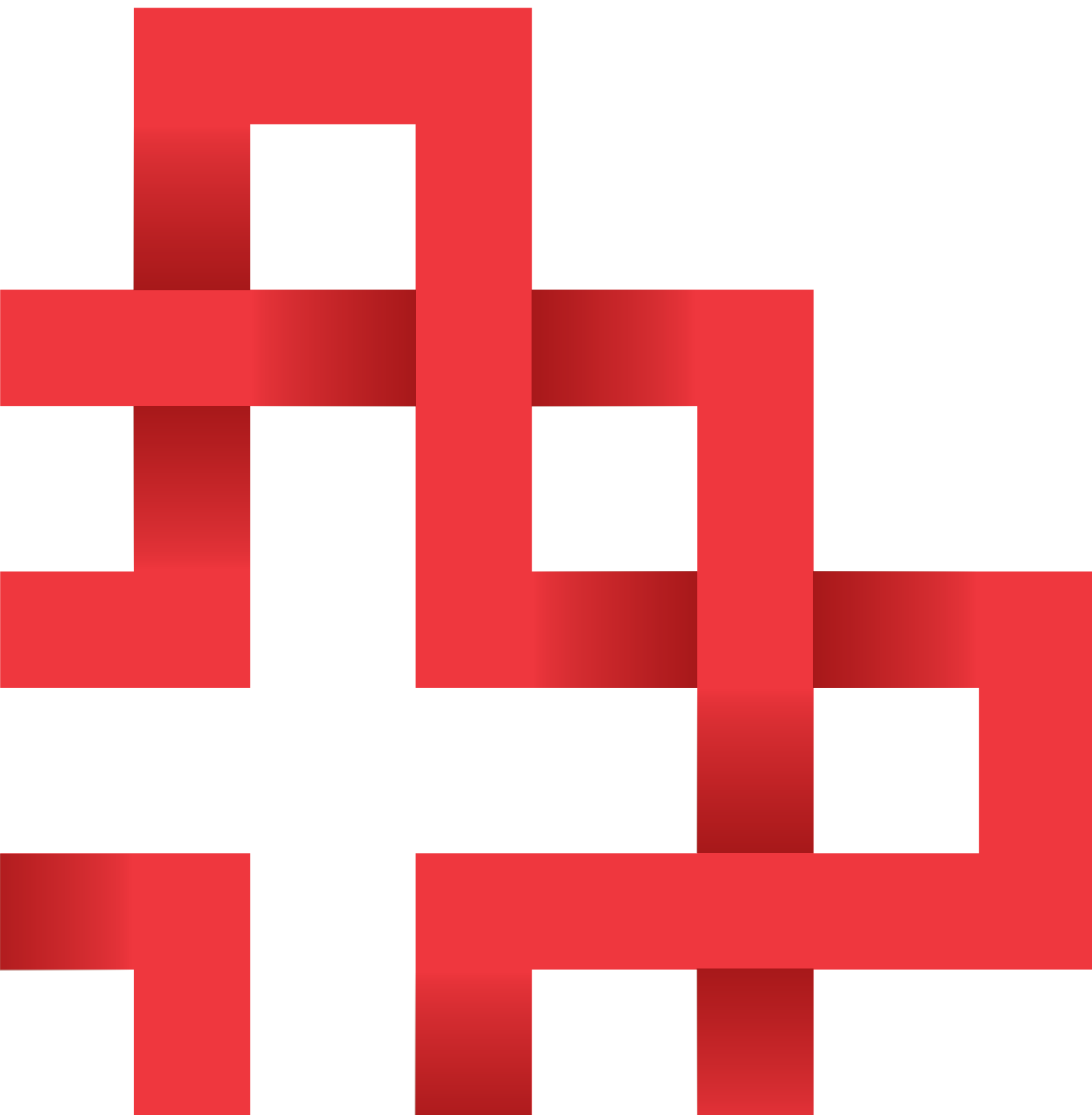
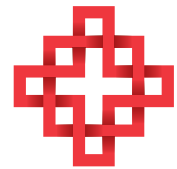
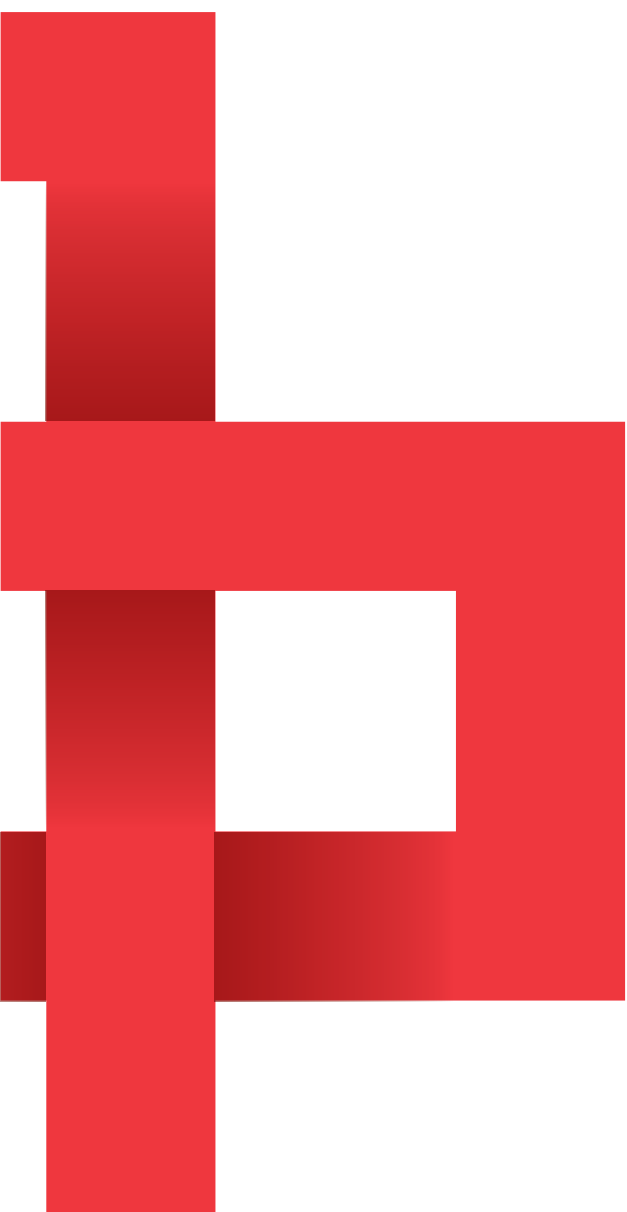


Canterbury Medical Research Foundation

Annual Report 2016





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Legacy



Y



Our People

Patron



Sir Robert Stewart
KNZM

Board of Directors



Mike Stenhouse
Chair



Bert Govan
Vice Chair



Simon Carey
Treasurer



Nichola Hiatt



Geoff Cranko

Staff



Kate Russell
Chief Executive



**Caroline Wagteveld
McKenzie**
Fundraising Manager



Barbara Chapman
Administration
Manager



Kimberly Ford
Administration
Officer

Co-opted Board Advisers



**Professor
Margreet Vissers**
Chair, SAC



**Professor
Peter Joyce**
(until Sept 2016)



**Professor
Steve Weaver**
(until Sept 2016)



**Professor
David Murdoch**
(from Oct 2016)



**Professor
Ian Wright**
(from Oct 2016)



Ross Hutton
Craig's Investment
Partners

Objectives of the Foundation

Over the past 56 years, the Foundation has helped hundreds of scientists conduct medical research in the U.S. and provided more than \$100 million in funding to the Cantor Center.

ars, the Foundation
ds of promising
leas to be realised
than \$25 million in
erbury Region

Mission

**Canterbury Medical
Research Foundation
is an enabler of
world class Medical
Research**

-
- We support medical research in Canterbury
 - We aim to improve health outcomes locally in Canterbury but our impact is global
 - We are focused on enabling world class medical researchers, both emerging and more experienced and thus retaining intellectual research capital here in Canterbury

Chairman's Report



Reflecting on last year's achievements within the Foundation, I believe we can take pride in significant growth in the support we provide to the research sector Canterbury as well as a very successful year in growing our capital base, ensuring our purpose and mission continues well into the future.

The Foundation has always enjoyed great support for its work, through bequests left to us by long-time supporters. One such supporter was Rhona Wright, whose \$1.9 million bequest in the middle of the year, significantly boosted our reserve and ultimately, our ability to fund more research. Rhona had pledged as a young woman to support medical research and she worked her whole life toward that goal, for which we are very appreciative. Similarly, for the NZBRI, Alan Trembath, a loyal supporter of brain research, left the bulk of his estate to the Institute late in 2016, providing a game-changing lift in the Institute's reserve.

What is of utmost importance, is what we do with these generous gifts. 2016 saw us funding two thirds of the applicants who came to us for funding — a result which sees us 'punching well above our weight' in the medical research funding space. So many of the researchers we have supported in their early career are now the senior researchers who are mentoring new PhD candidates coming through to receive our support, which is very satisfying.

We are delighted in the growth of the NZBRI and the new and exciting work being undertaken as they collaborate in the government-funded 'Brain CoRE'. I think we can be assured that Cas van der Veer would be very happy with what his legacy from back in 2000 has achieved. I would like to take this opportunity to thank outgoing Chairman of the NZBRI, John Bayley, who served as Chair from the inception of the van der Veer Institute in 2004 and



did a stirring job of setting up the Institute to become the successful, collaborative space it is today.

NZBRI and CMRF are now firmly cemented as a family, thanks to our very successful, ongoing publicity campaign to create more awareness around our work. Board members and staff alike are often told that people have seen our billboards, or our ads in social media and that they ‘never knew’ that so much was being done here in the medical research field.

We continue to monitor the development of the Health Precinct in the middle of the city. This new campus which will be the focal point of all medical research in Canterbury and brings together the research ‘might’ of the Otago Medical School, University of Canterbury, Ara Institute and Canterbury District Health Board. It should be no surprise then, that CMRF and the NZBRI see ourselves as having a significant role to play in this precinct as a funder of and participant in, ground-breaking research. We will continue to work toward taking a presence in the new precinct and to maximize our location through increased collaboration and excellent relationships with these key stakeholders.

Any organisation is only ever as good as its people. The CMRF Board members are a hard-working and high functioning group of committed professionals whose governance helps to steer CMRF toward ever better outcomes and I thank them all for their diligence. Thanks also to Kate and her team at the CMRF Office whose hard work and dedication to the Foundation enhances our reputation each and every day. Finally, my thanks to all of you who continue to support us financially. Without the ongoing support of the many who regularly gift to us, we could not support the many dedicated researchers in Canterbury who have received our funding.

Mike Stenhouse
Chairman, CMRF

CEO Report



American Novelist and Anthropologist Zora Neale Hurston said ‘Research is formalised curiosity. It’s poking and prying with a purpose’.

I am consistently impressed by the many ‘curious’ minds we have in the research community here in Canterbury. Both fresh-faced Post Docs and more experienced faces, continue to add to the global body of knowledge in medical research. But research is a long game. Rarely do medical breakthroughs come in a rush or epiphany of new thinking. Rather they come about due to years of step-wise research, incremental steps, countless blind alleys and the sheer tenacity and dogged determination to create a better future that our researchers display. Like many important leaps forward in humanity’s evolution, sometimes it comes down to the sheer force of will of one or two people, to keep going despite set-backs, uncertain funding and the vicissitudes of popular support.

2016 was a year of consolidation for the Foundation. Having rebranded in early 2015, we had the opportunity to leverage the increased public recognition of our work with more stories about the impact of our funding both on the careers of the researchers themselves, but perhaps more importantly, on the patients and users of the health system whom their discoveries helped.

This was all backed up with a solid year across our income streams. Despite the disruptions of the overseas political climate, our investments remained a steady source of income. We were pleased to have a large bequest notified to us in the middle of the year from a person who had made it her life’s mission to build her personal wealth specifically in order to leave it to medical research and the NZBRI were also bequeathed a significant sum from a long-time supporter, which will be a game-changer for the Institute going forward.

Highlights of the year included the Wine and Art Auction, now in its 24th year, raising an impressive sum for the work of Dr Julia Rucklidge, a high number of completed grants and internationally



Smart

published articles and new opportunities arising for collaboration and cooperation with the other six medical research institutes around New Zealand. It was gratifying to also be able to assist and advise various other research centres and institutes throughout Canterbury, on effective fundraising and being able to provide introductions to potential funding sources to help grow the research sector overall.

If CMRF were a ship, then I would say we have a superb crew. The strong governance at the helm provided by our skilled and diverse Board, ably led by Chairman, Mike Stenhouse, which sets the direction of travel for our Foundation, made manifest by the management and staff who are a happy, high-functioning team, allow us to achieve impressive financial, strategic and research results, year on year. My personal thanks to my team in the CMRF office, Barbara, Caroline and Kim who go the extra mile for the Foundation every day.

We also owe a debt to the members of our advisory and fundraising committees. The Scientific Assessment Committee, gives long hours to the assessment of incoming applications and gives us the surety of a transparent and robust assessment process. Our Wine and Art Auction Committee are a loyal bunch, who manage to get the hard work of event management done and have many laughs along the way. We are similarly very grateful for the insight and experience lent to us by our Co-opted advisors to the Board from both Universities and our investment partners, Craigs.

Of course, none of this would be possible without the friendship and support of our loyal donor base. Without the constancy of support from our many friends who have been with us, in some cases, for decades and the pleasing in-flow of new donors and supporters throughout the year, our work would be greatly diminished. Thank you all for the part you play in helping us to ensure medical research is well-supported in Canterbury.

Kate Russell

Chief Executive, CMRF

Funds Awarded in 2016

Major Projects

Dr Anitra Carr

Intravenous Vitamin C and severe sepsis outcomes

Dr Rachel Purcell

Gut bacteria and colorectal cancer

Dr Andree Pearson

Mitochondria and ageing

Dr Katie Douglas

Cognitive remediation for depression

Dr Margaret Currie

Exercise as Cancer therapy

Dr Prisca Mbikou

Role of DWORF in heart disease

Dr Kristin Gozdzikowska

Pharyngeal high resolution manometry

Grants in Aid

Dr Bronwyn Thompson

Adolescent/Adult Sensory Profile validation in central sensitization

Dr Andrew Day

Designing and Testing an app for young people with inflammatory bowel disease

Dr Amy Scott Thomas

Early detection of lung infection using a non-invasive breath test

Dame Malvina Major Travelling Fellowship

Debbie O'Donohue

Study tour of UK Neonatal units to study family — integrated care strategies

Wine and Art Auction 2016

Dr Julia Rucklidge

Use of micronutrients for children with a diagnosis of ADHD

Travel Grants

Dr Patrice Rosengrave

Australia New Zealand Intensive Care Society Annual Meeting — Australia

Nursing Fellowship

Ian Averill

Use of physical activity in treatment for severe depression

Clinical Registrar Fellowship

Dr Natalie Martin

Outcomes from UK Paediatric Meningitis study

Summer Studentships Otago University, Christchurch

The effects of oestradiol and progesterone on the expression of Focal Adhesion Pathway and proliferation markers in Ishikawa cell culture

A naturalistic study of outcomes with olanzapine long acting injection

A cross-sectional analysis and benchmarking of clinical assessment data using the electronic Persistent Pain Outcomes Collaboration assessment tools

Early unplanned hospital re-admissions in frail older people receiving a community rehabilitation service—Causes and precipitants.

A New Zealand PHODA: A measure for identifying the perceived harmfulness of activities

Effect of hydrogen peroxide produced by *Streptococcus pneumoniae* on bacterial survival in the presence of peroxidases released by immune cells

Summer Studentships Canterbury University

Inhibitory effect of statins on atheroma inflammation

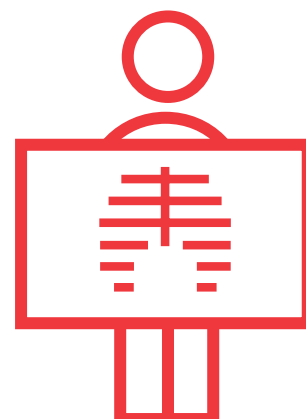
Characterising the active site of NagA—an enzyme critical for bacterial sialic acid catabolism

Characterising the active site of NanK—an enzyme critical for bacterial sialic acid catabolism

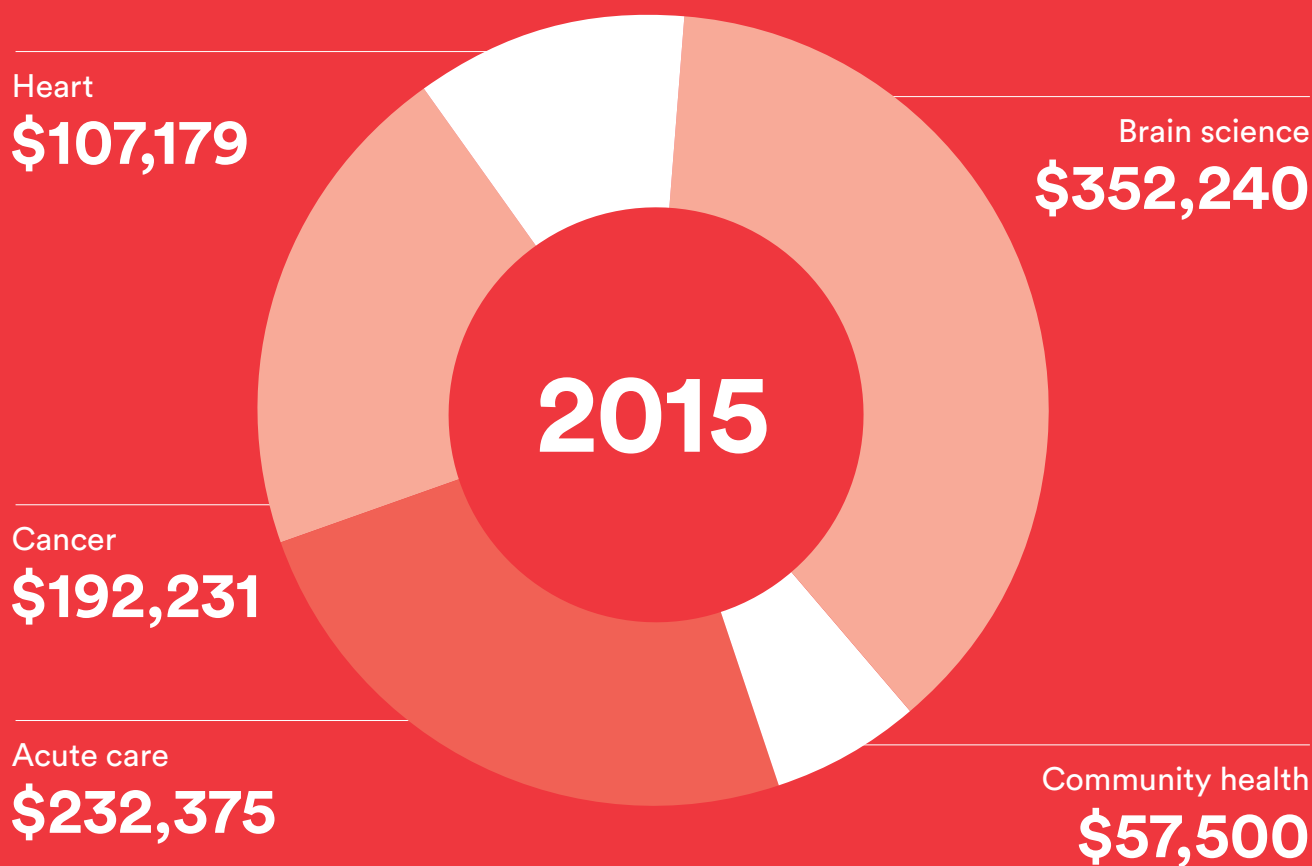
The phosphoribosyl transferases: potential targets for new anti-tuberculosis therapies

Vibrotactile stimulation of cough reflex: a pilot study

Establishing normative data for ultrasound assessment of swallowing



Grants Awarded (By Subject)



\$1,192,523 awarded

Heart

\$100,000

Paediatrics

\$148,000

Cancer

\$188,149

Acute care

\$98,687

Biological science

\$20,000

Brain science

\$217,066

Community health

\$194,626

2016

\$1,581,516 awarded

Fundraising report



2016 was a successful year for our fundraising with several events across the group and new benchmarks made for our flagship event, the Wine and Art Auction.

With well over \$100,000 made on the night of the auction, this 23rd annual event, a sell out by July, was the most successful ever. Our thanks must go to the wonderful organising committee for this event; Mel Brew, Julie Hutton, Sue Stenhouse, Janette Borthwick, Shona Ross and Ron Wright, ably led by raising Manager, Caroline Wagteveld McKenzie. We also acknowledge the wonderful businesses that support the auction, some for many years now: Pegasus Wines, Rydges Latimer Christchurch, Charles Wiffen Wines, Harcourts and the many volunteers who make the night special. Of course without the many contributing wineries, private wine collectors and artists who are so generous to us, the event would not happen so we also pay tribute to their Our community Direct Mail spirit. programme and giving through the 'Research News' newsletter increased markedly in 2016, reflecting the great stories we have to tell about the impact our funding has on the careers of young researchers. The ability to donate on our website





Support

has also been very well-received as we work to create opportunities for the 'tech-savvy' to donate easily and with immediacy. We have found Facebook to be a very effective medium to promote our work, and the posts about our impact are widely shared. Our Live streams from the Otago Medical School Open Day were particularly popular.

Mid-year saw the launch of a more formalized approach to bequest fundraising as we are working with our loyal donor base, to promote and create opportunities for leaving lasting gifts to our work. Personal visits by Caroline and CEO, Kate Russell to those interested in the possibility of a bequest to the Foundation have been welcomed and present a wonderful opportunity for us to get to know you, our supporters, better.

Our team fundraise for both CMRF and its subsidiary The NZ Brain Research Institute, the schedule of events, mail and other outreach is a full one. This is one of the most enjoyable parts of our work, to talk to people about the joy of giving and supporting such important work. We are very grateful for the many friends and supporters who help us attain our goals.

Caroline Wagteveld McKenzie
Fundraising Manager, CMRF

‘It’s about people
not only functioning
but they function
do research.

Dr Maggie-Lee Huckabee

Director, Rose Centre for Stroke Recovery and Research

people — they
d research
d people to
,

Completed Grants

Dr Heather Parker

Superoxide Dismutase and Infection with *Micobacterium Tuberculosis*

‘There were several interesting unexpected outcomes to this project. Firstly, we found that neutrophils can kill *M. smegmatis* equally well without the use of oxidants as when they are present. Secondly, our preliminary data suggests *M. smegmatis* are more resistant to HOCl than other bacteria such as *S. aureus*. This is a very interesting finding and we intend to continue investigating this.’

Dr Paul Pace

Redox regulation of neuronal development by the antioxidant Prx2

Dr Louisa Forbes

Screening for Potent Inhibitors of Myeloperoxidase

‘The CMRF was established to support medical research in Canterbury, with the aim of having both local and global impact. This project has been successful in meeting these objectives. With this funding, we have been able to use our existing expertise and technical base to produce a new research tool in our area of biomedical research. The new assay will help in the discovery of inhibitors of myeloperoxidase, which would be of great value for the treatment of inflammatory diseases.’

Dr Martin Kennedy

Evaluating the potential applications of a nanopore DNA sequencer

‘This grant-in aid allowed us to carry out some key work with this device, which we believe has a very promising future in medical research. We are now pursuing similar analyses with newer, more accurate iterations of the technology.’

Dr Madhav Bhatia

Liver Seive, Inflammation and Septic Shock

Dr Tracy Melzer

MRI to predict dementia in Parkinson’s Disease

‘Our aims with this project were to begin research into the mechanisms by which CRMP2 modification can be regulated, potentially by Prx2. This is an important process as uncontrolled modification is strongly associated with the onset of several neurological diseases.’

Dr Anitra Carr

Intravenous Vitamin C— Integrative therapies Conference 2016

‘I would like to thank the CMRF for providing \$2000 towards travel to attend this interesting and highly relevant conference in Kansas City and subsequent visit to the VCU Medical Center.’

Dr Katie Douglas

Effect of Glucocorticoid administration of PTSD

‘This is the first known neuroimaging study to investigate the effect of acute glucocorticoid administration on emotional recall, using script-driven imagery, in PTSD.’

Dr Daniel Myall

Optimally predicting the risk of cognitive decline in Parkinson’s Disease

‘The project was successful and resulted in a useful model for predicting which individuals with Parkinson’s disease are most likely to develop dementia. The model performs better than any existing method. This model is now being extended to include new measures which should further improve predictions.’

Dr Dean Harris

Potential markers of 5 Fluorouracil Cardiotoxicity

‘We hope that this will provide a further avenue for more targeted and assessment of cardiotoxicities in a national trial, with emphasis on the biomarkers discovered in this translational project. We feel that this project has been successful in meeting the aims of CMRF with regards to extending local research with significant potential impact. The study alone could carry global impact from its unique combination of patient numbers and multiple outcomes.’

Dr Suetonia Palmer

Comparative efficacy and safety of blood pressure lowering agents in adults with diabetes and kidney disease

‘I am delighted to announce that the first systematic review and network meta-analysis of blood pressure lowering medication in adults who have diabetes and kidney disease funded by the CMRF is completed and has just been accepted for publication on The Lancet.’

Professor Margreet Vissers

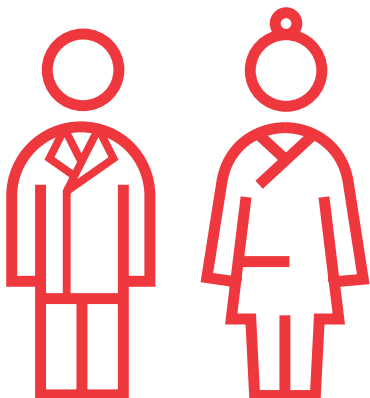
An investigation into the possible linkages between Vitamin C, hypoxia and cancer, in breast cancer

Dr Jacqui Keenan

Unravelling the Host Innate Human response to enteral nutrition



Scientific Assessment Committee — Report



The Scientific Assessing Committee (SAC) provides the CMRF with a ‘quality control unit’, overseeing a process of peer-reviewing all grant applications and advising the CMRF Board with respect to ranking the quality and relevance of funding proposals.

The SAC currently has 11 members, drawn from the Health Research community in Christchurch, representing the University of Otago, Christchurch, the Canterbury District Health Board, the University of Canterbury and the NZ Brain Institute. All members are active researchers and are expert in their fields, covering a wide range of disciplines from Psychology, Population Health, Neuroscience, Microbiology, Biomedical Science and Statistics. This breadth and depth of knowledge helps ensure that there are robust discussions of submitted proposals and that good decisions are made. All the SAC members volunteer their time and the committee oversees the reviewing of three types of application.

In 2016 we received 12 applications to the Major Grants round, across a range of disciplines. Around 3 experts are consulted on each application and the reports received are used by the committee to inform the discussion and to help the SAC members score each application. Following this process, all proposals are ranked according to the overall quality of the science, the relevance and importance of the research and the strength of the research team. This recommendation is passed to the CMRF Board to assist with the funding decisions.

In 2016, CMRF funded 6 of the 12 applications covering a range of areas, including clinical investigations in sepsis patients, basic and clinical cancer research, mental health and cutting edge science. In addition to this funding round, the SAC assists with assessment of grants-in-aid, with a number of applications being made throughout



Future

the year for small projects. This funding is keenly contested and the money is generally used to help generate preliminary data to test the feasibility of a potentially bigger project, or to allow the completion or extension of existing studies.

2016 also saw two Clinical Fellowships awarded; one in nursing and one in Medicine. These personal awards are designed to enable a nurse or a young doctor to buy out time from their clinical duties and to hone their research expertise. In 2016 two excellent recipients were identified and have begun their projects. This initiative is likely to yield great fruit in the coming years as clinical practice relies more heavily on evidence-based medicine. Encouraging and enabling research within the clinical workforce will benefit doctors, nurses and patients alike.

The CMRF is to be commended for its dedication to Health Research in Canterbury. Because of its input and support, the Health Research workforce in Christchurch has the best and most active clinical collaborations in the country, and the people of Canterbury benefit. The SAC is pleased to be able to support this process and to help ensure rigorous assessment and fair allocation of the available funding.

Margreet Vissers

*Research Professor, Associate Dean (Research),
University of Otago, Christchurch, Chair of SAC.*

**‘CMRF is a critical factor
and supporting health
and PhD scholarship
of Canterbury, and is
enhancing collaboration
with other researchers**

Professor Ian Wright

Deputy Vice Chancellor (Research and Innovation), University of Canterbury

...cet of facilitating
...th-related research
...at the University
...s a key link in
...tive relationships
...ers.'

Acknowledgments

Strategic Partners

University of Otago
Christchurch

University of
Canterbury

Canterbury District
Health Board

Burwood Academy

Emergency Care
Foundation

Rose Centre for Stroke
Recovery and Research

Health Precinct
Advisory Council

Trusts and Foundations

Burrows Bros
Charitable Trust

Carsin Trust

Rachel G Boydell
Charitable Trust

A R Cox
Charitable Trust

S J Charitable Trust

Torhaven Trust

D S and A D Laird
Charitable Trust

Neil and Pearl Hamilton
Charitable Trust

W H Travis
Charitable Trust

Pub Charity

Our thanks also go to all the generous donors to the Wine and Art Auction and the members of the Wine and Art Auction Committee

Donors Over \$500

Ann Webley	Mike Scoot and	Frank Dickson
Sue and Paul Williams	Kaye Rayner	Anthony Ballantyne
Dame Adrienne Stewart	Bridget Robinson	Campbell and Lesley
Mark Stewart	Te Wharau Investments	Ballantyne
Hillary and David Stock	Robin and Annette Mann	Catherine Ballantyne
Edith Tripp	Suzie and Simon Marks	Elizabeth Ballantyne
Mary Jo Murphy	Walter Ford	J R and S Barker
Murray and Judith Purvis	James Furneaux	Philippa Bates
Ray Newton	George Henry and Co	Anonymous
John and Margaret	Isobel Hale	Geoffrey Beadel
Palmer	Frederick Blackmore	Bruce Beckett
	L P Bodger	

Estates

E J McIntosh
J Smellie
Joy Alice Roberts
Rhona Wright
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Sybil Mahar
Mr and Mrs
Geoffrey Wood
Faye Harkness
Thelma Overend

Service Clubs and Associations

Lions Club
Christchurch Host
Lions Club Pegasus
Lions Club Ellesmere
NZ Federation of
Graduate Women
Victoria League

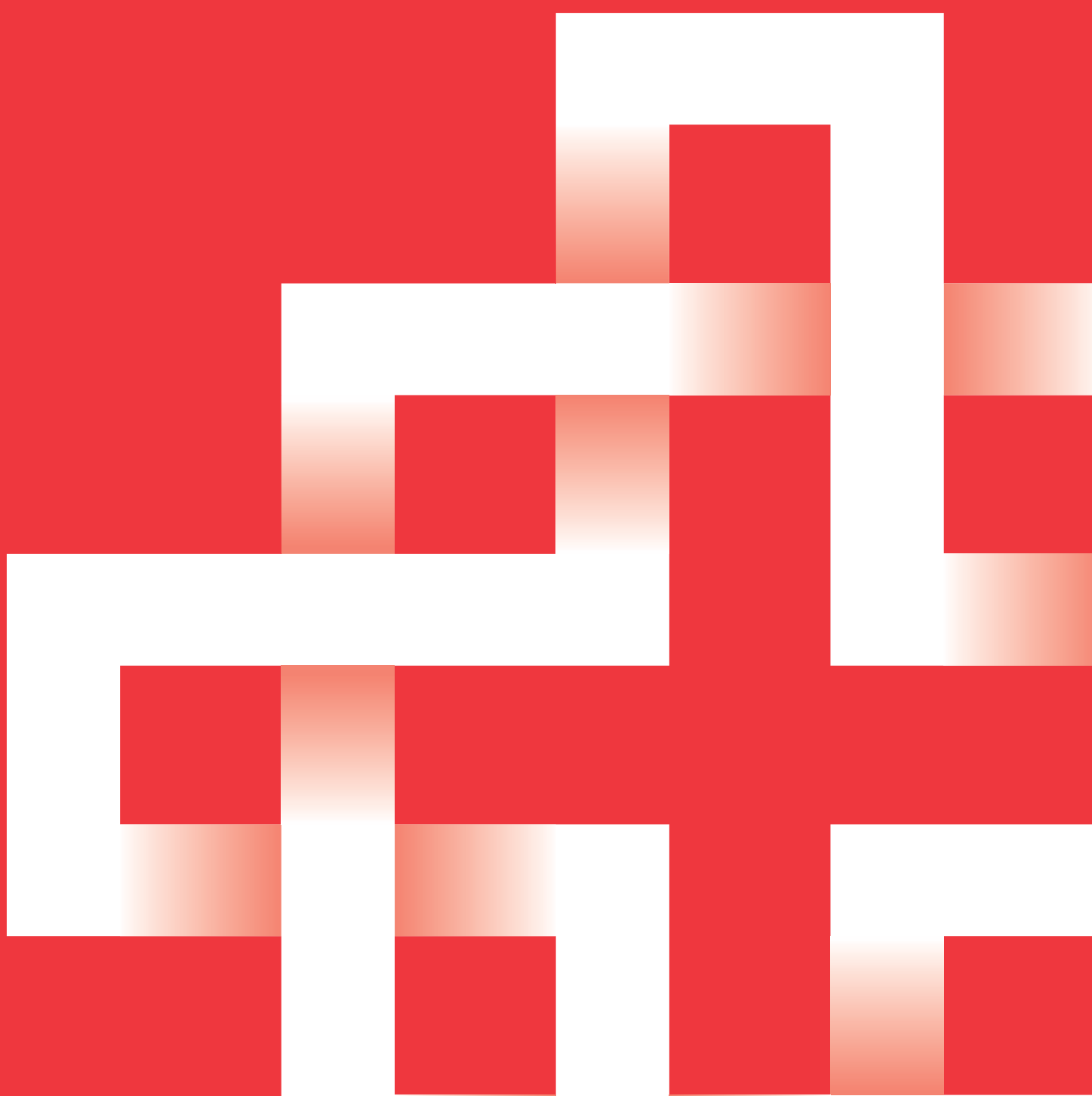
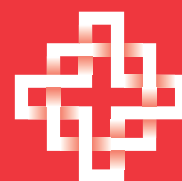
Businesses

Rydgges Latimer
Christchurch
Charles Wiffen Wines
Pegasus Bay Wines
KPMG
Craigs Investment
Partners

Disclaimer

This summary financial report and the graphics embedded within the proceeding pages, have been authorized for issue by the Chair of the CMRF Board Michael Stenhouse. The results presented in this summary have been extracted from the audited financial statements for the year ended 31 December 2016, which is available, by request, from the CMRF Office, or online at our website www.cmrf.org.nz

Financial Report 2016



Financial Highlights

The CMRF's Investment portfolio, which is overseen by the Finance committee, is managed by Craig's Investment Partners with a Balanced asset allocation and is diversified as follows:

16%

**New Zealand
equities**

18%

**Australian
equities**

17%

**International
equities**

35%

Fixed Interest

7%

Cash deposits

**Over the last five years
the portfolio has grown
at a rate of 9.64% gross
per annum.**

**For the last 12 months
the gross income yield
has been 4.25%
(\$509,000).**

Craig's Investment Partners, in addition to producing full quarterly reports, has their representative Ross Hutton attend all Finance Committee meetings and regularly attend the Foundation's Board meetings in a Co-opted advisor capacity.

2016 Overview

Donations and bequests

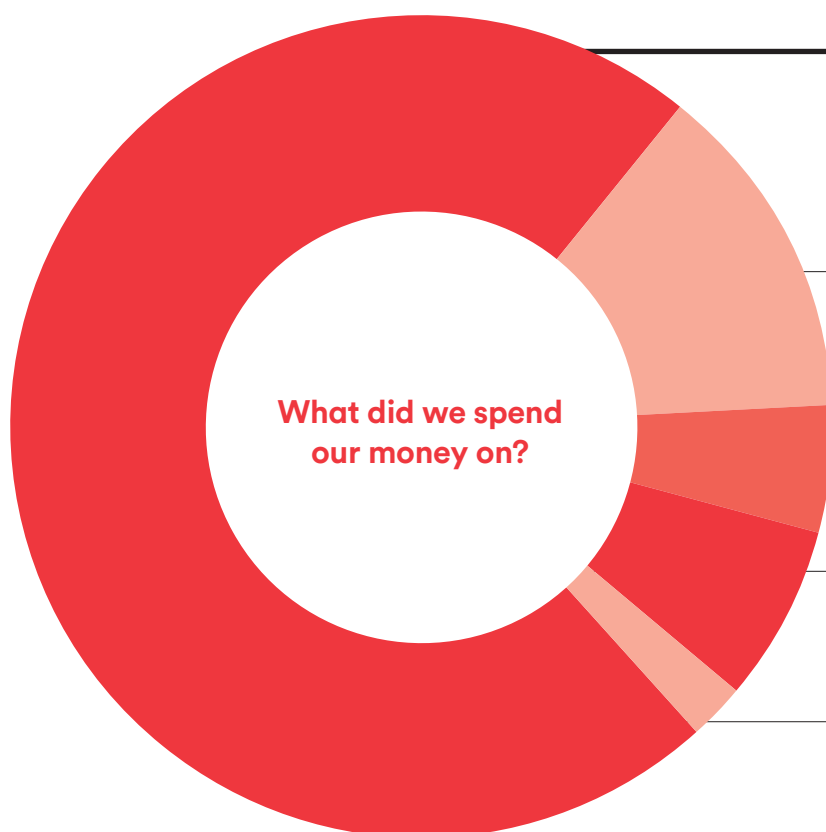
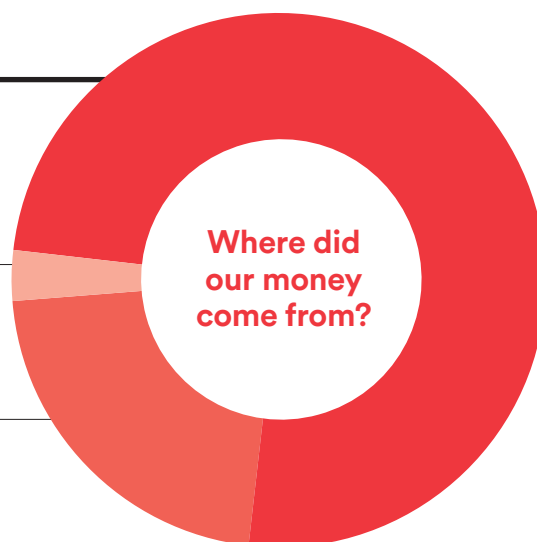
\$2,417,152

Other

\$104,300

Investments

\$698,951



Research Grants and support

\$1,581,516

Salaries

\$293,442

Operations

\$105,684

Other

\$147,676

Marketing and PR

\$57,349

Where did our money come from?	2015	2016
Donations and Bequests	\$1,281,808	\$2,417,152
Investments	\$497,735	\$698,951
Other	\$55,924	\$104,300
Total revenue	\$1,835,467	\$3,220,403

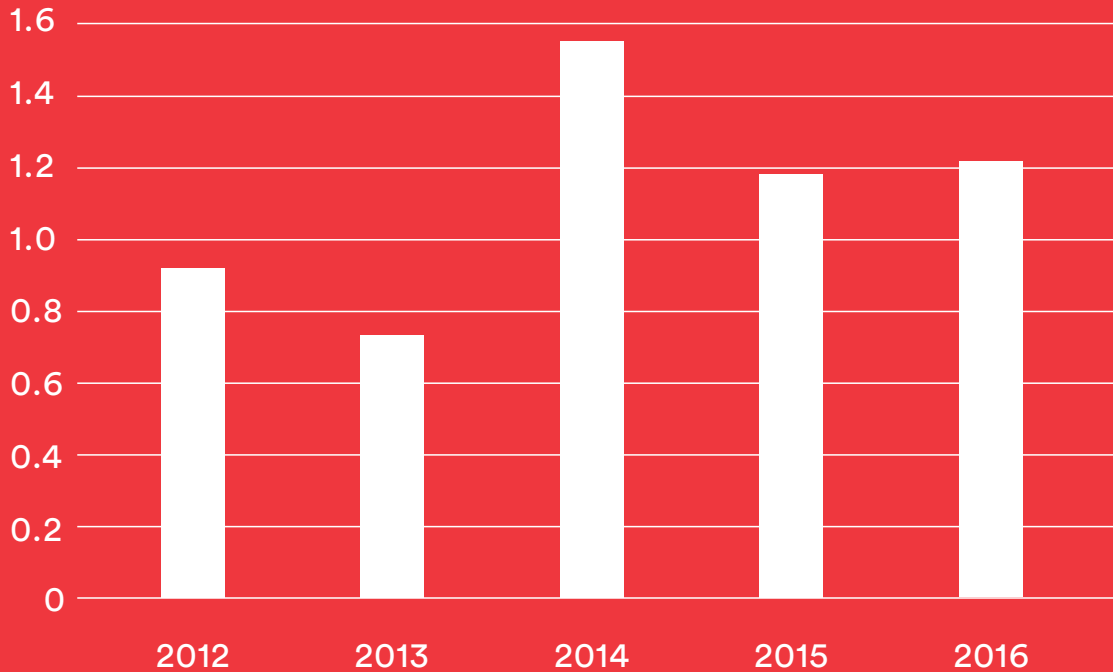
What did we spend our money on?	2015	2016
Operations	\$93,188	\$105,684
Salaries	\$296,018	\$293,442
Research Grants and support	\$1,192,523	\$1,581,516
Marketing and Public Relations	\$209,122	\$57,349
Other	\$88,362	\$147,676
Total expense	\$1,879,213	\$2,185,667

Note

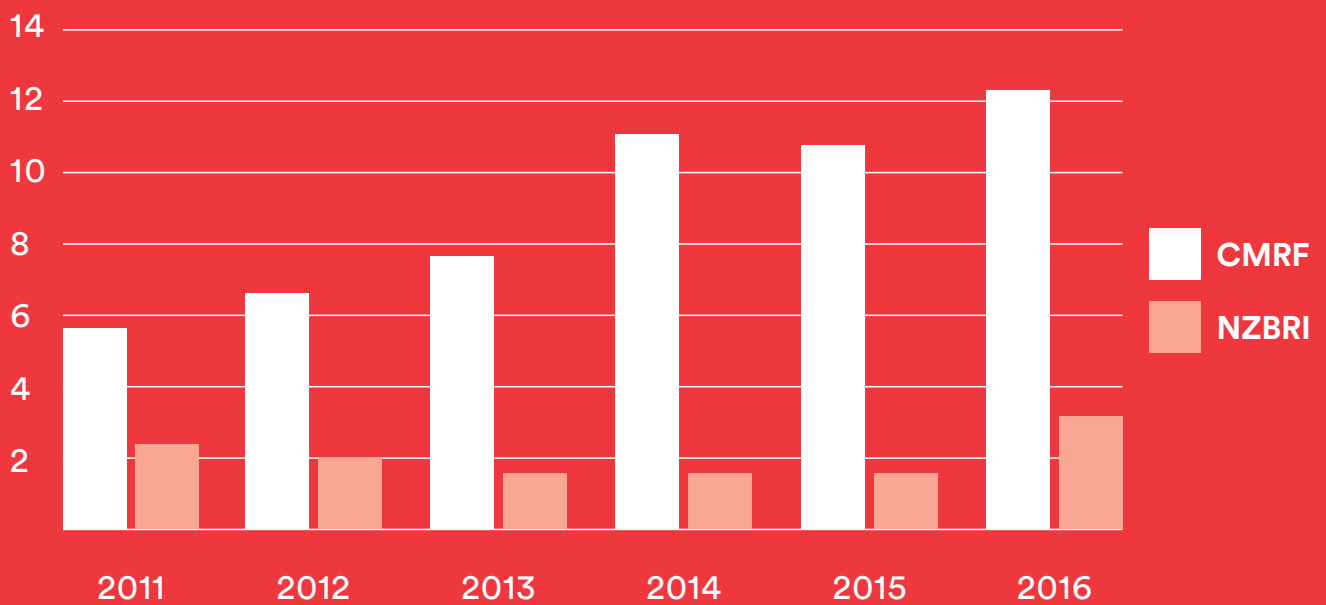
There are significant challenges in fairly reflecting operational costs for many not for profits, including CMRF. We are keenly aware of the need to keep administrative costs at a reasonable level, but must also maintain all the usual office and assessment systems that allow us to fulfil our purpose, all of which carry a cost. We are confident that we run the organisation efficiently and without waste and all supporters can be assured the majority of their generous donations get directly to research support.

Trends

Funding trend (in millions of \$)



Growth in our portfolios (in millions of \$)



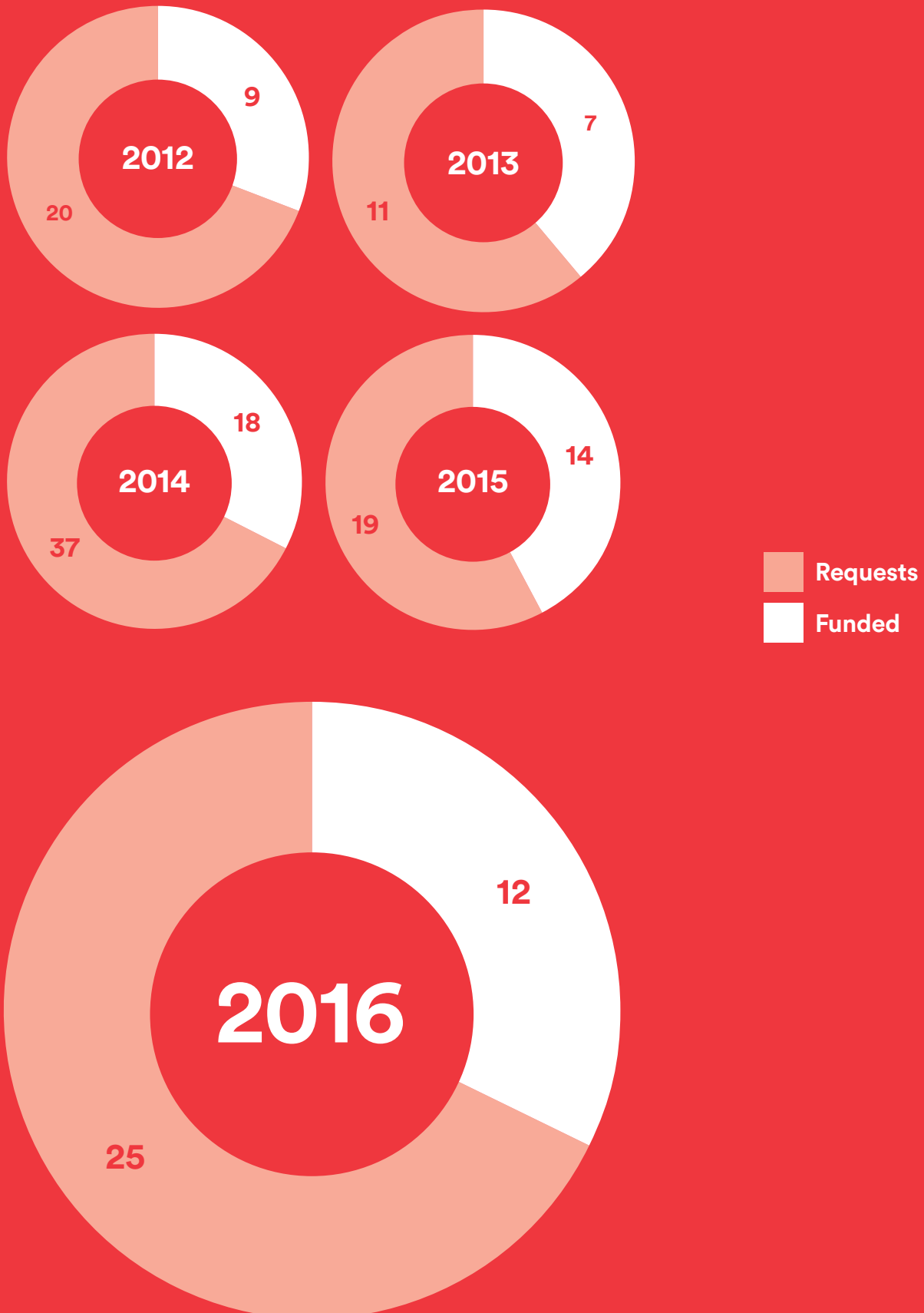
Funding trend

2012	\$937,226
2013	\$747,964
2014	\$1,557,824
2015	\$1,192,523
2016	\$1,206,516

Growth in our portfolios**CMRF****NZBRI**

2011	\$5,485,073	\$2,143,718
2012	\$6,716,127	\$1,998,910
2013	\$7,679,485	\$1,475,211
2014	\$11,101,154	\$1,366,051
2015	\$11,005,672	\$1,534,145
2016	\$12,177,667	\$3,122,208

Requests vs. Funded



Requests vs. Funded	Requests	Funded
2012	20	9
2013	11	7
2014	37	18
2015	19	14
2016	25	12

Statement of Financial Position

Assets	2015	2016
Investments	\$12,621,346	\$14,538,851
Bequests due	\$841,450	\$0
Other	\$101,922	\$113,605
Total assets	\$13,564,718	\$14,652,456

Liabilities	2015	2016
Unexpended project grants	\$1,362,404	\$1,405,510
Other	\$131,561	\$261,810
Total liabilities	\$1,493,965	\$1,667,320

Total Equity	\$12,070,753	\$12,985,135
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