# National Foundation for Medical Research and Innovation

NFMRI

# 2018 ANNUAL REPORT

## About Us

Founded in 1977, the National Foundation for Medical Research and Innovation (NFMRI) is a not-for-profit organisation that is entirely independent. It is not affiliated with any university, hospital, government or state body. The Foundation provides financial and in-kind, skill-based support to research projects whilst conserving and building its capital base.

The Foundation is classified as a health promotion charity and is endorsed as a Tax Concession Charity (TCC) with Deductible Gift Recipient Item 1(DGR 1) status.

## Our Mission

“To advance innovations in medical research related to the nature, prevention, diagnosis, treatment and incidence of disease and other health problems that have a significant impact on the health of humans”

## Our Vision

NFMRI believes more than funding alone is needed to advance discoveries and innovations. Our culture is one where we look to make a social investment in medical research. By partnering with researchers to provide support and knowledge, and facilitating connections with industry, we aim to maximise the social returns from our grants. The Foundation is looking to become a partner of choice with both researchers and funders of research, and a national ambassador for medical research and innovation.

Our vision is to be recognised as the leading Foundation, efficiently and effectively supporting biomedical research, advancing innovations and creating impact.

## Our Approach

NFMRI takes a uniquely proactive approach by partnering with grant recipients to provide support along the innovation pathway. It is a prerequisite that we only fund research of the highest quality. When reviewing applications and research projects, NFMRI looks for more than good science. We also assess the ability and willingness of the researcher and the institution to collaborate, plan and manage research along the innovation pathway. Most importantly, we analyse the potential commercial and social success of the innovation.

NFMRI also considers the need and size of any potential impact, the potential for the research and innovation to make a significant difference and whether the opportunity may become attractive to a potential partner who can make a product accessible to the community. To do this, we harness skill sets from a variety of scientific, clinical, business development, commercial, industry and financial sources.

The Foundation is looking to increase its impact by partnering with other trusts and foundations, Private and Public Ancillary Funds (PAFs and PuAFs) and corporate donors. NFMRI does not proactively solicit donations, but we are always grateful for the donations and bequests that we do receive.

# Message from our Chairman

I was delighted to join the Board of NFMRI in 2018 and be appointed as Chairman. After having served NFMRI as Chairman since 200,1 Mr Harkness felt it was an appropriate time to step back into a Director role with NFMRI so that he could enjoy his retirement more fully. Mr Harkness recently led the Foundation through a new growth and impact-focussed strategy and had paved the way establishing high governance standards and a focus of achieving the vision and goals of its benefactors over time.

NFMRI's strategy is unique as a charity in that it focuses on good giving and is scaling as a result of building a successful track record resulting in an ability to establish funding partnerships with other leading donors, charities and organisations who are aligned with its mission and strategy. By combining our skills and expertise together with funding, we are more effective in our giving and we can achieve greater change and impact together with our partners.

This unique pathway is already proving highly successful, with a number of existing robust partnerships. In particular, I wish to acknowledge and thank the NSW Department of Primary Industries for their support towards infectious diseases research. The Mason Foundation, NSW Community Fund and the Nicholas & Phyllis Pinter Trust (managed by Equity Trustees) have been a pleasure to work with and are truly collaborators in all aspects of our partnership. Together we have recently announced support for innovative research into Alzheimer's disease and cancer. In addition, we were pleased to announce our partnership with Cure4CF Foundation in late 2018. This partnership will support innovations into Cystic Fibrosis with funding commencing later in 2019.

It's pleasing to report that since the Foundation's establishment in 1977, over $17 million in grants has been distributed to support innovative research projects covering various diseases and conditions throughout the country. Thanks to our partnerships, we have nearly doubled our grant commitments in 2018 and only hope to grow this further over time. This funding, and our work, has been made possible thanks to our generous benefactors, supporters and partners, including individuals and organisations who generously contribute their time and expertise. We are grateful for our stakeholders' support and are confident both our donors and partners will be pleased with the high-quality research projects their gifts and assistance have enabled.

Continuing on from the important conversation at our third conference held in Sydney in 2017, the Foundation will be holding its fourth conference for the first time in Victoria, at Peppers, The Sands Resort in Torquay on the 20-21 November 2019. We look forward to seeing you there and having you join this important conversation.

Our corpus is on an upwards trajectory despite turbulent market conditions thanks to guidance from BT Financial and in particular, Mr Scott Glover, as well as sound management from our team. We also wish to thank Mr Andrew Hoffman, Mr Mark Boyle and Mr Eddie Bertan for their terrific work with this year's annual audit of our Foundation.

I would especially like to acknowledge our team's efforts and achievements over the past year. Dr Noel Chambers and Mrs Nancy Ranner continue to excel with the delivery of the Foundation's strategy. We were also pleased to welcome Ms Sonya Kewal, who joined the team during 2018 to provide ongoing support and administration of the Foundation's financial activities.

Likewise, I wish to thank my colleagues and fellow Directors for the dedication and passion they have brought to the organisation. Their leadership, vision and guidance have been, and will continue to be instrumental to the work and successes of our Foundation. During the year, we farewelled A/Prof Ray

Garrick AM, who served the Foundation since 2002. We had the pleasure of welcoming to our Board Dr Elaine Saunders, who has a tremendous track record, which includes expertise in devices.

Our Board greatly appreciates the continued support and advice from our expert Research Advisory Committee (RAC). After nearly nineteen years of dedication and support, Dr John Dixon Hughes OAM resigned as Chairman of the RAC in 2018. We were pleased that Prof Ian Smith commenced his role Chair of the RAC from March 2018. We welcomed A/Prof Wendy Cooper in late 2018 to our RAC and Prof Liz Harry was appointed in early 2019. We also farewelled Emeritus Professor John MacAvoy and A/Prof Ray Garrick AM in late 2018.

Furthermore, we are grateful to have received pro-bono legal advice from Ms Alison Choy Flannigan at Holman Webb Lawyers (now Hall & Wilcox) throughout the course of the year, as well as complimentary venue access and administrative support from McGrathNicol. We also greatly appreciate that KPMG kindly hosted our awards night in November 2018 at their spectacular Barangaroo venue.

I hope you enjoy reading about our collaborative achievements throughout 2018 and I look forward to sharing with you some of our exciting partnership announcements in 2019.

Dr Rob Sauer
Chairman

# Message from our CEO

The 2018 calendar year has been eventful, with our partnerships forging ahead and our current and previously funded projects achieving early successes across a range of diseases and innovations. The year commenced with an exciting announcement that A/Prof Bernard Flynn's fibrosis research had received a $7million investment from the MCRF. The good news continued throughout the year with confirmation that A/Prof Lenka Munoz's brain cancer innovation was being licenced to an industry partner and had received NHMRC development grant funding. A number of other projects had agreements on the way or potential investors doing their due diligence on exciting new innovations. A growing list of case studies can be found on our website highlighting impact and how our unique strategy and support is making a difference.

Most importantly, the successes NFMRI's support has helped generate in such a short time across various technologies (vaccines, devices, therapeutics, tools, drugs etc.) and diseases and conditions is clear evidence that this type of targeted, strategic support is very much required to assist the translation of research. The breadth and depth of our strategy puts us in a unique position where we are partnering with likeminded foundations, donors and other organisations across a broad range of diseases, conditions and innovations to help create impact.

As our funding partnership model grows, so does our ability to support even more high-quality projects. Together with the NSW Department of Primary Industries we supported a Zika virus vaccine project led by Prof Eric Gowans at The University of Adelaide and we recently announced joint support for Dr Adam Taylor at Griffith University for a chikungunya virus vaccine and A/Prof Joanne Macdonald at the University of Sunshine Coast for a genetic diagnostic test for malaria. Thanks to generous support from the NSW Community Foundation and the Nicholas and Phyllis Pinter Trust, both managed by Equity Trustees, we are supporting Dr Clare Stirzaker's breast cancer research at the Garvan Institute for Medical Research. Our inaugural Alzheimer's disease grant round was held in 2018 in partnership with The Mason Foundation, which is also managed by Equity Trustees. We were pleased to recently announce that four highly innovative projects had been successful and would be receiving support commencing in 2019. I hope you enjoy reading more about these projects in the project section of this report.

Working with funding partners is important as we continue to move research beyond traditional academic measures. Scaling our activities, supporting systems and culture with those who value the necessary expertise, networks and pathways for translation can better enable the medical research sector and our great scientists to advance discoveries and deliver impact to our communities.

NFMRI continues to deliver workshops and presentations at universities, medical research institutes, sector events and conferences to help grow awareness, inform researchers and assist them to submit high quality, strategically-aligned proposals. Our annual grant round led to the identification of a significant number of high-quality biomedical research projects and the announcement of five new research grants commencing in 2019. At our 2018 Awards Night at KPMG in Barangaroo, Sydney, NFMRI presented the fourth Dr John Dixon Hughes Medal, which was awarded to A/Prof Nicholas Huntington in recognition of his influential research to supercharge the body's immune response against cancer.

I would especially like to thank our Research Advisory Committee (RAC) who contribute an enormous amount of time reviewing expressions of interest, applications, reports and acquittals throughout the year. The composition of our RAC is unique as it includes clinicians, academics, translation and commercial science experts. Each member has a different background and set of skills that helps

provide a multi-lens approach in our reviews. I also wish to thank our mentors and supporters, whose pro-bono support in IP, research translation, marketing, commercialisation, media and access to networks helps to ensure researchers and their innovations have the maximum ability of achieving the desired outcomes.

This year, we are holding our fourth medical research innovation conference in Torquay, Victoria on the 20-21 November 2019. Titled *"Aligning intent: working towards a more sustainable, efficient and effective medical research ecosystem*", our fourth conference will create a conversation on the importance and benefits of aligning intent and working towards achieving the intended purpose of our donors and supporters. We hope you will be able to join us, learn from our exciting line-up of speakers and participate in the conversation.

Being disease agnostic and impact-driven makes NFMRI an ideal partner of choice. We are actively looking to assist and partner with reputable charities, organisations and individuals with a desire to improve health outcomes of the community through biomedical innovations. The nature of our Foundation means we are able to work within the boundaries established by our partners, be they jurisdiction, technology or disease-focused. Every single dollar put on the table by our partners is directed towards the strategically-focussed medical research projects.

Whether you are an organisation or individual interested in a partnership or if you simply want to learn more about our Foundation, what we do differently and explore how we may be able to help you, I look forward to hearing from you.

Dr Noel Chambers,
Chief Executive Officer

## Our Legacy

The Foundation was established in 1977 on the initiative of the late Dr Frank Ritchie who had a number of patients wishing to donate to medical research and for the capital to be preserved. Fundraising activities were conducted under the auspices of the initial Chairman of the Board of the Foundation, Sir Peter Abeles, and Lady Sonia McMahon.

A patient of Dr Frank Ritchie bequeathed a substantial sum, the Stern Estate, to be divided equally between Sydney Hospital and the Foundation. The Foundation was to maintain the capital and use income to fund and facilitate ongoing medical research in perpetuity. Over the years, by way of further bequests and donations, the Foundation has built up significant capital reserves to provide income to facilitate continuing important medical research. The funds of the Foundation and the management of those funds have always been totally independent of the hospital, as has been its management structure.

In January 2014, following an extensive review of the sector, the Foundation updated its mission and changed its name from the Sydney Foundation for Medical Research to the National Foundation for Medical Research and Innovation.

## Emeritus Trustee

We would like to thank Mr Peter Bowen for his continued support and assistance to the Foundation as an Emeritus Trustee.

## Past Directors and Major Benefactors

Our Foundation owes its legacy to the following Directors who have served as part of its Board and to those who contributed to the Foundation so generously. Without their vision, foresight and commitment to the Foundation, it would not be where it is today.

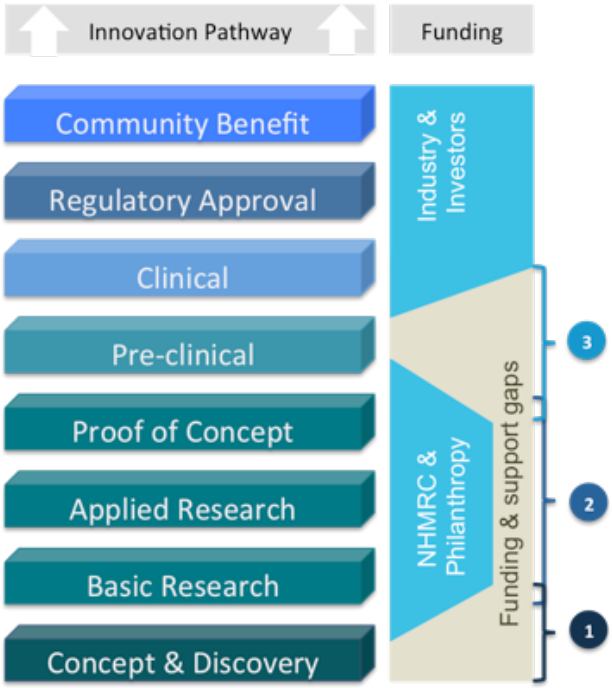
| | |
|---|---|
| 1979-1982 | Sir Peter Abeles (Founding Chairman) |
| 1979-1983 | Mr ED Cameron |
| 1979-1983 | Mr JP Ducker AO |
| 1979-1983 | Mr MJ Inglis |
| 1979-1982 | Lady Sonia McMahon |
| 1979-1990 | Mr TE May (Former Chairman) |
| 1977-1982 | Dr FL Ritchie C.B.E. |
| 1977-1995 | Mr BF Rose |
| 1979-1982 | Dr HH Spiegel |
| 1979-1982 | Sir Ian Turbott C.M.G, C.V.O |
| 1982-2007 | Dr J Raftos AM |
| 1984-1990 | Sir Gordon Jackson |
| 1984-1991 | Mr TL Lewis |
| 1984-1987 | Mr JW MacBean |
| 1984-1985 | Sir William W Pettingell |
| 1987-2003 | Mrs SE Ball |
| 1987-1999 | Mr RH Minter (Chairman) |
| 1987-2017 | Dr V Cowlishaw Shortell |
| 1995-2011 | Mr PM Bowen |
| 2000-2003 | Prof AJ Young AO |
| 2002-2017 | Dr J Graham OAM |
| 2002-2018 | A/Prof R Garrick AM |
| 2006-2017 | Ms J Schwager AO |

The Stern Estate
Josephine White and Hiltbrunner Fund
Estate Late Celia Margaret Paine
Estate Late Daqmar Wilhemine Halas
Estate Late Blanche Elizabeth Turnet
Estate Late Mary Althouse
The Mason Foundation (managed by Equity Trustees)
NSW Community Foundation – Nicholas and Phyllis
Pinter Trust (managed by Equity Trustees)
Cynthia & Patricia Gaden Fund
Tempe Mann Fund
Estate Late Bill & Shirley Westbrook
Estate Late Gloria Ida Prejeant
Estate Late Beatrice Gordon Joske
Estate Late James Hoadley
NSW Community Foundation
NSW Department of Primary Industries
Cure 4 Cystic Fibrosis Foundation

## Our Strategy

Historically, funding of medical research in Australia has been determined by outputs – research papers and citations validated by scientific peer review. Whilst these factors are important, the advancement of innovation, the formation of collaborations and the ability to deliver impact are the outcomes NFMRI's funding delivers.

To maximise impact, NFMRI focuses on advancing innovation. By looking outwards and supporting the gaps along the innovation pathway and applying resources, networks and knowledge NFMRI helps philanthropy make a difference. NFMRI supports medical research in three key gap areas we call social investment portfolios.




**1 Original Australian innovation and discovery. Frontier research not competitive for NHMRC grants.**

Supporting the validation of new concepts, discoveries and intellectual property creates the foundation for innovations and community benefits of tomorrow. Young researchers, early discoveries and new paradigms need support to become competitive and stand on their own two feet.

**2 Support for strategic collaborative research activities focussed on advancing research and validating directions.**

Providing access to the additional research skills not obtainable through currently available funding mechanisms.

Support for strategic collaborative research activities focussed on advancing innovations and validating directions is needed. NFMRI is uniquely positioned to add value to the advancement of research and innovations in preparation for potential collaborations.

By partnering with researchers, NFMRI supports collaborative research activities undertaken by other research groups that expedite the advancement of the innovation and are important for attracting potential industry partners and investors.

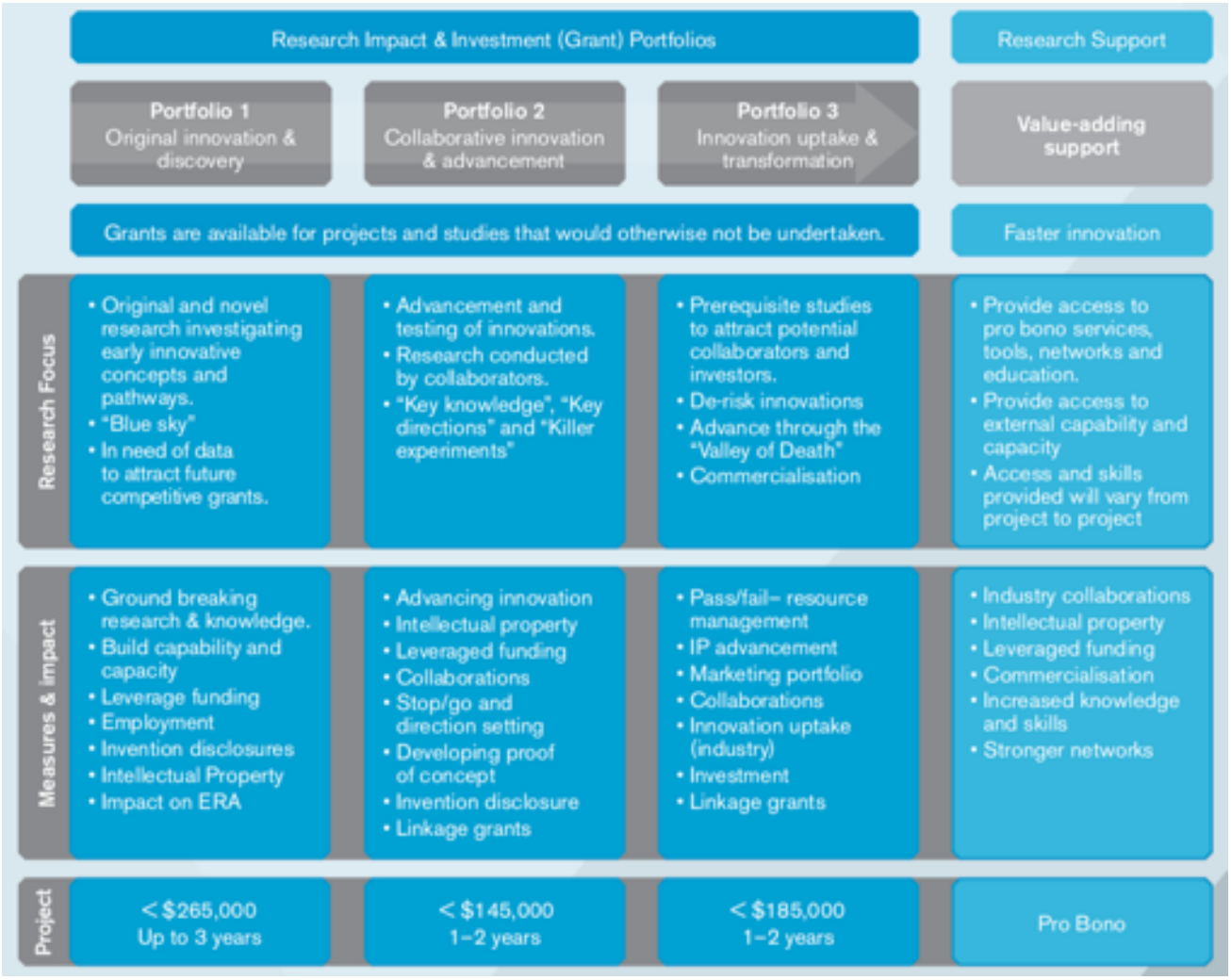
**3** **Bridging the 'valley of death'. Supporting research required to facilitate collaborator uptake and investment**

Often referred to as the 'valley of death', this is the area where strategic research studies are required to attract potential investors and industry collaborators.

Traditional funding mechanisms do not support or motivate researchers to contract research activities necessary to answer some research questions necessary to form these collaborations.
These research questions are often not attractive to publications as they are "less newsworthy" and not research undertaken by the chief investigator and their team.

By supporting small, incremental studies NFMRI can manage risk and make innovations more attractive to potential commercial partners and investors.

## Portfolio Summary




*Grant amounts and durations are a guide only.*

# Our Supporters

We wish to acknowledge and thank the following organisations and individuals who have supported the Foundation during 2018. Their assistance has greatly contributed to the Foundation's growth and success:

## McGrathNicol

Over many years, McGrathNicol has generously provided support to the Foundation. NFMRI is very grateful to McGrathNicol for kindly providing administrative support and use of office facilities.

## BT Financial Group

BT Financial Group has been supporting the Foundation for a number of years, providing strategic guidance to the organisation and management of our investment portfolio. Their knowledge and direction have been imperative to the ongoing work and successes of the Foundation.

## Equity Trustees

A partnership with Equity Trustees was formed in 2018 thanks to generous funding from The Mason Foundation to help support mutually aligned research into Alzheimer's Disease. Additional funding from The NSW Community Foundation and the NSW Community Foundation – Nicholas and Phyllis Pinter Trust has been provided to support cancer research.

## NSW Department of Primary Industries

In 2018, infectious disease grant funding was provided to Prof. Eric Gowans from the University of Adelaide via our partnership with the NSW Department of Primary Industries.

## Holman Webb

Holman Webb kindly provided pro bono legal and secretarial advice to the Foundation, as well as the use of the Board room facilities.

## IP Australia

IP Australia kindly provided pro bono patent analytics research to a number of our research projects.

## KPMG

KPMG kindly hosted NFMRI's 2018 Awards Night at the Barangaroo towers in Sydney.

## Nexia Sydney Pty. Ltd.

We wish to thank Nexia Sydney Pty. Ltd for being our auditors since 2016.

## Gray Design

Gray Design has provided significantly discounted services assisting with the maintenance of our website.

## Special acknowledgements

We also wish to thank the following organisations who promoted and assisted our Foundation and grantees during 2018:

- AAMRI
- AusBiotech
- Bio Melbourne Network
- Biotech Daily
- Channel 7 (Helen Wellings)
- Generosity Magazine
- Life Sciences Queensland
- Philanthropy Australia

## 2018 Events and NFMRI Presentations

Throughout the year, NFMRI presents at a variety of sector events to help grow awareness of NFMRI, its mission and objectives, as well as to educate the wider research sector about translation and philanthropy. This assists researchers to better understand the types of projects supported by NFMRI and helps increase their chances of success when submitting a proposal for consideration.


*Dr Chambers presenting at the 2018 Australasian Research Management Society (ARMS) Conference in Hobart.*

During the 2018 calendar year, NFMRI presentations included:

- Macquarie University
- The University of Sydney
- James Cook University
- Griffith University
- NFMRI 2018 Awards Night
- University of Queensland
- Flinders University
- Monash University
- ANU
- 2018 ARMS Conference

# Our Governance

The National Foundation for Medical Research and Innovation (ABN: 85 001 422 895) is endorsed as a Tax Concession Charity and Deductible Gift Recipient (Item 1). The Foundation is also recognised as a Health Promotion Charity and has fundraising licences in relevant Australian states.

The Directors of the Foundation and management are committed to achieving and demonstrating the highest standards of corporate governance. The Directors of the Foundation continually seek to adopt best practice policies and procedures.

In accordance with the Foundation's strong focus on sound governance, the Board has adopted a Governance Charter that supplements its Constitution and details the policies, processes and expectations for the Directors, Research Advisory Committee (RAC), staff and contractors of the Foundation. It outlines a code of conduct, which all members are required to agree to, as well as conflicts of interest disclosures and management procedures.

The annual review of the Foundation's governance frameworks considers best practice guides, including those published by the Australian Securities Exchange and Standards Australia.

The Foundation has continuous improvement processes and adopts a governance review schedule, which includes the review of its skills-based Board, RAC and Staff.

## Our Board's Responsibilities

One of the primary responsibilities of the Board is to be the custodian of the purpose of the Foundation as set out in the mission statement within the Foundation's Constitution.

## Our Mission

"To advance innovations in medical research related to the nature, prevention, diagnosis, treatment and incidence of disease and other health problems that have a significant impact on the health of humans"

Specific responsibilities include:

- Continually develop and drive the vision of the Foundation;
- Identify any critical gaps in medical research funding in the community;
- Achieve a greater profile within the research community;
- Grant funding to applicants whose research supports the mission of the Foundation;
- Provide guidance to the Research Advisory Committee in respect of the type of research project that the Foundation may fund;
- Increase the Foundation's ability to give via partnerships, bequests and any other suitable avenues; and
- Grow and monitor the financial capital base of the Foundation.

## Our Management's Responsibilities

The Board has formally delegated day-to-day management of the company's operations and the implementation of the Foundation's strategy and policy initiatives to the Chief Executive Officer and senior executives.

NATIONAL FOUNDATION FOR MEDICAL RESEARCH AND INNOVATION

# Partnering for success

**NFMRI partners with funders of medical research to create impact**


## A focus on creating impact

NFMRI partners with other funders, applying its strategy, systems, networks and expertise to achieve common goals.

Founded in 1977 and with DGR1 status the National Foundation for Medical Research and Innovation (NFMRI) has an established partnering program assisting other funders of medical research achieve better outcomes.

Supporting medical research that is important in the translation of discoveries leading to new innovations including; medicines, vaccines, diagnostics, devices, biologics and tools NFMRI has built specific expertise, capability and capacity that has enabled success.

Through our partnering program NFMRI is collaborating with other funders to achieve our missions.

Contact us to learn more and enquire about how we can work together.

**Professor Janet Davies**

*"NFMRI can foster a culture that enhances commercial uptake of our biomedical innovations, mentor academic inventors and facilitate connections between academia, philanthropy and commercial sectors"*

**A.Prof Bernard Flynn**

*"NFMRI provides critical assistance to researchers in bridging the 'valley of death' that separates basic science from viable therapies"*

1 **GOVERNANCE**

Strong governance forms the foundation of what we do, our culture and our partnerships.

2 **STRATEGY**

Our strategy focuses on targeted support that addresses gaps to enable translation.

3 **SYSTEMS**

NFMRI has built bespoke scaleable systems and capability specific to our strategy.

4 **TRACK RECORD**

Proven track record of success with breath and depth across diseases and innovations

# Advancing medical discoveries and innovations

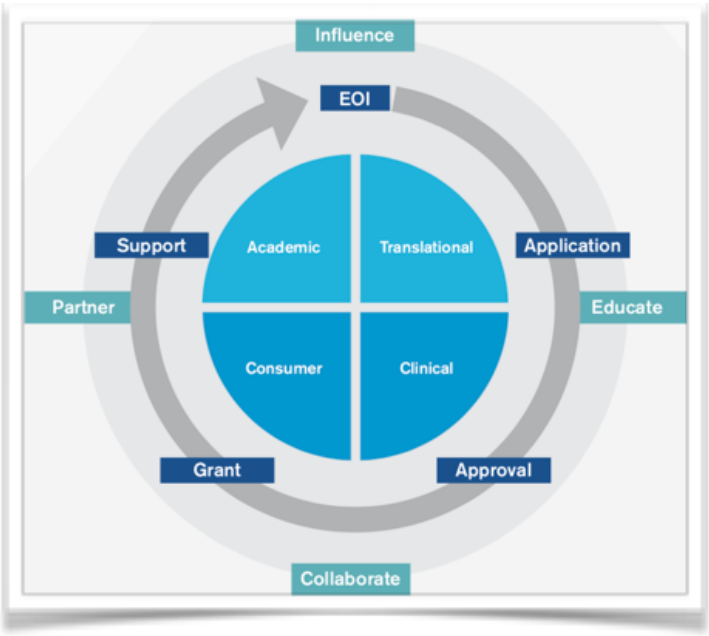
## It is more than funding that is needed to advance discoveries and innovations.

NFMRI takes a uniquely proactive approach by partnering with our grant recipients to provide support along the innovation pathway.

It is a prerequisite that we only fund research of the highest quality. When reviewing applications and research projects NFMRI looks for more than good science. We also assess the ability and willingness of the researcher and the institution to collaborate, plan and manage research along the innovation pathway.

NFMRI also considers the need and size of any potential impact, the potential for the research and innovation to make a significant difference and whether the opportunity may become attractive to a potential partner who can make a product accessible to the community.

To do this we harness skill sets from a variety of scientific, business development, commercial, industry and financial sources.




### Identification, selection and support

Working with our researchers and their institutions, the NFMRI utilises the skills of our staff, Research Advisory Committee, Board and our networks to assist with communication strategies, understanding industry's expectations and the establishment of networks and collaborations.

**nfmri.org.au**

### JODI KENNEDY, EQUITY TRUSTEES

NFMRI is a standout partner due to its strong governance and transparency, but also because of the Foundation's focus on translation of research outcomes across medical innovations including medicines, diagnostics, vaccines and devices. The focus on delivering community benefits from medical research and helping de-risk innovations so they are more attractive to the next-stage partner is an important factor in our decision making. This unique support is critical in helping researchers bridge the 'valley of death' that prevents many research outcomes from ever reaching the community.

Also factored into this decision was NFMRI's unique capability and capacity for holding grant rounds nationally, utilising its developed online programs and software. In addition, the individuals that make up their review committee are unique in that they are from diverse areas including academia, translation, commercial and clinical backgrounds.

## New chemotherapy for brain cancers

**A/Prof Lenka Munoz, The University of Sydney and Charles Perkins Centre**
Field: Brain cancer
Innovation: Therapeutic

Brain cancer is fatal and worldwide more than 200,000 individuals die from brain cancer each year. In Australia, primary brain cancer is the leading cause of cancer-associated death for young adults and children under the age of 10, with one person dying every eight hours. This results on average in 1,600 deaths each year. Further mortality results from metastatic brain tumours, which caused the death of about 9,400 Australians in 2017.

Despite all therapeutic efforts, brain cancer remains incurable and patients succumb to the disease within five years. Cancer drugs that effectively treat peripheral cancers, such as melanoma, lung and breast carcinomas, are unable to cross the blood-brain barrier, a layer of cells that protects the brain. This is a major roadblock in developing efficacious brain cancer therapy, and renders current drugs ineffective for brain cancer therapy.

A/Prof Munoz recognised the major and urgent need for effective brain cancer therapy and over the past years, after receiving support from the NFMRI between 2013-2016, A/Prof Munoz focused on the development of cancer drugs that are able to reach tumour in the brain. She has discovered a new class of highly effective cancer drugs, exemplified by the lead analogue CMPD1 that can cross the blood-brain barrier. Once inside the brain, CMPD1 disrupts the division of cancer cells, leading to tumour regression. This characteristic makes the compounds discovered by A/Prof Munoz unique among cancer drugs, the majority of which cannot reach the brain.

With over 250,000 individuals diagnosed yearly with brain cancer and global sales of brain cancer therapeutics (although ineffective) reaching US$2.1 billion, market demand is great. The Intellectual Property of CMPD1 and related effective brain cancer therapeutics generated major interest in the pharmaceutical industry. In early 2017, A/Prof Munoz and her team at The University of Sydney finalised a licensing agreement with Lin BioScience, a drug development company specializing in innovative therapies for oncology with headquarters in Australia, Taiwan and San Diego. In addition to licencing, Lin BioScience entered into a research contract with A/Prof Munoz and her team, proving $1.2M per year towards clinical development of the lead candidates. These outstanding achievements of A/Prof Munoz have been covered by media both in Australia and USA.

In addition to commercial achievements, A/Prof Munoz's research funded by NFMRI has made a great impact on basic science of kinase inhibitors. Kinase inhibitors are the most investigated class of anti-cancer drugs. However, scientists are rarely aware that many kinase inhibitors inhibit non-kinase proteins, which leads to wasted drug development efforts. Her discovery of non-kinase targets for kinase inhibitors led to commentaries and presentations, including an invited lecture at the 51st International Conference on Medicinal Chemistry in France (450 attendees) and an invited article in *Nature Reviews Drug Discovery,* the most prestigious journal in the field of drug development across academia and industry.

## Supporting research

On the evening of Tuesday, 27 November 2019, key stakeholders joined NFMRI to celebrate its annual awards night, which was kindly hosted by KPMG at their Barangaroo Towers venue.

In the presence of industry, business, government, academia and philanthropy leaders, NFMRI announced successful researchers from across the country receiving new and continuing funding to support the advancement of their innovations commencing in 2019. In addition to these funding awards, NFMRI announced the third recipient of the Dr John Dixon Hughes Medal.


**(L-R) Dr John Dixon Hughes OAM and A/Prof Nicholas Huntington**

## Dr John Dixon Hughes Medal for Medical Research Innovation

The NFMRI offers the Dr John Dixon Hughes Medal for Medical Research Innovation every two years to a researcher under the age of 45 for outstanding contribution towards the development and advancement of a biomedical innovation related to the nature, prevention, diagnosis, treatment and incidence of disease and other health problems that have a significant impact on the health of humans. The Medal is awarded with a prize of $50,000, in the form of a grant, to support the research activities of the recipient.

This year, the Research Advisory Committee and Board resolved to present the award to A/Prof Nicholas Huntington from Monash University (previously at the Walter and Eliza Hall Institute of Medical Research.

As an immunologist and laboratory head at the Walter and Eliza Hall Institute of Medical Research, Associate Professor Huntington made major discoveries in the field of immune regulation and immunotherapy over the last six years.

In 2016 he spearheaded a program of pre-clinical Natural Killer (NK) cell research and drug development at the Institute that has since generated interest from the immunology and cancer fields and is poised to have a profound impact in the quest to cure cancer.

Associate Professor Huntington said NK cells are known for their potent tumour-fighting ability "Using cutting-edge genomic editing and pre-clinical tumour models, we are working to better understand and harness the ability of NK cells to 'seek and destroy' cancer cells," he said.

"Despite their discovery in the early 1970s, NK cells have yet to be effectively targeted in the clinic for cancer treatments. We are striving to discover new drug targets and develop gene modifying techniques that supercharge the anti-tumour immune response of NK cells."

To date, Associate Professor Huntington's pre-clinical NK cell research studies have seen some promising results in the laboratory by preventing melanoma, breast, prostate and lung cancer metastases from developing and reducing the onset and growth of sarcomas, breast and colon cancer.

Together with the Institute's leaders in structural biology, medicinal chemistry, high-throughput chemical screening and proteomics, Associate Professor Huntington has an ongoing collaboration with a pharmaceutical company to progress the research discoveries of his laboratory and co-develop small molecule inhibitors for cancer immunotherapy.

National Foundation for Medical Research and Innovation CEO Noel Chambers congratulated Associate Professor Nicholas Huntington saying, "Nick's contribution to biomedicine and immunotherapy signals his emergence as one of the world's leaders in cancer immunology and innovation."

# New 2019 Grants

From grant rounds held in 2018, a total of six new grants were approved (total of $660,894) and will commence in 2019:

**Prof Roger Chung** **Macquarie University** **$183,488 (2019)**

***Preclinical evaluation of novel therapies for clearance of TDP-43 in amyotrophic lateral sclerosis***

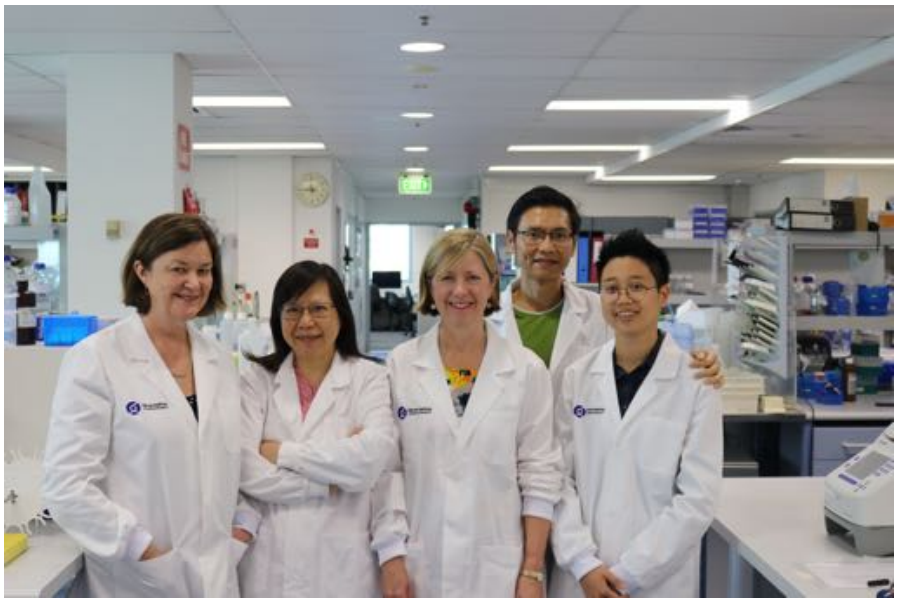
Professor Chung's team recently identified mutations in a specific gene (CCNF) as the cause of amyotrophic lateral sclerosis (ALS) in a large Australian family. A number of different mutations in the CCNF gene were identified by their international collaborators, and more recently by other international research groups. CCNF encodes a component of the protein that is a central regulator of protein degradation within cells. Because abnormal accumulation and aggregation of a protein, called TDP-43, inside motor neurons is the key pathological hallmark of the disease, it is possible that defective CCNF might contribute to a common convergent mechanism that leads to the abnormal protein aggregation that causes ALS.

To explore this further, Professor Chung's team have successfully undertaken further experiments and screening. The data generated from these experiments and screenings has provided compelling evidence.

NFMRI funding would be used towards a study that will provide strong pre-clinical evidence of efficacy for a proposed gene therapy. This is essential data for advancing this innovation through commercial development. This discovery is currently protected through a PCT that is due for conversion to National Phase in 2019, and potential commercial investors (pharma etc) that they have approached have indicated that positive indications in a pre-clinical mouse study are required before they can consider the innovation for investment.

**A/Prof Clare Stirzaker** **Garvan Institute of Medical Research** **$141,834 (2019)**

***Liquid biopsy monitoring for triple negative breast cancer: a novel epigenetic test***



**L-R: Prof Susan Clark, Jenny Song, A/Prof Clare Stirzaker, Dr Phuc Loi Luu and Dilya Lam**

A/Prof Stirzaker and her team have performed the FIRST genome-wide profiling study on DNA methylation (epigenetics) in Triple Negative Breast Cancer (TNBC). Funding from NFMRI would be used to develop this TNBC-specific blood-based biomarker test, by providing access to the sensitive methylation assay that has been developed in the laboratory of Prof Trau and Dr Korbie at the University of Queensland. This assay is particularly important as it allows, for the first time, up to 50 methylation signatures to be tested on the same clinical sample in one test. In addition, the test employs next-generation sequencing which allows unprecedented sensitivity to be achieved, critical to accurately detect tumour methylation in a blood sample when circulating tumour DNA may comprise only 1% of the total circulating free DNA.

This project is supported in partnership with the generous funding from the NSW Community Foundation, the NSW Community Foundation – Nicholas and Phyllis Pinter Trust (both are managed by Equity Trustees) and NFMRI.

**A/Prof Nicholas Huntington** **Monash University** **$50,000 (2019)**

***Dr John Dixon Hughes Medal – Genetically modified human NK cells for cancer immunotherapy***

A/Prof Huntington has been awarded a grant of $50,000 to apply towards his NK cells research, which will be commencing in 2019.

**Dr Adam Taylor** **Griffith University** **$50,000 (2019-2020)**

***Liposome delivery of chikungunya virus vaccine candidate: a solution to vaccine production bottlenecks***

Dr Adam Taylor

Dr Taylor has had several partnering discussions with industry around licensing or co-development of their live-attenuated chikungunya virus (CHIKV) vaccine candidate. This highlighted a single barrier for investment: production limits. The modifications that make the virus safe and effective for use as a vaccine, prevent rapid, large-scale production of the virus. It simply doesn't replicate fast enough.

In response to this feedback, they have developed an alternative vaccine delivery vehicle that removes the need for in vitro scale up, and therefore, removes the production limit.

NFMRI funding will enable conduct of efficacy testing on the new formulation to confirm immune response and storage efficacy. This type of late pre-clinical research activity is not typically funded through NHMRC, but is critical to obtaining the required data to entice an industry partner, and consequently, bridge the 'valley of death'.

CHIKV is transmissible between animals and humans via a mosquito vector. As global temperatures are rising, the mosquito populations in South-East Asia and Queensland are migrating south and their prevalence in New South Wales is increasing.

This project is supported in partnership with the generous funding from the NSW Department of Primary industries and NFMRI.

**Dr Steve Wise** **Heart Research Institute** **$95,022 (2019)**

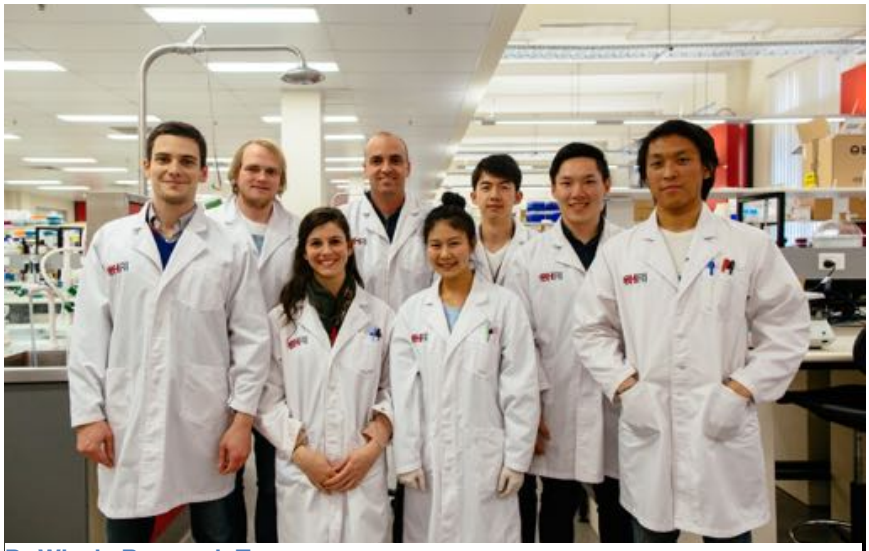
***Durable treatment of peripheral artery disease***

Dr Steve Wise

Dr Wise is seeking support for an injectable treatment for peripheral artery disease. Peripheral artery disease has a significant impact on the health of humans, affecting over 2.3 million Australians and 200 million people globally. There is currently no lasting effective treatment, and thousands of cases result in amputations each year. This intervention has the potential to provide an urgently needed improved treatment option.

NFMRI funding provides support for the one-year research plan incorporating a rat model and rabbit model study that will demonstrate safety and efficacy in two established animal models of vessel injury and healing – key criteria for attracting future investment.

These two models will complete the optimisation and proof-of-concept stages for the technology (rat model), before going head-to-head with current clinical practice in arteries of increasing anatomical similarity to humans (rabbit). Together these studies will provide the necessary data package to enable investors to confidently drive the technology to the next stage of development and toward clinical translation.



Dr Wise's Research Team

**A/Prof Joanne Macdonald University of Sunshine Coast $140,550 (2019 – 2020)**

***A rapid, sensitive and portable molecular genetic test for diagnosis of Malaria in blood***

In a project previously funded by the Bill and Melinda Gates Foundation, A/Prof Macdonald and her team developed rapid assay technology for the detection of Malaria (Plasmodium falciparum) in mosquitoes. Support is now required to validate the rapid and sensitive Malaria test for detecting subclinical infection levels at a collaborating institute by testing it on human samples containing low levels of infection. These samples are uniquely available via a collaborator already performing human clinical trials for treatment of Malaria infections. If it can be demonstrated that the test has higher sensitivity and can detect subclinical parasite levels, then the test will be well positioned to attract funding and investment for development into both the clinical detection market, as well as the market for tests that can assist with community screening for eradication programs.

A/Prof Joanne Macdonald

NFMRI funding will also help to determine the optimal manufacturing reagents to achieve the best possible sensitivity, specificity and reliability of testing kits, to provide further confidence for potential investors that our test can be reliably manufactured. The team will also expand the assay to detect other malaria strains such as P. vivax, which will extend the number of countries the tests can be employed in, as the relative prevalence of Plasmodium strains differs between countries.

This project is supported in partnership with the generous funding from the NSW Department of Primary industries and NFMRI.

NFMRI takes a uniquely proactive approach by partnering with our grant recipients to provide support along the innovation pathway.


It is a prerequisite that we only fund research of the highest quality. When reviewing applications and research projects NFMRI looks for more than good science. We also assess the ability and willingness of the researcher and the institution to collaborate, plan and manage research along the innovation pathway. NFMRI also considers the need and size of any potential impact, the potential for the research and innovation to make a significant difference and whether the opportunity may become attractive to a potential partner who can make a product accessible to the community.

To do this we harness skill sets from a variety of scientific, business development, commercial, industry and financial sources. Working with our researchers and their institutions, the NFMRI utilises the skills of our staff, Research Advisory Committee, Board and our networks to assist with communication strategies, understanding industry's expectations, and the establishment of networks and collaborations.

# 2018 Grants

Following recommendations of our Research Advisory Committee, the Board approved $890,241 in grant payments during the 2018 calendar year:

| Researcher | Institute | Focus Area | Total 2018 | Total funding commitment |
|---|---|---|---|---|
| **Prof Michael Good AO** | Griffith University | Rheumatic heart disease | $12,500 | $251,000 |
| **A/Prof Michelle Hill** | QIMR Berghofer | Cancer | $84,602 | $169,204 |
| **Dr Nicholas Opie** | University of Melbourne | Neurodegeneration | $100,000 | $390,000 |
| **Prof Des Richardson** | University of Sydney | Cancer | $81,500 | $105,500 |
| **A/Prof Wendy Cooper** | Royal Prince Alfred Hospital | Lung cancer | $37,500 | $50,000 |
| **Dr Joanna Woodcock*** | University of South Australia | Lung cancer | $50,001 | $50,001 |
| **Prof Eric Gowans**** | University of Adelaide | Zika virus | $113,685 | $293,880 |
| **A/Prof Philip Sutton** | Murdoch Children's Research Institute | Gastric cancer | $112,500 | $150,000 |
| **Prof Michael Good AO** | Griffith University | Malaria | $200,000 | $200,000 |
| **Prof Janet Davies** | Queensland University of Technology | Asthma & allergies | $97,953 | $99,953 |
| | | | **$890,241** | **$1,759,538** |

**Supported by NFMRI, the NSW Community Foundation and the NSW Community Foundation Nicholas and Phyllis Pinter Trust (managed by Equity Trustees)*

***Supported by NFMRI and the NSW Department of Primary Industries*

**Prof Michael Good AO** **Griffith University** **$251,000 from 2015 to 2018**

***Producing and testing a GMP grade peptide conjugate vaccine to prevent infections with Group A Streptococcus***

A proposal to manufacture and test a vaccine to prevent infections with Group A Streptococcus (GAS), which may potentially decrease the global burden of rheumatic heart disease, many forms of chronic renal disease and other streptococcal pathology commenced in 2015. The prevalence of severe GAS disease is estimated to be greater than 18 million cases globally, with 1.7 million new cases each year.

Prof Michael Good AO

**A/Prof Michelle Hill** **QIMR Berghofer** **$169,204 from 2017 to 2018**

***Blood glycoprotein panel for early detection of oesophageal cancer***

A/Prof Hill's research aimed to transform the detection and management of oesophageal adenocarcinoma (OAC) by developing a blood test. Her research program is in the process of evaluating these markers in large patient samples, as a step toward development of a diagnostic test that can be introduced into clinical practice.

**Dr Nicholas Opie** **The University of Melbourne** **$390,000 from 2017 to 2018**

***Safety validation of the stentrode: a biomedical device for paralysis that converts thoughts into computer commands***

Dr Opie has developed a minimally invasive brain machine interface that has the potential to return mobility and independence to people with paralysis. His technology can record brain signals and convert them into useful commands that can be used to control computers, wheelchairs, exoskeletons and/or prosthetic limbs. Translation of existing brain machines is hampered by invasive surgical procedures, which require access to the brain and lead to immune reactions that are causing device failure within months. Dr Opie and his team have already done enormous progress since receiving a $1.3m seed funding grant from the Defence Advanced Research Projects Agency – having already developed an implantable stent-electrode array that can record neural information from within a blood vessel, mitigating risks associated with open brain surgery.

NFMRI support has helped with clinical translation of this research via the conduction of a world-first human trial which commenced in April 2019. To meet this milestone, the team first had to manufacture the technology in an FDA approved and ISO-certified facility and conduct the necessary preclinical experiments to demonstrate reliability, efficacy and safety.

**Prof Des Richardson** **The University of Sydney** **$105,500 from 2017-2018**

***Commercial translation of innovative null hepcidin analogues that prevent the anaemia of chronic disease***

The anaemia of chronic disease (ACD) is a severe cause of morbidity and mortality in many millions of patients with cancer or inflammatory diseases and is due to excessive levels of the hormone hepcidin. These diseases induce excessive levels of hepcidin, which in turn promotes iron storage, thus preventing its release into the blood leading to severe and debilitating anaemia.

Prof Richardson has discovered that hepcidin is bound in the blood by a specific protein and has since developed an analogue that leads to urinary excretions of excessive hepcidin. NFMRI support is enabling commercialisation of this optimal analogue.

**A/Prof Wendy Cooper** **Royal Prince Alfred Hospital** **$50,000 in 2018**
***2018 Dr John Raftos Medal***

A/Prof Wendy Cooper is a staff specialist in tissue pathology and diagnostic oncology at Royal Prince Alfred Hospital in Sydney with a special interest in lung cancer and lymphomas. Between 2012 – 2015, A/Prof Wendy Cooper received two grants totalling $220,000 to support research focussed on lung cancer and identifying biomarkers that could predict responses to particular treatments – i.e. personalised medicine.

This is important as some lung cancer patients with specific changes in the genes of the cancer cells could be targeted with new smart drugs that are more effective and had less side effects than traditional chemotherapy.

Funding from the Foundation was provided to enable A/Prof Cooper to collaborate with bioinformatics experts and since then her team studied a group of lung cancer cases that could be targeted by new drugs. An important outcome of this research has been the approval of new therapies and concurrent diagnostics by the Medical Services Advisory Committee and the Pharmaceutical Benefits Advisory Committee (PBAC). Her data has been used by Pfizer and other pharmaceutical companies for this purpose.

**Dr Joanna Woodcock** **University of South Australia** **$50,002 (2018)**
***Pre-clinical evaluation of 14-3-3 protein inhibitors for lung cancer therapy***

The cellular protein, 14-3-3, is abundant in many cancers including lung cancer and the increased amount of 14-3-3 protein above normal levels strongly equates to the severity of the cancer and poor patient survival. Importantly, in experimental systems, reduction in levels of 14-3-3 protein in lung cancer cells has been shown to block cancer cell growth and cause cell death. Therefore, 14-3-3 protein represents a promising ‘molecular target’ for the development of new anti-cancer treatment for lung cancer. Several other laboratories in the world have attempted to generate drugs to interfere with14-3-3, but without much success.

Through Dr Woodcock’s research, her team has found a novel way to inactivate 14-3-3 protein which already shows greater promise. Based on their knowledge of 14-3-3 protein structure and function, they have identified chemical compounds that selectively inactivate 14-3-3 and have shown that these compounds kill lung cancer cells and reduce lung cancer tumour growth in an animal model.

They are currently evaluating these compounds in more relevant models of human lung cancer to assess the potential of our 14-3-3-targeting compounds as anti-cancer drugs for lung cancer. This project is supported thanks to generous funding from the NSW Community Foundation, the NSW Community Foundation – Nicholas and Phyllis Pinter Trust (both are managed by Equity Trustees) and NFMRI.

Our combined funding is helping support the assessment of pharmacokinetic properties of the drug compounds by scientists at CDCO and analysis of those compounds’ properties using RPPA. These studies will enable Dr Woodwock to fully assess the drug-like properties of those compounds and their potential efficacy for lung cancer.

**Prof Eric Gowans** **The University of Adelaide** **$293,880 from 2016 to 2018**

### *A DNA vaccine for Zika virus*


Prof Eric Gowans

The Gowans laboratory has developed a novel DNA vaccine that is more effective than canonical DNA vaccines and elicits robust immune responses in small (mice) and large (pigs) animals. A vaccine for the Zika virus is urgently required because there is no therapy, and the link with microcephaly in children born to mothers who were infected during pregnancy demands that women of child-bearing potential be immunised. As canonical vaccines (eg. live attenuated vaccines) require a considerable period of development, a DNA vaccine that can be generated in a matter of weeks represents an attractive alternative.

Prof. Gowans' team have been examining the efficacy of novel DNA vaccines designed to elicit cell-mediated immunity to the Zika virus non-structural proteins or Zika neutralizing antibody in mice. A major component of the project was to examine the immune responses in mice and pigs, and the protective efficacy of the vaccines in mice, with a view to identifying the most appropriate strategy to further develop for follow up studies in human clinical trials.

This project is supported thanks to generous support from the NSW Department of Primary Industries.

**Prof Philip Sutton** **Murdoch Children's Research Institute** **$150,000 (2018)**

### *Vaccinating against Helicobacter pylori-induced gastric cancer*

A/Prof Sutton has invented a vaccine that can prevent gastritis in mice. His vaccine targets the enzyme produced by H.pylori, which opens up gaps in the normally tight, impermeable barrier of the stomach lining. A/Prof Sutton believes that by preventing disruption of this barrier, either before or after H.pylori infection, that they may completely prevent the development of gastritis. A/Prof Sutton wishes to test this vaccine in clinical trials, but to do so he needs to optimise the manufacturing process of the vaccine antigen in order to be able to produce the antigen in sufficient quantity and quality for taking into clinical trials.

NFMRI funding will help support optimisation of the manufacturing process for the vaccine antigen. Luinabio, one of the most experienced company in Australia for producing recombinant vaccine antigens used in clinical trials would be contracted by A/Prof Sutton to carry out this work.

**Prof Michael Good AO** **Griffith University** **$200,000 from 2018-2019**

***Manufacture and evaluation of a chemically attenuated Plasmodium falciparum whole parasite blood-stage malaria vaccine***

Prof Good's team has developed and patented a novel approach to a malaria vaccine that in their published pre-clinical studies has shown long-lasting protection against different strains and species of the malaria parasite.

This approach is based on the use of the entire parasite which is made non-infectious by treatment with a chemical agent. For the human malaria parasite (Plasmodium falciparum) vaccine manufacture involves in vitro culture of the malaria parasite followed by chemical treatment.

This has since been administered as a single dose to eight volunteers who all developed strong cellular immune responses. Since the vaccine has been shown to be safe and well-tolerated, Prof Good's team is undertaking a Phase Ib trial, which will involve 36 volunteers and test the efficacy of the vaccine. NFMRI funding is helping support the vaccine manufacture for this trial. The associated clinical trial and activities are already funded via other sources, including Rotary. There was also a $500,000 funding announcement from the MRFF through the Federal Health Minister's Department for the malaria vaccine clinical trials. Recruitment for the next study group for this clinical trial is currently taking place.

**Prof Janet Davies** **Queensland University of Technology** **$99,953 from 2018-2019**

***Point of care diagnosis for hay fever and asthma; development and validation of rapid subtropical specific IgE tests***

This project sought to use allergen molecules of subtropical grass pollen for more specific tests and treatments to assist people allergic to grasses in subtropical regions.

Prof Janet Davies

After identifying and characterising all the key allergens of two major subtropical grass pollens and making headway in subtropical grass pollens research, A/Prof Davies partnered with Abionic SA, a Swiss company that has developed an instrument that quickly measures levels of sensitivity to allergens in doctors' rooms, to investigate whether recombinant version of their pollen allergens are effective as a more specific and rapid point of care diagnostic test for grass pollen allergy in warmer regions of the world.

NFMRI funding helped support optimal generation and purification of two quality assessed recombinant allergen components, as well as the trialling these components on a new point of care diagnostic platform. The pre-commercial research will advance the innovations quickly for commercial uptake.

# Project Updates

## Prof Des Richardson

Field: Cancer
Innovation: Drug

"The anaemia of chronic disease is a major health problem that is found in 80% of hospitalised patients and thus affects millions throughout the world. We have developed a new treatment strategy based on drugs called hepcidin null analogues.

Our recent NFMRI-funded studies have been successful in identifying several new analogues (tripeptides e.g., PIC) that show great promise. The eventual goal of our studies is to have a drug that can enter clinical trials. We are collaborating with national and international researchers to ensure success and that our translational efforts result in an effective pharmaceutical for widespread use.

Our studies in vivo have demonstrated high tolerability and we have shown that the tripeptide (PIC) as well as others negates the activity of hepcidin. Hence, this NFMRI funded project has been highly successful and will stimulate further research and development of this therapy for ACD treatment.

We gratefully thank the NFMRI for the tremendous support that has enabled the successful completion of this project." – Prof Des Richardson and Dr Michael Huang

## Prof Mark Smythe

Field: Asthma and allergies
Innovation: Drug

"Our research team was awarded an NFMRI grant to assist in selecting a drug candidate for the treatment of allergic asthma. We have developed a series of compounds as potent and selective antagonists of hematopoietic prostaglandin D2 synthase (HPGD2S) that are metabolically stable, orally bioavailable and efficacious in animal models. Through the NFMRI grant, we have been able to access collaborators and key experiments to test these compounds on human bronchial epithelial (hBEC) cells from healthy and asthmatic patients. This promising, preliminary efficacy shows first in human cell activity and has aided in the selection of our best candidate to ultimately take to the clinic.

Prof Mark Smythe

NFMRI funding has been important in guiding the selection of a preferred lead candidate for our severe asthma program. We have been involved in multiple meetings with key opinion leaders in asthma and respiratory diseases and have created a strong data package. This project has attracted industry interest from pharmaceutical companies, as well as local and international venture capitalists. We are currently engaged in ongoing discussions with possible partners. We have also expanded our research into new disease indications with similar underlying inflammatory mechanisms and have established several new collaborations and submitted grant applications."

## NFMRI-funded research crosses the 'valley of death'

After receiving support by the NFMRI in 2016-2017 to assist in the optimisation and evaluation of a new class of drug molecules that influence lipid (fat) metabolism, A/Prof Bernard Flynn research has successful led to the launch of an Australian biotech company with a $7m investment to develop therapies for treating obesity and liver disease.

A/Prof Bernard Flynn

The research undertaken by A/Prof Bernard Flynn's group has resulted in the identification of a key enzyme in lipid metabolism that produces lipid metabolites (toxic fats) that are important in promoting the onset and progression of these diseases. They have also developed drug molecules to intercept this enzyme and reduce the production of toxic fats and promote the formation of good fats, that is, fats that actually reverse the disease process!

The NFMRI funding was awarded to the A/Prof Flynn's research group to help fund access to contract research organisations and other collaborators necessary in providing critical data to help A/Prof Flynn's group optimise their drug molecules, so as to afford a safe and effective drug molecule that can be administered orally.

The work funded by the NFMRI has been successful and A/Prof Flynn's group now has a set of drug molecules that are effective in blocking this enzyme via oral administration. These drug molecules are currently undergoing further optimisation and preclinical development in the expectation of nominating the best performing drug molecule to progress to the clinic.

This research attracted considerable interest from potential commercial partners throughout 2016 – 2017. We are pleased to advise that A/Professor Bernard Flynn and his collaborators have since been successful with the establishment of a spin-off company to further develop fibrosis therapeutics that have potential to treat many diseases.

### Australian biotech company launched with AU$7m investment to develop therapies for treating obesity and liver disease

Cincera Therapeutics Pty Ltd ("Cincera") was launched in February 2018 with an AU$7 million venture capital commitment from the Medical Research Commercialisation Fund (MRCF).

The Company has been founded to develop new therapies to target conditions relating to an unhealthy Western diet, including serious and highly prevalent diseases associated with obesity. The company will initially focus on treatments for the emerging epidemic of a liver disease termed 'NASH' (non-alcoholic steatohepatitis).

Obesity and Western diets, high in saturated fats and processed carbohydrates, can alter the abundance (in both quantity and quality) of fats in the body. The subsequent accumulation of excessive and 'toxic' fats in the peripheral organs of the body can induce inflammation and tissue fibrosis (scarring), which can ultimately compromise function and lead to organ failure. Cincera aims to treat diseases like NASH by reducing the excessive abundance of specific 'toxic' fats in the body.

The Company is harnessing high-potential research from the Centre for Cancer Biology, an alliance between the University of South Australia and SA Pathology in Adelaide, and Monash University's Institute of Pharmaceutical Sciences (MIPS) in Melbourne. The founding scientists of Cincera are Associate Professor Bernard Flynn from MIPS and Professor Stuart Pitson from the CCB who have been developing novel therapies that modulate an important target involved in a number of diseases.

The MRCF investment will be used by Cincera to show efficacy in disease models and support the ongoing optimisation of compounds to select drug candidates that will be suitable for clinical trials in three to four years.

# Our people

A dedicated Board, Research Advisory Committee (RAC) and management lead our Foundation.

## Trustees

| Trustees, qualifications and special responsibilities | | Experience |
|---|---|---|
| **Dr Rob Sauer**<br>**Chairman** | 2017- | • Chairman, Echoview Holdings Pty. Ltd.<br>• Director, Biopharm Australia Pty Ltd.<br>• Admitted as solicitor of the Supreme Court of New South Wales in 1974<br>• Admitted as Certified Practicing Accountant in 1980<br><br>Formerly:<br>• A Founding Director and shareholder of ResMed<br>• Partner, DibbsBarker (1978-2008)<br>• Inaugural Chairman, R&D Tax Concession Committee<br>• Inaugural Chairman, Tassal Ltd (1984-1990) |
| **Mr John Harkness** | 1984 - | • Partner of KPMG for 24 years and National Executive Chairman for five years.<br>• Former Chairman, Charter Hall Retail REIT<br>• Former Chairman, Reliance Rail<br>• Former Director, Goodman Group<br>• Fellow of the Institute of Chartered Accountants in Australia and the Australian Institute of Company Directors. |
| **Dr John Dixon Hughes OAM**<br>Chairman, Research Advisory Committee | 1977 - | • NFMRI RAC Chairman (2000-2018)<br>• Consultant General Surgeon<br>• Research Advisory Committee since 1977 and Chairman since 2000<br>• Fellow, Royal College of Surgeons (Eng)<br>• Fellow, Royal Australasian College of Surgeons<br>• Fellow, Australian Medical Association<br>• Foundation member of the Australian Association of Surgeons, formerly serving as Chairman of the NSW State Committee and President of the Association<br>Formerly;<br>• Board Member, Senior Vice President, Chairman Medical Staff Council, Chairman of Surgical Research Committee and Chairman of Ethics Committee at Sydney Hospital. |

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| | | • Chairman of Infection Control Advisory Group NSW Health<br>• Convener (Chairman) Negotiating Committee to negotiate with the NSW Government, on behalf of the medical profession during the "Doctor's Dispute" in 1984.<br>• Medical Services Committee NSW Administrator (1984 – 1996) & Chairman (1996 – 2016). |
| **Dr Kevin Hellestrand** | 2001 - | • Cardiologist and Cardiac Electrophysiologist for 35 years.<br>• Co-author of more than 50 journal articles, reviews and book chapters.<br>• Fellow of the Royal Australasian College of Physicians, American College of Cardiology, Cardiac Society of Australia and New Zealand, Heart Rhythm Society, European Society of Cardiology.<br>• Member of the North Shore Heart Research Foundation |
| **Mr Anthony McGrath**<br>*Honorary Secretary and Director* | 1997 - | • Co-Chairman of McGrathNicol<br>• Director, QBE Insurance (Australia) Ltd<br>• National Rugby League Commissioner<br>• Member, Institute of Chartered Accountants in Australia.<br>• Member, Insolvency Practitioners Association of Australia. |
| **A/Prof. Ray Garrick AM**<br>*Retired in November 2018* | 2002- | • Neurologist with over 35 years' experience<br>• Fellow, Royal Australasian College of Physicians<br>• Member, Australian New Zealand Association of Neurologists<br>• Associate Professor of Medicine at the University of Notre Dame, Sydney Campus<br>• |
| **Mr Keith Drewery** | 2010 - | • Director, Drewery Consulting Pty Ltd<br>• Consultant, KPMG Private Enterprise Division<br>• Trustee, The Balnaves Foundation<br>• Director, Abbott Foundation Pty. Limited<br>• Advisory Board, See Beyond Borders |
| **Dr Ashley Bates** | 2014- | • Director, AusIndustry Entrepreneur's Programme<br>• Principal, Ashley Bates Consulting<br>Formerly:<br>• National Executive, Manufacturing Excellence Taskforce Australia<br>• Head of Product Development and Head of R&D Alliances, GlaxoSmithKline |

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| **Ms Alison Choy Flannigan**<br>*Company Secretary* | 2014- | • Company Secretary since 2014<br>• Partner, Hall & Wilcox<br>• Member, NSW Law Society<br>• Member, Australian Institute of Company Directors<br>• Member, Australian Corporate Lawyers Association<br>• Asia Pacific Regional Forum Liaison Officer, Healthcare and Life Sciences Committee, International Bar Association<br>• Member, AusBiotech |
| **Prof A. Ian Smith** | 2017- | • Vice-Provost (Research & Research Infrastructure), Monash University<br>• Director, Bioplatforms Australia (from 2008)<br>• Director, National Imaging Facility (from 2009)<br>• Director, Victorian BioImaging Collaboration (from 2010)<br>• Director, Victoria Endowment for Science, Knowledge and Innovation (from 2011)<br>• Director, Neuroscience Victoria (from 2012)<br>• Director, South East Asia Community Observation (from 2010)<br>• Director, Curtin Health Innovation Research Institute (from 2016)<br>• Director, Population Health Research Network (from 2017)<br>• ARC Centre for Advanced Molecular Imaging since February 2017<br>• Future Low-Energy Electronics Technologies (FLEET) Advisory Committee since November 2018<br>• Australian Synchrotron Stakeholder Committee since July 2018<br>• ANSTO Innovation Precinct External Consultative Committee since November 2018 |
| **Dr Elaine Saunders** | 2018- | • Advisor, Teleaudiology, Blamey Saunders hears<br>• Adjunct Professor, Faculty of Health, Arts & Design, Swinburne University of Technology<br>• Chair, Swinburne University's Innovation Precinct Advisory Board<br>• Chair, Swinburne University's Biodevices Advisory Board<br>• Non-Executive Director, Australian National Fabrication Facility<br>• Non-Executive Director, Australian Innovation Research Group |

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| | Formerly:<br>• Executive Chairman, Blamey Saunders hears<br>• Co-founder &CEO, Dynamic Hearing Pty. Ltd.<br>• Non-Executive Director, Alfred Health |

## Research Advisory Committee

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|---|---|
| **Chairman**<br>**Prof A. Ian Smith** | Vice-Provost (Research & Research Infrastructure), Monash University |
| **Dr John Dixon Hughes OAM** | Consultant general surgeon with over 55 years' experience |
| **A/Professor Ray Garrick AM**<br>*Retired in November 2018* | Associate Professor of Medicine (Neurology) at the University of Notre Dame, Sydney Campus |
| **Em. Professor Douglas E. Joshua AO** | Emeritus Professor in Haematology at the University of Sydney and Consultant Haematologist at RPHA. |
| **Professor Mark von Itzstein** | Director of the Institute for Glycomics at Griffith University |
| **Em. Professor John McAvoy**<br>*Retired in November 2018* | Emeritus Professor of Experimental Ophthalmology at the University of Sydney |
| **Dr Ashley Bates** | National Executive, Pharmaceutical and Biotechnology at META, previously Head of R&D Alliances ANZ at GSK |
| **Dr Noel Chambers** | CEO with over 25 years' experience in biomedical research, innovation, commercialisation and biotechnology. |
| **Dr Andrew Cottrill** | Medical Director, HCF |
| **A/Prof Wendy Cooper** | Clinical Associate Professor at The University of Sydney |

## Management and Administration

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|---|---|
| **Dr Noel Chambers** | Chief Executive Officer |
| **Mrs Nancy Ranner** | Grants, Communications and Engagement Coordinator |
| **Ms Sonya Kewal** | Administrator |

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