods	Building BRIDGES for culturally ethical biobanking & genomic research	\$1.14	Project	Associate Professor Maui Hudson	University of Waikato
12/221	Diabetes	Diabetes -The impact of maternal care disparities on Māori mothers and infants	\$1.19	Project	Associate Professor Beverley Lawton	University of Otago
11/623	Wellness	Marae Food Gardens: Health and Wellbeing through urban marae in Tamaki Makaurau	\$1.17	Project	Dr Rhys Jones	The University of Auckland
09/644b	Dental/oral health	Reducing disease burden and health inequalities arising from chronic dental disease among Indigenous children: an early childhood caries intervention	\$2.35	ICIHRP Grant	Professor John Broughton	University of Otago
09/643b	Health services - Community	How can medical education reduce disparities in chronic disease care and improve outcomes of Indigenous populations	\$1.97	ICIHRP Grant	Dr Rhys Jones	The University of Auckland

Research Contracts Not Classified by Research Investment Stream

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
17/482	Infectious disease	A review of communicable Diseases in the Pacific region	\$0.01	Pacific Knowledge Translation Grant	Associate Professor Vili Nosa	The University of Auckland
17/415	Injury - intentional and unintentional	Community mobilisation potential and possibilities for violence prevention	\$0.01	Maori Knowledge Translation Grant	Dr Stephanie Palmer	Tumana Research Services
17/287	Wellness	Maori self-reported wellbeing versus informant-reported wellbeing	\$0.01	Maori Knowledge Translation Grant	Dr Tess Chalmers	Independent Research Organisation
16/586	Wellness	Whakarauora Hapori	\$0.48	Māori Health Postdoctoral Fellowship	Dr Ruakere Hond	Te Pou Tiringa Incorporated
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	Victoria University of Wellington
16/550	Disability	Development of a Neural Interface for Prosthetics	\$0.11	Māori PhD Scholarship	Mr Mahonri William Owen	University of Waikato
16/541	Injury - intentional and unintentional	Kia Maanu, Kia Ora: Examining Māori Water Safety	\$0.08	Māori PhD Scholarship	Miss Chanel Phillips	University of Otago
16/520	Wellness	To better understand how cultural context can make a difference for Hauora	\$0.02	Māori Master Scholarship	Mrs Jewell Albert	Auckland University of Technology
16/516	Gambling	Exploring the perceptions and experiences of Tongan males towards gambling in NZ	\$0.11	Pacific Health PhD Scholarship	Mr Edmond Fehoko	Auckland University of Technology
16/514	Physical activity/exercise	Metabolic and Affective Responses to High-Intensity Training with Māori Women	\$0.02	Māori Master Scholarship	Miss Deborah Heke	Auckland University of Technology
16/508	Aging	Improving the uptake of hearing health services in older Pasifika people	\$0.29	Pacific Health Postdoctoral Fellowship	Dr Ravi Reddy	The University of Auckland
16/498	Reproduction/family planning/sexual health	Tika tonu - young Māori mothers' experiences of wellbeing following birth	\$0.06	Māori PhD Scholarship	Mrs Aria Graham	Victoria University of Wellington
16/491	Reproduction/family planning/sexual health	Investigating customary Māori philosophies regarding the whare tangata (womb)	\$0.11	Māori PhD Scholarship	Ms Ngahuia Murphy	University of Waikato

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
16/468	Mental health	Pacific peoples experience of mental disorder and mental health services	\$0.02	Pacific Health Masters Scholarship	Mrs Acelini Hakopa	University of Otago
16/464	Mortality	Pacific meets West in Advancing Palliative Care for Pacific populations	\$0.30	Pacific Health Davis Award	Dr Sunia Foliaki	Massey University
16/462	Injury - intentional and unintentional	Kava drink-driving: Driver safety and injury minimisation to improve health	\$0.23	Pacific Health Postdoctoral Fellowship	Dr Apo Aporosa	University of Waikato
16/459	Wellness	App for Houses and Households (A4HH)	\$0.11	Pacific Health Postdoctoral Fellowship	Dr Ramona Tiatia	University of Otago
16/453	Injury - intentional and unintentional	Koi Te Mata Punenga	\$0.30	Nga Pou Senior Fellowship	Dr Leonie Pihama	University of Waikato
16/452	Infectious disease	Inflammation or infection? The role of biomarkers after colon surgery	\$0.17	Pacific Health Clinical Training Fellowship	Dr Bruce Uelese Su'a	The University of Auckland
16/450	Aging	A Qualitative Investigation of Experiences of Aged Residential Care by Māori	\$0.10	Māori PhD Scholarship	Ms Karen Keelan	University of Otago
16/449	Health services - clinical	Optimising Post-Operative Pain Relief Following Abdominal Surgery	\$0.11	Māori PhD Scholarship	Dr Jamie-Lee Rahiri	The University of Auckland
16/440	Wellness	Taiora Taimau	\$0.30	Nga 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/family planning/sexual health	Prescription Medicine Use in Pregnancy	\$0.25	Clinical Research Training Fellowship	Dr Sarah Donald	University of Otago
16/065	Respiratory disease/asthma	A model of care for Māori and Pacific People with chronic airways disease	\$0.24	Clinical Research Training Fellowship	Dr Sandra Hotu	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
16/059	Oncology and cancer	Thermal properties of the liver: improving outcome from ablation of liver cancer	\$0.17	Clinical Research Training Fellowship	Mr Peter James Swan	The University of Auckland
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
16/056	Health services - delivery	Exploring and improving hospital care quality for New Zealand rural communities	\$0.22	Foxley Fellowship	Dr Carol Atmore	University of Otago
16/054	Oncology and 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	Dr 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
16/023	Respiratory disease/asthma	Perioperative care in chronic rhinosinusitis	\$0.08	Clinical Research Training Fellowship	Dr Ravi Jain	The University of Auckland
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
16/001	Gastrointestinal disease	Gut Peptides Post Bariatric Surgery: Mechanisms of Adaptive Metabolism	\$0.17	Clinical Research Training Fellowship	Dr Brian Corley	University of Otago
15/476	Health services - delivery	Towards medical education that addresses indigenous rights to health	\$0.06	Māori PhD Scholarship	Ms Anna Fay	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
15/471	Reproduction/family planning/sexual health	Iho - a cord between two worlds. Traditional Māori Birthing Practices.	\$0.08	Māori PhD Scholarship	Ms Kelly Tikao	University of Canterbury
15/460	Obesity	Pasifika solutions to reduce sugary drink consumption	\$0.30	Pacific Health Davis Award	Dr Gerhard Sundborn	The University of Auckland
15/454	Rheumatology/arthritis	Lipid profiles as a risk factor for metabolic disease in Polynesians	\$0.11	Pacific Health PhD Scholarship	Ms 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 and 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
15/444	Disability	The health and disability experiences of Whanau haua	\$0.38	Māori Health Postdoctoral Fellowship	Dr Huhana (Susan Jane) Jane Hickey	Auckland University of Technology
15/441	Cardio/cerebrovascular disease	Paramedic Systems of Care for ST-Elevation Myocardial Infarction Patients	\$0.11	Māori PhD Scholarship	Mr Paul Davis	Auckland University of Technology
15/436	Wellness	Te Papa o Te Ora	\$0.42	Māori Health Postdoctoral Fellowship	Professor Meihana Durie	Te Wananga o Raukawa
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
15/426	Health services - delivery	Māori participation in traditional Māori health practices	\$0.11	Māori PhD Scholarship	Ms Erena Wikaire	The University of Auckland
15/415	Health services - clinical	Defining a biomarker profile for anastomotic leak following colon surgery	\$0.03	Pacific Health PhD Scholarship	Dr Bruce Ueese Su'a	The University of Auckland
15/413	Health services - delivery	"Created Equal": Investigating health system perspectives of disparities	\$0.07	Māori PhD Scholarship	Mrs Tania Huria	University of Otago
15/408	Reproduction/family planning/sexual health	Hookin' Up - Mental health and Pasifika students' intimate relationships	\$0.34	Pacific Health Postdoctoral Fellowship	Dr Byron Seiuli	University of Waikato
15/403	Wellness	Food availability for Māori children - A rights-based approach	\$0.12	Māori PhD Scholarship	Ms Christina McKerchar	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
15/397	Wellness	Pacific students' health, wellbeing & success in higher education	\$0.10	Pacific Health PhD Scholarship	Associate Professor Faafetai Sopoaga	University of Otago
15/395	Obesity	Pacific Health and Obesity Research	\$0.30	Pacific Health Davis Award	Dr Tupa'ilevaililigi Ridvan Firestone	Massey University
15/284	Health services - clinical	0.9% saline vs. Plasma-Lyte 148 ® for fluid therapy	\$0.17	Clinical Research Training Fellowship	Dr Sumeet Reddy	Medical Research Institute of New Zealand
15/081	Respiratory disease/asthma	Registry based clinical trials	\$0.80	Practitioner Research Fellowship	Professor Dr Ralph Stewart	Auckland District Health Board
15/054	Health services - knowledge resources	Hepatitis B, Diabetes and Outcomes	\$0.17	Clinical Research Training Fellowship	Dr John Hsiang	The University of Auckland
15/048	Vision/hearing/speech	Oxaliplatin-induced corneal nerve microstructural changes	\$0.25	Clinical Research Training Fellowship	Dr Ellen Wang	The University of Auckland
15/035	Diabetes	New insights into pancreatogenic diabetes	\$0.50	Sir Charles Hercus Fellowship	Dr Max Petrov	The University of Auckland
15/030	Health services - clinical	Towards the treatment of toxic thoracic lymph in critical illness	\$0.25	Clinical Research Training Fellowship	Dr Alistair Escott	The University of Auckland
15/019	Biomedical - physiology	Chronic stress-induced adaptations in hypothalamic brain circuits	\$0.49	Sir Charles Hercus Fellowship	Dr Karl Iremonger	University of Otago
15/009	Health services - clinical	In vitro and in vivo evaluation of bone graft substitutes for bone healing	\$0.17	Clinical Research Training Fellowship	Dr Ryan Gao	The University of Auckland
15/008	Gastrointestinal disease	Better Outcomes after Bariatric Surgery: The BOBS Study	\$0.17	Clinical Research Training Fellowship	Dr Melanie Lauti	The University of Auckland
14/512	Cardio/cerebrovascular disease	Samoan peoples' experiences of CVD pathways of care	\$0.11	Pacific Health PhD Scholarship	Mrs Victoria Lesatele	Massey University

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/1005	Multiple conditions	Independent Research Organisation Funding	\$3.78	Independent Research Organisation Fund	Dr Cheryl Smith	Te Atawhai o te Ao: Independent Māori Institute for Environment & Health
14/1004	Multiple conditions	Independent Research Organisation Funding	\$2.80	Independent Research Organisation Fund	Dr Heather Gifford	Whakauae Research Services
14/1003	Multiple conditions	Independent Research Organisation Funding	\$14.24	Independent Research Organisation Fund	Professor Graham Le Gros CNZM	Malaghan Institute of Medical Research
14/1002	Multiple conditions	Independent Research Organisation Funding	\$6.80	Independent Research Organisation Fund	Professor Richard Beasley	Medical Research Institute of New Zealand
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
14/075	Cardio/cerebrovascular disease	Lipoprotein biomarkers and cardiovascular risk in Māori and Pacific communities	\$0.24	Pacific Health Postdoctoral Fellowship	Dr Allamanda Faatoese	University of Otago
14/074	Endocrine disease	Te whakangungu rakau: Prevalence, severity, outcome of thyrotoxicosis in Māori	\$0.02	Māori PhD Scholarship	Dr Jade Tamatea	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
14/063	Injury - intentional and unintentional	Injury and disability among Pacific people in the Cooks Islands and New Zealand	\$0.34	Pacific Health Postdoctoral Fellowship	Dr Josephine Herman	The University of Auckland
14/060	Injury - intentional and unintentional	Te Waka Oranga; bringing the recovery destination to whanau	\$0.46	Māori Health Postdoctoral Fellowship	Dr Hinemoa Elder	Te Whare Wananga O Awanuiarangi
14/052	Oncology and cancer	Testicular cancer in Māori men: what is driving the disparity?	\$0.36	Māori Health Postdoctoral Fellowship	Dr Jason Gurney	University of Otago

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
14/047	CNS/neurological disorders	Use of EpiNet platform for clinical trials & epidemiological studies in epilepsy	\$0.91	Practitioner Research Fellowship	Dr Peter Bergin	Auckland DHB Charitable Trust
14/041	Injury - intentional and unintentional	Road injuries in the Pacific: disability, costs and health system indicators	\$0.25	Clinical Research Training Fellowship	Dr Iris Wainiqolo	The University of Auckland
14/040	Cardio/cerebrovascular disease	Lower limb immobility and VTE risk: investigating preventive measures	\$0.25	Clinical Research Training Fellowship	Dr Irene Braithwaite	Medical Research Institute of New Zealand
14/031	Oncology and cancer	Diet and risk of colorectal cancer in UK Biobank	\$0.18	Girdler's Fellowship	Dr Kathryn Bradbury	University of Otago
14/025	CNS/neurological disorders	Paramedic response to acute stroke; investigating current practice and outcomes	\$0.25	Clinical Research Training Fellowship	Ms Bronwyn Tunnage	Auckland University of Technology
14/018	Vision/hearing/speech	Stimuli-responsive ocular implants - More than meets the eye?	\$0.50	Sir Charles Hercus Fellowship	Dr Ilva Rupenthal	The University of Auckland
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
14/010	Cardio/cerebrovascular disease	Can we predict CVD risk population-wide using only routinely collected data?	\$0.17	Clinical Research Training Fellowship	Dr Suneela Mehta	The University of Auckland
14/004	Wellness	Transforming research into child health equity: a 21st century approach	\$0.25	Clinical Research Training Fellowship	Dr Paula King	University of Otago
14/002	Vision/hearing/speech	A novel biosynthetic tissue substitute for transplantation	\$0.50	Practitioner Research Fellowship	Associate Professor Dipika Patel	The University of Auckland
13/604	Cardio/cerebrovascular disease	Arterial Function, Vitamin D and Cardiovascular Disease	\$0.39	Pacific Health Postdoctoral Fellowship	Dr John Sluyter	The University of Auckland

Ref	Research Focus	Title	\$M	Contract Type	Lead Researcher	Contract Type
13/594	Child development	Whanau kopepe: Young Māori parents' experiences of raising a family	\$0.11	Māori PhD Scholarship	Miss Felicity Ware	Massey University
13/590	Cardio/cerebrovascular disease	Kaupapa Māori Evaluation of a Health Literacy-Appropriate CVD Intervention	\$0.11	Māori PhD Scholarship	Miss Teah Carlson	Massey University
13/575	Oncology and cancer	Taku aroha ki nga tai e ngunguru e ra: Transforming Māori health cancer workforce	\$0.11	Māori PhD Scholarship	Ms Monica Koia	Massey University
13/556	Health services - delivery	Paediatric Emergency Research	\$0.77	Practitioner Research Fellowship	Dr Stuart Dalziel	Auckland DHB Charitable Trust
13/553	Obesity	Whanau Pakari: a multi-disciplinary intervention for children with weight issues	\$0.25	Clinical Research Training Fellowship	Dr Yvonne Anderson	The University of Auckland
13/044	Cardio/cerebrovascular disease	Investigation of Cardiovascular Pathology in the Emergency Department	\$0.71	Practitioner Research Fellowship	Dr Martin Than	Canterbury District Health Board
13/026	Biomedical - physiology	Investigating the role of histone acetylation in memory formation	\$0.50	Sir Charles Hercus Fellowship	Dr Helen Fitzsimons	Massey University
13/014	Cardio/cerebrovascular disease	Brainstem Hypoperfusion as a Causative Mechanism for Neurogenic Hypertension	\$0.50	Sir Charles Hercus Fellowship	Dr Fiona McBryde	The University of Auckland
12/867	Wellness	Healthy public policy for children in NZ: overcoming the obstacles	\$0.25	Clinical Research Training Fellowship	Dr Amanda D'Souza	University of Otago
12/828	Vision/hearing/speech	Ka puawai nga Kohungahunga Turi: The early development of Māori deaf tamariki	\$0.33	Erihapeti Rehu-Murchie Fellowship	Dr Kirsten Smiler	Victoria University of Wellington
12/026	Wellness	Ngaitai wellbeing indicators: measuring iwi health outcomes	\$0.11	Māori PhD Scholarship	Miss Jodi Porter	Massey University

Appendix 2b: HRC contracts that began between 1 July 2016 and 30 June 2017

Health and Wellbeing in New Zealand Contracts

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/641	Obesity	Prevention of childhood obesity through sugar reduction	\$0.04	1/03/2017	31/08/2018	International Relationship Fund	Dr Gerhard Sundborn	The University of Auckland
17/640	Obesity	Technology-enabled behaviour change to reduce childhood obesity	\$0.05	1/03/2017	31/08/2018	International Relationship Fund	Associate Professor Robyn Whittaker	The University of Auckland
17/630	Obesity	An international collaboration to reduce infant obesity in high-risk groups	\$0.06	1/03/2017	31/08/2018	International Relationship Fund	Professor Rachael Taylor	University of Otago
17/189	Injury - intentional and unintentional	Curbing the tide of violence! Exploring a Pacific psychological faith-quotient	\$0.15	1/01/2017	31/12/2019	Emerging Researcher First Grant	Dr Siautu Alefaio-Tugia	Massey University
16/682	Physical activity/exercise	Designing Diagnostic and Rehabilitation Landscapes for the Disabled	\$0.15	1/10/2016	30/09/2018	Explorer Grant	Mr Bruno Marques	Research Trust of Victoria University of Wellington
16/656	Obesity	Nutrition 2.0: Toward a food systems approach for public health nutrition	\$0.15	1/04/2017	30/04/2019	Explorer Grant	Professor Boyd Swinburn	The University of Auckland
16/642	Obesity	Using principles of the 'Slow Movement' to prevent obesity from birth	\$0.15	1/12/2016	30/11/2018	Explorer Grant	Dr Samantha Marsh	The University of Auckland
16/605	Child development	Feeding preterm babies for life-long health	\$5.00	1/10/2016	30/09/2021	Programme	Professor Frank Bloomfield	The University of Auckland
16/600	Alcohol/drugs of dependence	The Christchurch Health and Development Study - Birth to 40 Years	\$4.36	1/09/2016	31/08/2021	Programme	Associate Professor	University of Otago

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
							John Horwood	
16/551	Health Services - health delivery	Utilizing a prognostic indicator to guide deprescribing in Aged Residential Care	\$0.15	1/12/2016	30/11/2018	Emerging Researcher First Grant	Dr Claire Heppenstall	University of Otago
16/546	Biomedical - diagnostics	Validation of a dietary intake biomarker for free sugars intake	\$0.15	1/08/2016	31/07/2017	Feasibility Study	Dr Lisa Te Morenga	University of Otago
16/510	Cardio/cerebrovascular disease	Disturbed energetics in heart failure: its association with t-tubule disruption	\$0.11	1/10/2016	30/09/2019	Emerging Researcher First Grant	Dr June-Chiew Han	The University of Auckland
16/489	Alcohol/drugs of dependence	Feasibility Assessment of a Smart E-cigarette	\$0.15	1/10/2016	30/09/2017	Feasibility Study	Professor Janet Hoek	University of Otago
16/481	Diabetes	Probiotics for prediabetes: Dose-ranging and MRI feasibility study	\$0.15	1/09/2016	31/12/2017	Feasibility Study	Dr Rinki Murphy	The University of Auckland
16/475	Infectious disease	Zoonotic disease transmission in New Zealand rural communities	\$0.15	1/10/2016	30/09/2019	Emerging Researcher First Grant	Dr Pippa Scott	University of Otago
16/402	Obesity	Role of hypothalamic beta-catenin in body weight regulation	\$1.20	1/09/2016	31/08/2019	Project	Professor David Grattan	University of Otago
16/351	Occupational health	Work-related risk factors for cardiovascular disease	\$0.72	1/05/2017	30/04/2019	Project	Professor Jeroen Douwes	Massey University
16/329	Obesity	Communities Fighting Sugar in Soft-drinks	\$1.18	1/02/2017	31/01/2021	Project	Dr Gerhard Sundborn	The University of Auckland
16/289	Aging	Towards streetscapes promoting inclusive mobility, health and wellbeing for all	\$1.19	1/01/2017	31/12/2019	Project	Professor Shanthi Ameratunga	The University of Auckland
16/206	Environmental health	Community water supplies: ensuring microbial safety for disease prevention	\$1.06	1/10/2016	30/09/2019	Project	Dr Liping Pang	ESR Institute of Environmental Science & Research

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/185	Health Services - community	Exploring the development and impact of changes in community pharmacy services	\$1.19	1/10/2016	31/03/2020	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	1/10/2016	30/09/2019	Project	Dr Rebecca Lilley	University of Otago
16/149	Alcohol/drugs of dependence	Supporting informed e-cigarette use: A mixed methods study	\$1.20	1/10/2016	30/09/2019	Project	Professor Janet Hoek	University of Otago
16/148	Reproduction/family planning/sexual health	Generating pulses with KNDy neurons	\$1.12	1/10/2016	30/09/2019	Project	Professor Allan Herbison	University of Otago
16/096	CNS/neurological disorders	Targeting the RFRP neuronal system to control stress and anxiety	\$1.19	1/10/2016	31/12/2020	Project	Associate Professor Greg Anderson	University of Otago
16/078	Bone disease	Zoledronic acid and fracture prevention in early postmenopausal women	\$0.96	1/08/2016	31/07/2020	Project	Associate Professor Mark Bolland	The University of Auckland
16/076	Alcohol/drugs of dependence	A head-to-head trial of cytisine and varenicline for smoking cessation	\$1.60	1/08/2016	31/07/2019	Project	Associate Professor Natalie Walker	The University of Auckland
16/066	Alcohol/drugs of dependence	No smokers left behind: A trial of adaptive smoking cessation treatment	\$1.20	1/08/2016	31/07/2019	Project	Professor Christopher Bullen	The University of Auckland
16/027	Reproduction/family planning/sexual health	Timekeeping in the neural network controlling fertility	\$1.07	1/10/2016	30/09/2019	Project	Dr Richard Piet	University of Otago
16/017	Public Health - at-risk populations	Preventing Upper Respiratory Tract Infections in Infancy	\$1.20	1/11/2016	31/10/2020	Project	Professor Julian Crane	University of Otago

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/010	Infectious disease	New Generation Lipopeptide Antimicrobial Agents Using Patented CLipPA Technology	\$1.20	1/09/2016	31/08/2019	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	1/11/2016	31/10/2019	Project	Professor Michael Baker	University of Otago
14/436a	Physical activity/exercise	Neighbourhoods for active kids	\$0.52	1/09/2016	31/03/2018	Project	Associate Professor Melody Smith	The University of Auckland

Improving Outcomes for Acute & Chronic Conditions in New Zealand Contracts

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/671	Oncology and cancer	Development of inhibitors of PC-PLC as anticancer therapeutics	\$0.20	1/06/2017	31/05/2019	Project - Partnership	Associate Professor David Barker	The University of Auckland
17/669	Oncology and cancer	Targeting growth hormone signal transduction in breast cancer	\$0.20	1/06/2017	31/05/2019	Project - Partnership	Dr Jo Perry	The University of Auckland
17/638	Obesity	Indigenous approaches to reducing childhood obesity	\$0.04	1/03/2017	31/08/2018	International Relationship Fund	Professor Boyd Swinburn	The University of Auckland
17/624	Reproductive system disorders	Transforming women's pelvic floor health.	\$0.15	1/06/2017	31/05/2019	Explorer Grant	Dr Jennifer Kruger	The University of Auckland
17/536	Injury - intentional and unintentional	The effectiveness of tailored rehabilitation versus standard exercise programme	\$0.21	1/06/2017	31/05/2019	Feasibility Study	Dr Daniel Ribeiro	University of Otago

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/194	Mental health	Effectiveness of ūloa model	\$0.15	1/01/2017	31/12/2019	Emerging Researcher First Grant	Dr Sione Vaka	Massey University
16/780	Diabetes	Improving metformin adherence and persistence in people with type 2 diabetes	\$0.21	1/02/2017	28/02/2019	Project - Partnership	Dr Lianne Parkin	University of Otago
16/768	Health services - clinical	Improving acceptance of generic medicines	\$0.21	1/03/2017	28/02/2018	Project - Partnership	Professor Keith Petrie	Auckland UniServices
16/736	Diabetes	Mana Tū: a whānau ora approach to long term conditions	\$2.38	1/03/2017	29/02/2020	Project - Partnership	Dr Matire Harwood	National Hauora Coalition
16/726	Diabetes	Innovative management of diabetes with a comprehensive digital health programme	\$1.59	1/03/2017	29/02/2020	Project - Partnership	Professor Diana Sarfati	University of Otago
16/724	Diabetes	Preventing type 2 diabetes with probiotics and prebiotics (PDP2)	\$1.80	1/03/2017	29/02/2020	Project - Partnership	Associate Professor Jeremy Krebs	University of Otago
16/697	Health services - knowledge resources	Collaborative fever etiology research in South East Asia	\$0.45	1/11/2016	31/10/2018	Project - Partnership	Professor John Crump	University of Otago
16/690	Oncology and cancer	Using CRISPR-Cas9 to predict sensitivity to trastuzumab emtansine	\$0.14	1/10/2016	30/09/2018	Project - Partnership	Dr Francis Hunter	The University of Auckland
16/688	Oncology and cancer	Targeting HP1 regulated pathways to suppress breast cell invasion	\$0.20	1/09/2016	31/08/2018	Project - Partnership	Dr Tracy Hale	Massey University
16/680	Cardio/cerebrovascular disease	A Novel Nanosensor array for Heart Failure Diagnosis	\$0.15	1/09/2016	31/08/2018	Explorer Grant	Dr Patrick Gladding	Waitemata District Health Board
16/670	CNS/neurological disorders	Can we rehabilitate a reflex? A treatment protocol for the cough reflex	\$0.15	1/10/2016	30/09/2018	Explorer Grant	Dr Phoebe Macrae	University of Canterbury
16/646	Biomedical - pharmaceuticals/treatments	Preclinical development of non-addictive pain medications	\$0.15	1/10/2016	30/09/2018	Explorer Grant	Dr Bronwyn Kivell	Research Trust of Victoria

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
								University of Wellington
16/631	Infectious disease	Platform Trial Optimising Interventions in Severe Community Acquired Pneumonia	\$4.81	1/12/2016	30/11/2021	Programme	Dr Colin McArthur	Medical Research Institute of New Zealand
16/609	Cardio/cerebrovascular disease	Vascular risk Informatics using Epidemiology & the Web 2020 (VIEW2020)	\$4.98	1/01/2017	31/12/2021	Programme	Professor Rodney Jackson	The University of Auckland
16/597	CNS/neurological disorders	Harnessing brain mechanisms to tackle Alzheimer's disease	\$4.93	1/09/2016	31/08/2021	Programme	Professor Wickliffe Abraham	University of Otago
16/595	Gastrointestinal disease	Improving gut microbiota in IBD patients using enteral nutrition and curcumin	\$0.11	1/09/2016	31/08/2018	Emerging Researcher First Grant	Dr Paul Blatchford	The New Zealand Institute for Plant & Food Research
16/559	CNS/neurological	Lost in Translation: Translation Dysregulation and Parkinson's Disease	\$0.12	1/08/2016	31/07/2019	Emerging Researcher First Grant	Dr Ivanhoe Leung	The University of Auckland
16/534	Respiratory disease/asthma	Beta-blockers in COPD: Feasibility of an RCT in Stable patients	\$0.15	1/09/2016	28/02/2018	Feasibility Study	Professor Bob Hancox	University of Otago
16/505	Vision/hearing/speech	The transition zone as corneal endothelial transplants	\$0.15	1/10/2016	30/09/2018	Emerging Researcher First Grant	Dr Jie Zhang	The University of Auckland
16/488	Health services - Clinical	Paracetamol therapy in critical illness	\$0.15	1/12/2016	31/05/2018	Feasibility Study	Dr Paul Young	Medical Research Institute of New Zealand
16/391	Oncology and cancer	Intercellular mitochondrial transfer in glioblastoma	\$1.10	1/10/2016	30/09/2019	Project	Professor Michael Berridge	Malaghan Institute of Medical Research

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/385	Cardio/cerebrovascular disease	Targeting human atrial microstructure: The key to resolving atrial fibrillation	\$1.18	1/10/2016	30/09/2020	Project	Dr Jichao Zhao	The University of Auckland
16/361	Infectious disease	Repurposing Amiloride Derivatives as New Agents for Drug-Resistant Tuberculosis	\$1.19	1/09/2016	31/08/2019	Project	Professor Gregory Cook	University of Otago
16/341	Oncology and cancer	Potential of targeted cancer therapies by statins	\$1.17	1/08/2016	31/07/2019	Project	Professor Peter Shepherd	The University of Auckland
16/331	Oncology and cancer	Proliferating Tumour-Associated Macrophages in Human Cancers	\$1.17	1/01/2017	31/12/2019	Project	Professor Rod Dunbar	The University of Auckland
16/314	Oncology and cancer	Targeting cancer vaccines to human dendritic cells via CD301	\$1.19	1/10/2016	30/09/2019	Project	Professor Rod Dunbar	The University of Auckland
16/300	Diabetes	Fructose & the heart: targeting novel mechanisms of diabetic cardiomyopathy	\$1.17	1/09/2016	31/08/2019	Project	Dr Kimberley Mellor	The University of Auckland
16/279	Gastrointestinal disease	Translational Advances in Faecal Incontinence and Anterior Resection Syndrome	\$1.19	1/10/2016	30/09/2019	Project	Associate Professor Gregory O'Grady	The University of Auckland
16/267	Respiratory disease/asthma	Smoking relapse prevention in COPD patients	\$1.20	1/08/2016	31/07/2019	Project	Associate Professor Natalie Walker	The University of Auckland
16/242	Cardio/cerebrovascular disease	Reducing the Burden of Atrial Fibrillation	\$1.09	1/09/2016	31/08/2020	Project	Professor Richard Troughton	University of Otago
16/236	Gastrointestinal disease	Targeting toxic gut lymph to treat acute disease	\$1.18	1/10/2016	30/09/2019	Project	Professor John Windsor	The University of Auckland

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/232	Infectious disease	Structure-directed discovery of next-generation antifungals	\$1.20	1/08/2016	31/07/2019	Project	Associate Professor Brian Monk	University of Otago
16/231	Gastrointestinal disease	Establishing drainage of thoracic duct lymph for longitudinal clinical studies	\$1.16	1/10/2016	30/09/2020	Project	Professor John Windsor	The University of Auckland
16/226	Biomedical - genes	Genomic analysis of adverse drug reactions	\$1.19	1/09/2016	31/08/2019	Project	Professor Martin Kennedy	University of Otago
16/172	Biomedical - pharmaceuticals/treatments	Biodiscovery and biosynthesis of new drug candidates	\$1.20	1/10/2016	30/09/2019	Project	Associate 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	1/08/2016	31/07/2019	Project	Professor Cameron Grant	The University of Auckland
16/155	Cardio/cerebrovascular disease	Physiological pacing to improve cardiac output in heart failure	\$1.12	1/09/2016	31/08/2019	Project	Dr Rohit Ramchandra	The University of Auckland
16/135	Clinical - trials	Keramatrix4VLU: a trial of wool-derived keratin dressings for venous ulcers	\$1.20	1/10/2016	30/09/2019	Project	Associate Professor Andrew Jull	The University of Auckland
16/120	Oncology and cancer	Novel radiosensitisers for head and neck cancer	\$1.20	1/12/2016	30/11/2019	Project	Associate Professor Michael Hay	The University of Auckland
16/009	Health services - clinical	The PLUS trial: PLasmalyte versUs Saline for intravenous fluid therapy in ICU	\$1.39	1/12/2016	31/05/2020	Project	Dr Paul Young	Medical Research Institute of New Zealand

New Zealand Health Delivery

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/811	Disability	Translating ultrasound imaging of swallowing to clinical dysphagia diagnosis	\$0.20	1/06/2017	30/11/2018	Project - Partnership	Professor Maggie-Lee Huckabee	University of Canterbury
16/524	Health services - clinical	Randomised controlled trial of prescription charges: Feasibility study	\$0.15	1/10/2016	30/09/2017	Feasibility Study	Professor Pauline Norris	University of Otago
16/521	Vision/hearing/speech	Improving children's vision-screening: Are Lea symbols a better option?	\$0.14	1/09/2016	31/08/2019	Emerging Researcher First Grant	Dr Nicola Anstice	The University of Auckland
16/425	Cardio/cerebrovascular disease	Pragmatic Clinical Trial of Sodium Lowering in Dialysate	\$1.20	1/04/2017	31/03/2022	Project	Associate Professor Mark Marshall	Middlemore Clinical Trials
16/405	Oncology and cancer	Self-sampling for HPV screening: a community trial	\$1.20	1/09/2016	31/08/2019	Project	Professor John Potter	Massey University
16/344	Diabetes	What predicts regression from prediabetes to normal glucose regulation?	\$1.11	1/10/2016	30/09/2019	Project	Dr Kirsten Coppel	University of Otago
16/330	Cardio/cerebrovascular disease	Improving outcomes of patients with atrial fibrillation in primary care	\$1.20	1/10/2016	30/09/2019	Project	Professor Dr Ralph Stewart	Auckland District Health Board
16/229	Alcohol/drugs of dependence	Me Mutu Kai Paipa - Improving the Provision of Cessation to NZ Smokers	\$0.58	1/11/2016	31/10/2018	Project	Professor Christopher Cunningham	Massey University
16/014	Health services - clinical	ICU-ROX: An ICU RCT of conservative vs. standard Oxygen therapy	\$1.40	1/12/2016	31/05/2020	Project	Dr Paul Young	Medical Research Institute of New Zealand

Rangahau Hauora Māori Contracts

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/705	Child development	Improving child and whanau health outcomes - intervention in early life settings	\$0.20	1/01/2017	30/06/2018	Ngā Kanohi Kitea Project	Ms Erana Hond-Flavell	Te Pou Tiringa Incorporated
16/704	Health services - community	He Puna Reo He Puna Oranga Whānau: Impact of urban Puna Reo on health & wellbeing	\$0.19	1/01/2017	30/06/2018	Ngā Kanohi Kitea Project	Ms Toni Roberts	Te Puna Reo o Nga Kakano Charitable Trust
16/703	Environmental health	Te Ohu Mo Papatuanuku: Contaminated Site Toolkit for Community Use	\$0.20	1/02/2017	31/07/2018	Ngā Kanohi Kitea Project	Mrs Tracey Godfery	Te Runanga o Ngati Awa
16/702	Mental health	Kimihia te Hauora Hinengaro: Pathways for Māori Mental Health	\$0.06	1/01/2017	31/12/2017	Ngā Kanohi Kitea Project	Dr Tanya Lee Allport	Te Whanau o Waipareira Trust
16/518	Child development	Māori experiences of antenatal care in Tamaki Makaurau	\$0.15	1/10/2016	31/05/2019	Emerging Researcher First Grant	Dr Anneka Anderson	The University of Auckland
16/444	Child development	Whānau Manaaki	\$4.70	1/08/2016	31/07/2021	Programme	Associate Professor Beverley Lawton	University of Otago
16/415	Oncology and cancer	Cancer support programmes for Māori whānau	\$1.04	1/09/2016	31/08/2019	Project	Dr Lis Ellison-Loschmann	Massey University
16/346	Mental health	He Oranga Ngākau: Māori and Trauma Informed Care	\$1.19	1/08/2016	31/07/2019	Project	Dr Leonie Pihama	University of Waikato
16/338	Mental health	Māori and Bipolar Disorder	\$1.18	1/10/2016	30/09/2019	Project	Dr Cameron Lacey	University of Otago
16/268	Wellness	Honour Project Aotearoa	\$1.19	1/08/2016	31/07/2019	Project	Dr Leonie Pihama	University of Waikato
16/089	Aging	A Māori approach to the assessment and management of dementia	\$1.06	1/09/2016	31/08/2020	Project	Dr Margaret Dudley	The University of Auckland

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
16/088	Alcohol/drugs of dependence	Te Ara Auahi Kore	\$1.19	1/09/2016	31/08/2019	Project	Mr Andrew Waa	University of Otago
15/678	Wellness	Association between Māori cultural identity and health	\$0.19	1/08/2016	31/01/2018	Ngā Kanohi Kitea Project	Mrs Teresa Kirkwood	Ngati Tamaoho Trust
15/643	Aging	Haunui, haurua, hauora!	\$0.20	1/09/2016	28/02/2018	Ngā Kanohi Kitea Project	Mr Jonathan Kilgour	Waikato-Tainui College for Research and Development

Research Contracts Not Classified by Research Investment Stream

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/606	Research methods	Tu te tapu, Ta te tapu: how can Tikanga inform the use of big data	\$0.01	1/11/2016	28/02/2017	Ethics Summer Studentships	Tiriana Anderson	University of Waikato
17/605	Child development	Growth attenuation therapy for children with severe physical and cognitive disability: practice and perspectives of NZ paediatricians	\$0.01	1/09/2016	30/11/2016	Ethics Summer Studentships	Miss Rebekah Wrigley	University of Otago
17/603	Obesity	Disparities in obesity prevalence and the ethics of personal responsibility	\$0.01	1/12/2016	31/03/2017	Ethics Summer Studentships	Johann Go	The University of Auckland
17/602	Research methods	Health research impact upon vaping	\$0.01	1/09/2016	30/11/2016	Ethics Summer Studentships	Yolande Jeffares	Massey University
17/515	Wellness	Attitudes, knowledge, behaviours and health in Rarotongan Adolescents	\$0.02	1/03/2017	28/02/2018	Pacific Health Masters	Mrs Mayor Pokino	The University of Auckland

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/511	Wellness	Social support among Pacific peoples	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Ms Sarah Kapeli	The University of Auckland
17/506	Wellness	Te hao nui, he hao komarohi	\$0.01	1/11/2016	30/04/2017	Māori Development Grant	Mr Andrew Sporle	Independent Researcher (HRC to administer)
17/503	Health services - delivery	Health and Service Delivery needs of the Turangi Māori Community	\$0.01	1/12/2016	28/02/2017	Māori Health Summer Studentship	Miss Casey Te Rangi	Te Whanau o Waipareira Trust
17/497	Health services - delivery	Senior nurses understanding of health equity.	\$0.02	1/10/2016	30/09/2017	Award Māori Master Scholarship	Mrs Sonia Hawkins	The University of Auckland
17/496	SUDI	Key influences for bed sharing and the relationship with SUDI	\$0.11	1/03/2017	29/02/2020	Māori PhD Scholarship	Mrs Melanie MacFarlane	The University of Auckland
17/495	Wellness	Indigenous approaches to family restoration and wellbeing	\$0.06	1/01/2017	31/12/2020	Pacific Health PhD	Mrs Sesimani Havea	Massey University
17/479	Obesity	Non-Communicable Disease Risk in Rarotongan Adolescents	\$0.11	1/03/2017	29/02/2020	Pacific Health PhD	Miss Siobhan Tu'akoi	The University of Auckland
17/476	Health services - delivery	A survey of non-Māori Health Professional students at Te Whare Wānanga o Otāgo	\$0.01	1/11/2016	31/01/2017	Māori Health Summer Studentship	Miss Nadine Houia-Ashwell	University of Otago
17/474	Wellness	Otago Māori Medical Student Perspectives on Cultural Development	\$0.01	1/11/2016	31/01/2017	Māori Health Summer Studentship	Miss Mairarangi Haimona	University of Otago
17/472	Obesity	Pacific Island Peoples Experiences of Bariatric Surgery Health Care Engagement	\$0.32	1/12/2016	30/11/2019	Pacific Health Postdoctoral Fellowship	Dr Tamasin Taylor	Auckland University of Technology

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/471	Dental/oral health	Effects of severe early childhood caries on Pacific Island families	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Miss Ashleigh Raikuna	University of Otago
17/470	Biomedical - physiology	Effects of uric acid on beta cell function	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Miss Tumanu Futi	University of Otago
17/467	Health services - delivery	Tāne in the Health Workforce: A Students Experience of Supporting Factors	\$0.01	1/11/2016	31/01/2017	Māori Health Summer Studentship	Mr Jordan Tewhaiti-Smith	University of Otago
17/465	Diabetes	Text messaging support for Tongan people with prediabetes	\$0.11	1/05/2017	30/04/2020	Pacific Health PhD	Miss Julienne Faletau	The University of Auckland
17/458	Obesity	To investigate health-related behaviours of Rarotongan adolescents	\$0.02	1/03/2017	28/02/2018	Pacific Health Masters	Miss Heimata Herman	The University of Auckland
17/455	Oncology and cancer	Raising awareness or creating confusion? Media coverage of cancer issues in NZ	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Miss Johanna Nee-Nee	University of Otago
17/454	Health services - delivery	A Review of NZ District Health Board Policies about Translation Services	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Miss Mary Kivalu	University of Otago
17/453	Diabetes	Genetics in iwi health: A journey to understanding.	\$0.38	1/04/2017	31/03/2020	Māori Health Postdoctoral Fellowship	Dr Julia Wilson	University of Otago
17/452	Infectious disease	Antibiotic Prophylaxis and the Progression of ARF to RHD	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Miss Brooke Marsters	University of Otago

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/428	Health services - clinical	Follow Up of Hip and Knee Arthroplasty Patients Returned to GP	\$0.01	1/10/2016	28/02/2017	Pacific Health Summer Studentship	Miss Toni Anitelea	University of Otago
17/383	Health services - delivery	A qualitative look at Tikanga best practice guidelines in New Zealand DHBs	\$0.01	1/11/2016	31/01/2017	Māori Health Summer Studentship	Mr Daniel Thompson	University of Otago
17/358	Wellness	Does sleep differ according to ethnicity in children?	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Mr Tevita Vaipuna	University of Otago
17/342	Child development	Tūhono Māori: Promoting secure whānau relationships for traumatised mokopuna	\$0.39	1/04/2017	31/03/2020	Māori Health Postdoctoral Fellowship	Dr Alayne Hall	Auckland University of Technology
17/218	Wellness	Housing, Violence and Ancestral Land	\$0.01	1/11/2016	30/04/2017	Māori Development Grant	Dr Stephanie Palmer	Tumana Research Services
17/216	Wellness	Community support for a community mobilisation model of violence prevention	\$0.01	1/11/2016	30/04/2017	Māori Development Grant	Dr Stephanie Palmer	Tumana Research Services
17/210	Mental health	Taiohe and whānau entering acute mental health with alcohol and drug issues	\$0.11	1/01/2017	31/12/2019	Māori PhD Scholarship	Ms Debra Gerrard	Auckland University of Technology
17/161	Health services - clinical	Knowledge Translation in the management of oxygen therapy in Intensive Care	\$0.25	1/01/2017	31/12/2020	Clinical Research Training Fellowship	Mrs Diane Mackle	Medical Research Institute of New Zealand
17/148	Health services - clinical	To suction or not to suction - that is the question	\$0.24	1/04/2017	31/03/2021	Clinical Research Training Fellowship	Ms Eileen Gilder	Auckland DHB Charitable Trust

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/141	Cardio/cerebrovascular disease	Improving Outcomes after Cardiothoracic Surgery	\$0.85	1/01/2017	31/12/2021	Award Practitioner Research Fellowship	Dr Shay McGuinness	Auckland DHB Charitable Trust
17/134	Aging	Medicine Optimisation in Older Adults in Primary Care - Multidisciplinary Approach	\$0.24	1/02/2017	31/01/2021	Clinical Research Training Fellowship	Ms Joanna Hikaka	The University of Auckland
17/103	Chronic pain	Naturally biased? Exploring neuropeptide signal pathway bias in pain	\$0.50	1/03/2017	28/02/2021	Sir Charles Hercus Fellowship	Dr Christopher Walker	The University of Auckland
17/097	Diabetes	The Economic Cost of Diabetes among Pacific Islanders	\$0.01	1/11/2016	28/02/2017	Pacific Health Summer Studentship	Miss Meaalofa Pupi	University of Otago
17/086	Wellness	Korero mai: taitamariki Māori development of healthy relationships	\$0.25	1/01/2017	31/12/2019	Clinical Research Training Fellowship	Ms Terry Dobbs	Auckland University of Technology
17/058	Infectious disease	Novel metabolic processes to target persistent tuberculosis	\$0.50	1/05/2017	30/04/2021	Sir Charles Hercus Fellowship	Dr Ghader Bashiri	The University of Auckland
17/039	CNS/neurological disorders	Dementia and Parkinson's disease: Tau pathology and cerebrovascular health	\$0.50	1/04/2017	31/03/2021	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	1/01/2017	31/12/2019	Clinical Research Training Fellowship	Dr Anthony Lin	The University of Auckland
17/018	Occupational health	Improving outcomes for support workers in aged care	\$0.25	1/01/2017	31/12/2019	Clinical Research Training Fellowship	Mr Karol Czuba	Auckland University of Technology

Ref	Focus Area	Title	\$M	Start	End	Contract Type	Lead Researcher	Host
17/016	Oncology and cancer	The effects of comorbidity on breast cancer care and outcomes	\$0.17	1/01/2017	31/12/2018	Clinical Research Training Fellowship	Dr Melissa Edwards	The University of Auckland
17/011	Health services - clinical	Prevention and treatment of fever in the ICU	\$0.72	1/12/2016	30/11/2021	Practitioner Research Fellowship	Dr Paul Young	Capital and Coast District Health Board
17/001	Wellness	Mahi Ngātahi - Culturally responsive ways of working together	\$0.11	1/01/2017	31/12/2019	Māori PhD Scholarship	Ms Zoe Kristen Tipa	Auckland University of Technology
16/477	Alcohol/drugs of dependence	Maraea - supportive solutions for indigenous children who misuse substances	\$0.54	1/01/2017	31/12/2020	Māori Health Postdoctoral Fellowship	Dr Lisa Chant	Auckland University of Technology

Appendix 3: Key focus of the HRC's Research Investment Streams and their relationship to the outcome framework

Research Investment Stream	Key Impacts	Outcomes
Health & Wellbeing in New Zealand: Understanding the human body and preventing disease	<ul style="list-style-type: none"> • A strong research focus on keeping New Zealanders healthy and productive • High-impact, original research is conducted and translated across the research pipeline • Expertise is harnessed to create local solutions to global health challenges • NZ research contributes to international advances 	<ol style="list-style-type: none"> 1. New knowledge, solutions, and innovations for health are created 2. The healthcare system is improved through research evidence and innovation
Improving Outcomes for Acute and Chronic Conditions in New Zealand: Better diagnosis, treatment and end-of-life care	<ul style="list-style-type: none"> • High-impact, original research is conducted and translated across the research pipeline • Expertise is harnessed to create local solutions to global health challenges • NZ research contributes to international advances • Innovative health technologies and therapies develop 	<ol style="list-style-type: none"> 1. New knowledge, solutions, and innovations for health are created 2. The healthcare system is improved through research evidence and innovation
New Zealand Health Delivery: Building a better, more efficient and cost-effective health system through research evidence	<ul style="list-style-type: none"> • More front-line clinicians are engaged in health research • Research is easily accessed, understood, and applied by end-users • Research increasingly guides policy and informs decisions • Overseas research is adapted for NZ conditions • New Zealanders have access to new treatments, technologies, and improved services that meet their needs • The cost-effectiveness and sustainability of NZ's health system is improved through research 	<ol style="list-style-type: none"> 1. New knowledge, solutions, and innovations for health are created 2. The healthcare system is improved through research, evidence, and innovation 3. The impact, responsiveness, and uptake of health research is increased
Rangahau Hauora Māori: Addressing Māori health issues and building the capacity and capability of the Māori workforce	<ul style="list-style-type: none"> • High-impact, original research is conducted and translated across the research pipeline • NZ has the research capacity to address the needs of our unique population • Promising emerging researchers gain valuable research experience • Sustainable career pathways enhance the skills of researchers and clinicians 	<ol style="list-style-type: none"> 1. New knowledge, solutions, and innovations for health are created 3. The impact, responsiveness, and uptake of health research is increased

Glossary of abbreviations and terms

Bibliometrics: the study of the influence that scientific publications have in a given field. A number of measures are used that include the relative impact factors of scientific journals, the number of times an article is cited in other publications and the expected number of citations, based on the world average for a particular discipline. Comparisons are made across countries and institutional funders, but never across disciplines.

DHB: District Health Board.

HWNZ: Health and Wellbeing in New Zealand Research Investment Stream.

HRC: The Health Research Council of New Zealand.

Impacts: these are the impacts of our activities under our various Outputs, against which we have designed performance indicators to measure our progress towards our stated Outcomes.

IOACC: Improving Outcomes for Acute and Chronic Conditions Research Investment Stream.

MBIE: Ministry of Business, Innovation and Employment.

MoH: Ministry of Health.

MSI: Ministry of Science and Innovation.

NZHD: New Zealand Health Delivery Research Investment Stream.

Outcomes: the benefits that our Impacts will ultimately bring for New Zealand society. These are not directly measurable and so we track our progress through surrogate measures against our Impacts.

Output: The government allocation from which our funding is drawn – each output provides funding for a specific purpose. The HRC receives funding from four different funding Outputs (detailed in Part 3).

Peer review: Assessment by experts in the field in question – literally, the scientific ‘peers’ of the applicant.

Peer-reviewed publications: Articles published in journals that employ a peer-review process for selection, meaning that the article is thoroughly checked and challenged by scientists in the same field (peers) before publication. There is great competition for publications space in most peer-reviewed journals and only the best research is published. Consequently, peer-reviewed publications are a good metric for research quality.

PHO: Public health organisation

Public Health Intervention: A programme that has been designed to improve public health, and shown to be effective by sound research evidence. Examples include programmes to help people stop smoking, or those aimed at preventing youth suicide.

RHM: Rangahau Hauora Māori Research Investment Stream.

Research Investment Streams (RIS): we have four RIS that collectively reflect the full spectrum of possible health research activities in New Zealand that HRC may support. We use these streams to signal our priorities to the research community.

RIS: Research Investment Stream(s).

RPNZHD: Research Partnerships for New Zealand Health Delivery.

Notes

Notes

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