THANK YOU

HMRI acknowledges the following Government funding in 2016:

NSW Ministry of Health, for providing:
- Population Health and Health Services Research Support Program funding;

NSW Ministry of Health, through the Office of Health & Medical Research, for providing:
- Infrastructure funding under the NSW Medical Research Support Program (MRSP);
  and
- ACGR-Based Bonus Funding under the Medical Research Support Program (MRSP)

We would also like to acknowledge the generous support of all of our donors and volunteers. Those who give to or help us run appeals, events, our benefactors and corporate partners. The work outlined in this report is due in no small part to your contributions.

Thank you.
HMRI 2016 ANNUAL REPORT

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Positioning a world-class research facility adjacent to a major teaching hospital was one of many inspired decisions made in HMRI’s formative years. It has afforded scientists and public health researchers a direct link to clinical service delivery – equally, clinicians gain access to the latest research-generated innovations.

Importantly, both are directly connected to patients and the community they serve, and that in turn support their work. Our job is to bring them together easily and often.

It is vital for us, as facilitators of medical research, to prioritise the funding of early- and mid-career researchers. HMRI is now pairing its Fellowships with targeted support grants to ensure that Fellows also have project funds.

At the same time, we have continued to partner with organisations and industry to provide researchers with new opportunities outside the square.

In 2016, HMRI hosted an International Workshop on Participatory Surveillance courtesy of a Skoll Global Threats Fund grant – the event attracted delegates from the World Health Organisation, national centres for disease control, governments and industry.

We benefitted from the pro-bono support of multinational IT firm TATA Consulting Services, resulting in a world-class website that engages both the community and broader research network globally.

This year we also enlisted the help of Hunter “ex-pats” by forming the HMRI Sydney Foundation. The inaugural event bore immediate fruit and our future goal is to network with other influential community leaders.

At HMRI’s final board meeting for 2016 we farewelled our long-serving Chairman, Glenn Turner. Glenn provided invaluable strategic and fundraising service to the Institute during his 10-year tenure. His experience and leadership helped set HMRI on a course for unparalleled growth in research capacity and reputation.

As the incoming HMRI Chair, Kyle Loades will maintain our focus on raising donor funds to support more life-changing research initiatives.

And with our partners at the University of Newcastle and Hunter New England Local Health District, we will continue to drive the innovation agenda with a view to future-proofing the medical research platform.

Where that leads, we don’t always know. But we must be open to recognising and being ready to act on opportunities as they arise. We can only do this with the continued support of government, our donors, partners, researchers and industry.

What we do know, is that the main winners will be the many people in our community who can ultimately enjoy longer, healthier, happier lives.

“**We will continue to drive the innovation agenda with a view to future-proofing the medical research platform.**”

- Professor Michael Nilsson
HMRI will soon reach 20 years since it was established, and as one of Australia’s larger medical research institutes, it has met and likely surpassed the vision and hopes of the founders.

It is noteworthy that the formal collaboration between the University of Newcastle and Hunter New England Health Local Health District, interwoven with community needs and financial support, as envisaged in the beginning, has truly prospered.

However, with significant changes to the manner in which medical research will be funded in the future, and pressures on government budgets to deliver health services, it was timely to conduct a review of HMRI during the year to ensure we are as well prepared and positioned for the future as we can be.

I am pleased to say this was largely accomplished in 2016. HMRI has established itself very much at the top table in terms of fitting into the new research model emerging – with increasing emphasis on translational research, health research economics and health technology assessment.

Other significant recognition of HMRI for its particular prowess will emerge in 2017. This is continuing testimony to the strength of research and community benefit that HMRI delivers, and highlights the joint contributions of our key stakeholders the University of Newcastle and Hunter New England Local Health District.

As I will be retiring at the end of 2016 I wish to thank all Directors and a great team of management for putting HMRI so firmly on the national and international map.

I also pay tribute to our wonderful community, who just keep turning up, donating, volunteering, working. It has been an honour and a privilege as well as a great learning experience.

As I have opined many times, HMRI now defines the Hunter. Any glory in that reflects on all involved.

“HMRI has established itself very much at the top table in terms of fitting into the emerging new research model”

- Glenn Turner
The Hunter Medical Research Institute (HMRI) works in partnership with Hunter New England Local Health District and the University of Newcastle to enable the translation of world-class medical research into high-quality health solutions to meet community needs.

As one of NSW’s largest independent research institutions, HMRI is a key enabler for Hunter researchers, healthcare professionals, policy makers, industry and the community to work together in solving a multitude of health issues.

It supports and accelerates the translation of research from bench to bedside – from basic molecular science, pre-clinical trials and human clinical trials through to evidence-based medical treatments, protocols and health policy.

The Institute provides essential funding, facilities, equipment and research support to over 1600 researchers, research students and support staff working across several campuses.

Research is coordinated through seven key Programs: Brain & Mental Health, Cancer, Cardiovascular, Information Based Medicine, Pregnancy & Reproduction, Public Health, and Viruses, Infections/Immunity, Vaccines & Asthma (VIVA).

HMRI also supports inter-Program collaborations in shared research focus areas, in Child & Adolescent Health, Indigenous Health, Rural & Telehealth, and Bioinformatics.

This multidisciplinary model recognises that families are burdened by a raft of medical conditions, including asthma, cancer, diabetes, heart disease, MS, stroke and more. Optimum treatment requires a holistic approach from experts across different research fields – collaboration is key.

Inspiration, exploration and innovation are fuelled by the translational flow of knowledge along the laboratory-to-clinic continuum. Researchers continually work with other leading research institutes across the country and the globe.

HMRI attracts significant government funding for affiliated researchers, distributed through the HMRI Research Programs. This supports essential research infrastructure including research salaries, equipment, technology and research support services.

The HMRI Research Programs also receive community and corporate philanthropic funding for research projects, equipment, scholarships, fellowships and awards.
The HMRI Brain and Mental Health Program blends the expertise of a unique and diverse group of researchers spanning basic neuroscience, psychology, clinical mental health, neurology and allied health. The researchers are working to understand the intricate mechanisms underpinning human cognition, brain and nervous system disorders, mental health and wellbeing.

Research within the HMRI Brain and Mental Health Program spans the bench to the bedside, and includes cellular studies, modelling, human studies and interventions, clinical studies, and translation to policy and practice.

Brain and Mental Health researchers are at the forefront of scientific discovery and translation across a broad range of research areas, including stroke, brain injury and rehabilitation, neuroscience, mental and physical health, cognition (psychology), ageing, pain, mood disorders, schizophrenia and community intervention.

Together they work across a variety of research topics at the forefront of the HMRI Brain and Mental Health Program:

- Neuroscience
- Schizophrenia
- Stroke and Brain Injury
- Stress and Addictive Disorders
- Psychology
- Clinical Mental Health

The Brain and Mental Health Program works in conjunction with two Priority Research Centres of the University of Newcastle – the PRC for Stroke and Brain Injury and the PRC for Brain and Mental Health Research. The Program also includes the HMRI Stroke Research Group, and incorporates the NSW Centre for Rural and Remote Mental Health.

RESEARCH HIGHLIGHT

AUSTRALIAN WOMEN CHALLENGE STROKE SURVIVAL ASSUMPTIONS

Hunter researchers have challenged assumptions on how long women will live after stroke, even with significant physical impairment.

Dr Isobel Hubbard found that many older Australian women who survive stroke live longer than 15 years with poor physical function.

She also found that few recovered from the low levels of physical function reported after they had recovered from the acute effects of their stroke.

“This means we need to reconsider the support and rehabilitation programs that improve their quality of life and ensure they support women right through their later years,” Dr Hubbard said.

“This research gives a ‘voice’ to the long-term needs of older women living with stroke for more than 15 years,” she said.

“We believe this research should be taken into account when it comes to estimating the burden of stroke across women’s later life, and in planning for their health and aged care needs.”
Researchers in the HMRI Cancer Research Program work in a number of specialised areas to understand the molecular and cellular mechanisms that underlie the development of cancer, and find ways to translate these findings into the clinic to improve patient outcomes.

Similarly, ideas and research focuses that are generated in the clinic are fed back to laboratory and preclinical scientists who work continually to improve both the care and treatment of patients. This bi-directional approach makes Hunter cancer researchers successful in their field across the nation and the globe.

Research has found that at least one in three of cancer cases are preventable, highlighting the need for effective research into the causes, intervention programs and treatment options for the thousands of Australians diagnosed with cancer each year.

Hunter researchers are dedicated to researching many different aspects and types of cancer:

- Melanoma
- Breast Cancer
- Ovarian and Endometrial Cancer
- Prostate Cancer
- Brain Cancer
- Leukaemia
- Pancreatic, Colorectal and Rare Cancers
- Clinical Treatment and Palliative Care

Hunter researchers can access one of the nation’s largest biobanks of cancer tissue and specimens - catalogued and organised so that researchers from a wide variety of disciplines can research their particular focus without the need to recruit a new sample of patients and collect tissues. This is both an efficient and cost effective way to collect samples, making it an extremely valuable resource for cancer researchers and clinicians alike.

RESEARCH HIGHLIGHT

STUDY OFFERS NEW TREATMENT TO REDUCE GIOBLASTOMA DEATH RISK

An international phase III clinical trial involving Trans-Tasman Radiation Oncology Group researchers and Hunter patients significantly improved survival of elderly patients with glioblastoma.

The study found that adding temozolomide chemotherapy during short-course radiation therapy, followed by monthly maintenance doses of temozolomide, reduced the risk of death by 33 per cent.

Hunter-based Radiation Oncologist Dr Mike Fay said this practice-changing study would help treat elderly patients with glioblastoma.

“It’s a great example of international collaboration answering an important question in an uncommon tumour. It’s important to learn how to best use the cancer treatments we already have available,” he said.

“This study does this by shortening the radiotherapy course and adding temozolomide chemotherapy. It also shows the benefit of testing the tumour to predict the chance of response.”
The HMRI Cardiovascular Health Program researches the causes, treatments and management of cardiovascular diseases and cardiovascular health amongst all Australians. Cardiovascular disease encompasses heart disease and conditions of the blood vessels. Led by Professor Dirk Van Helden, Professor Andrew Boyle and Professor Ron Plotnikoff, researchers in the HMRI Cardiovascular Health Program are successfully researching various aspects of cardiovascular health and managing numerous clinical trials and community interventions.

In conjunction with the University of Newcastle’s Priority Research Centre for Physical Activity and Nutrition and Hunter New England Local Health District, researchers in the Program study a range of research focuses aimed at improving cardiovascular health.

From the structure of the heart, the effect of the diet and exercise on the risk for cardiovascular disease, through to clinical interventions and stem cell therapy for damaged heart muscle, the Program is uniquely positioned to improve health outcomes for community by combining basic laboratory researchers with clinical cardiologists and nutritionists alike.

Within the HMRI Cardiovascular Program, Hunter researchers are working to understand a number of aspects of cardiovascular health including:

- Clinical Cardiovascular
- Heart Physiology
- Preventing Cardiovascular Disease

RESEARCH HIGHLIGHT

RAPID HEART-ATTACK RESPONSE BOOSTS SURVIVAL

A lifesaving treatment protocol pioneered in the Hunter New England Health district, which delivers clot-busting drugs to heart attack victims before they reach hospital, has been shown to improve survival rates for people in regional and rural areas.

The Pre-Hospital Thrombolysis (PHT) program enables paramedics to administer specialised treatment to patients, including clot-busting drugs, after consulting with a cardiologist via smartphone. Treatment can begin immediately and improvement is often seen before a patient arrives at hospital.

The quick response is vital in opening a blocked artery and preventing permanent heart muscle damage, especially for patients who are remote from a major treating hospital.

A landmark study shows the survival rate of patients who received the treatment was 93 per cent – the same as city patients who live close to a major hospital equipped with a cardiac catheterisation laboratory.

The PHT protocol has been adopted across regional and rural NSW and other states are moving to implement the program.
By embracing the interdisciplinary challenge that is personalised medicine, the diverse team of researchers in the HMRI Information Based Medicine Program are paving the way for an increasingly patient-tailored approach to healthcare.

Information based medicine is often referred to as bioinformatics, or the use of computer science and mathematical modelling to interpret extremely large amounts of biological data.

Due to the lengthy and complicated nature of genetic sequences, this research method is commonly applied to the field of genetics and cancer genetics to yield specific and personal disease information from complex genetic data.

With the improvement of computing technologies in recent times, the capabilities for analysing complex data have become more advanced, and more accessible. Bioinformatics allows meaningful interpretation of that data and unlocks the potential for personalised medicine where treatments could potentially be tailored to each individual patient.

High-tech and state-of-the-art genetic sequencing technology at HMRI now allows genetic researchers to screen a patient sample for their entire genome, not just the 2% of our DNA that codes for a product.

The two research arms of the HMRI Information Based Medicine Program are the Bioinformatics group and the Medical Genetics group.

In parallel with the University of Newcastle’s Priority Research Centre for Bioinformatics, researchers in the HMRI Information Based Medicine Program have made a number of important findings in disease areas such as cancer, dementia and Alzheimer’s disease, inflammatory bowel disease, multiple sclerosis, epilepsy and schizophrenia.
The HMRI Pregnancy and Reproduction Program brings together researchers focussed on understanding the environmental and biological processes that affect fertility, reproduction, pregnancy and birth.

Combining two of the world’s elite reproductive biologists, Laureate Professor John Aitken and Laureate Professor Roger Smith AM, the HMRI Pregnancy and Reproduction Program works in partnership with the University of Newcastle’s Priority Research Centre for Reproductive Science. These world class research programs unite expert researchers from across the globe who specialise in researching fertility and embryo development right through to pregnancy and birth.

Researchers in the Pregnancy and Reproduction Program Specialise in all aspects of reproductive health - from how bacteria, chemicals and genetics can all affect fertility through to developing new commercial methods of contraception, including a form that aims to reduce the spread of sexually transmitted diseases.

Researchers in this group are amongst the world’s best at investigating and improving fertility; even registering several patents including a novel method of separating sperm for IVF procedures which improves the chance of successful fertilisation and implantation.

Once conceived, the health of a baby, even in the womb, is known to influence their health outcomes and risk for disease later in life. A baby born with low birth weight may have an increased risk for adult diseases such as diabetes, heart disease, obesity and kidney failure later in life. This highlights that research into pregnancy and the health of the baby is just as important as the reproductive health of the parents.

The HMRI Pregnancy and Reproduction program researches the whole spectrum of reproductive health including:
- Reproduction and Infertility
- Pregnancy and Babies

**RESEARCH HIGHLIGHT**

**NANOTECH REVOLUTION FOR PREGNANCY DRUGS**

A revolutionary method of delivering drugs specifically to the uterus, using antibody-coated nanoparticles, has been pioneered by researchers from the University of Newcastle and Hunter Medical Research Institute.

The technology may allow a new generation of labour drugs to be employed, while existing therapies that deter or induce contractions could also be administered in lower dosages, reducing toxicity and unwanted side-effects for pregnant women and their baby.

“We’ve known from our previous research that the uterus expresses the Oxytocin receptor during labour,” Laureate Professor Roger Smith said. “Nanoparticles were the missing piece of the puzzle - we covered them with an antibody to the Oxytocin receptor.”

“The nanoparticles can target the uterus like a guided missile, without causing collateral damage.”
The HMRI Public Health Program seeks to improve the health of the community through population health interventions that promote healthy behaviours and enable effective, integrated and equitable health care for all.

Research in this group encompasses a wide range of health needs at all stages of life – from pregnancy and birth, through to childhood and adult health, as well as ageing and end of life decisions. The research extends from methodological and descriptive research, through trials of strategies to improve health, to studies involving the translation and monitoring of proven programs, surveillance of health risks, and measurement of health system performance. The research is conducted in a wide variety of clinical and community settings, with a strong focus on engagement with government and industry partners.

Working in conjunction with the University of Newcastle’s Priority Research Centre for Gender Health and Ageing, the Priority Research Centre for Health Behaviour, and the Hunter New England Area Health Service, the HMRI Public Health Program focuses on individual, societal and healthcare factors to influence policy and care.

The Program brings together researchers from a variety of fields including: public health, epidemiology, psychology, statistics, economics, medicine, nutrition and dietetics, health promotion, pharmacology, physiotherapy, nursing and occupational therapy. They operate across eight themes:

- Healthy lifestyles
- Global Health
- Women’s Health
- Healthy Ageing
- Communicable disease risks
- Effective health services
- Effective Medicines
- Using health data and statistics

**RESEARCH HIGHLIGHT**

**STUDY REVEALS QUIT-SMOKING BARRIERS FOR PREGNANT MUMS**

A study by Dr Gillian Gould has recommended reforms to Indigenous health services after identifying systemic barriers that are hindering pregnant women from quitting smoking.

The study cited a lack of subsidised access to nicotine replacement therapies, a lack of clinician training in managing maternal Indigenous smoking and a dearth of targeted health promotion programs.

“Our research shows women are well aware of the risks of smoking for their babies, and want to do something about it, but they need more help at a policy level.” - Dr Gillian Gould

You can’t blame them for not quitting when we have barriers on the service delivery side.”

GP guidelines recommend that oral nicotine replacement therapies should be offered to pregnant women if counselling is ineffective, however they are not listed on the Pharmaceutical Benefit Scheme.

“The barrier appears to be that pharmaceutical companies are unwilling to supply those products to the Government,” Dr Gould explained. “We could fix that immediately with a minor change to regulations.”
The HMRI Viruses, Infections/Immunity, Vaccines and Asthma (VIVA) Research Program brings together basic laboratory scientists, clinical researchers, respiratory physicians and epidemiologists to investigate diseases of the airways. This includes extensive research into the role of infections and inflammation in the development of asthma and other respiratory problems, including during pregnancy, in cystic fibrosis patients and even in the gut.

The VIVA group also researches the biology of viruses, how they can affect respiration and methods of developing new vaccines for the treatment of diseases such as cancer.

The HMRI VIVA research program links two of Australia’s most successful respiratory researchers, Laureate Professor Paul Foster and Professor Peter Gibson.

The collaboration enables multidisciplinary study into the cellular and molecular aspects of allergic diseases and airways inflammation. The partnership also enables translational studies aiming to improve the treatment and management of diseases of the airways including asthma in pregnancy and the accurate diagnosis of chronic obstructive pulmonary disease (COPD).

In conjunction with the University of Newcastle’s Priority Research Centre for Asthma and Respiratory Diseases, the HMRI VIVA Program brings together both clinically based respiratory research and basic laboratory immunology.

The Program’s key research topics include:

- Asthma, Respiratory Diseases and the Immune System
- Gastrointestinal Inflammation and Infections
- Asthma in pregnancy
- Viruses and Vaccines
- Cystic Fibrosis
THANK YOU
to all HMRI donors and supporters throughout 2016.

With your help, HMRI awarded more than $3.6 million in philanthropic funding to affiliated health and medical researchers, including:

- **1 HMRI Research Fellowship**
  - Supported by Mark Hughes Foundation: $525,000

- **1 HMRI Research Fellowship**
  - Supported by Hunter Children’s Research Foundation: $450,000

- **3 Research Awards**
  - $45,000

- **6 Scholarships**
  - $57,000

- **58 Projects**
  - $2,400,000

- **4 Career Support Grants**
  - $56,000

- **6 Travel Grants**
  - $64,500

A special thank you to HMRI’s Major Benefactors, for your significant and sustained investment in health and medical research:

- Gastronomic Lunch
  - of the Year

- Greater Bank and
  - Greater Charitable Foundation

- Kiriwina Investment
  - Company

- nib foundation

- Port Waratah Coal Services

- HMRI Life Governor,
  - Jennie Thomas AM

- Thyne Reid Foundation
The task of implementing behavioural change to help alleviate today’s chronic health issues remains a challenging one. It takes someone with the respectful, methodical and collegial approach of population health researcher and practitioner Professor John Wiggers to succeed.

John’s research focuses on building the capacity of community organisations such as schools, licenced premises and workplaces to reduce the risks imposed by smoking, poor nutrition, risky alcohol consumption and inadequate physical activity. He also harnesses support from policymakers and care providers.

The research-practice partnership he pioneered between the University of Newcastle and Hunter New England Population Health was, and still is, ahead of its time. It has been transformative to public health services due largely to John’s commitment to rigorous research methodology.

John has published over 200 peer-reviewed manuscripts, many in leading journals, which places him among the highest performing research academics in his field. He has been awarded over $40 million in grant income, including $15 million in the past 5 years.

Over the past decade John has grown his research group from a single staff member to 7 research fellows, 10 post-doctoral researchers and multiple University-funded research staff. Attesting to John’s career-building leadership, two of those fellows – Associate Professor Luke Wolfenden and Dr Chris Williams – are recent recipients of the HMRI Award for Early Career Research.

John’s research on the Alcohol Linking Program changed the way police collect data and respond to alcohol-related harm incidents. His work with the Australian Drug Foundation led to the national roll-out of a healthy sporting club intervention and is now in over 7000 sporting clubs, accessing over 2 million Australians each year.

John was also lead investigator on Australia’s largest child obesity prevention program, a research initiative that continues to inform obesity prevention services across NSW. Most recently, the Physical Activity for Everyone study implemented in disadvantaged high schools was one of the few interventions, internationally, to demonstrate a significant increase in physical activity among teenage students. It recently won a 2016 NSW Health Award.

Locally, John holds leadership positions as the Director of Hunter New England Population Health, Director of the University of Newcastle Priority Research Centre for Health Behaviour, Co-Director of the HMRI Public Health Capacity Building Program, and continues to lead the Hunter New England Population Health Research Group which he founded.
Associate Professor Simpson has carved an international research niche by focusing on understanding airway inflammation caused by neutrophils, which are white blood cells that fight infection. In some respiratory patients, neutrophils persist in the airways and cause poor lung function.

By characterising the inflammatory response in detail, Jodie’s fundamental and paradigm-shifting observations have helped change the way asthma is clinically defined and treated. New and novel targeted therapies have also been inspired.

In 2008, Jodie reported the findings of the first randomised clinical trial of macrolide antibiotics for patients with severe asthma. She is now co-leading the AMAZES study, the largest study of non-eosinophilic asthma in the world. Continuing her ground-breaking work, Jodie identified a novel inflammatory mechanism that results in neutrophilic airway inflammation (innate immune dysfunction), which led to another major area of discovery and an NHMRC project grant in 2010.

This work is of chief importance to the understanding of asthma, and has application to other airway diseases such as chronic obstructive pulmonary disease and bronchiectasis.

Her study of neutrophilic inflammation naturally led Jodie’s research to include the study of airway bacteria and she now leads the severe asthma microbiome and resistome project in Australia.

Recognising her ability in translation of research, Jodie was the only non-physician to receive an invitation to speak at the University of Leuven, Belgium, this year. Her research output exceeds that of her discipline peers at other universities – she has 5500 citations, 86 publications in leading journals and a research income of over $7.3 million.

In addition to this impactful early work on the immunology of the asthmatic airway, Jodie has led investigations for new therapies for patients with asthma who do not respond to the typical treatments of bronchodilators and inhaled corticosteroids. She has also been active in investigating an often neglected area of airway disease, namely the asthma-COPD overlap syndrome.
The majority of Andrew’s work is in acute ischemic stroke imaging, which has focused on patient selection for reperfusion therapies. Dr Andrew Bivard undertook a PhD under the supervision of Professors Mark Parsons and Chris Levi. Following two years working at the Melbourne Brain Centre he was lured back to the Hunter and has never looked back.

Together with industry partners, he developed an automated processing program that utilises cerebral perfusion imaging to inform treatment decision-making. Clinicians can now reliably measure the volume of the acute penumbra and infarct core.

These findings were adopted into the Phase Two clinical trial comparing ischemic stroke treatments Alteplase and Tenecteplase, which was published in the New England Journal of Medicine and since been expanded into the international TASTE trial.

In 2013, Dr Bivard was awarded the European Stroke Conference Young Investigator of the Year, and in 2014 the Peter Bladin award at the Stroke Society of Australasia. Last year he received an NHMRC early career fellowship.

With stroke also being a leading cause of disability, Andrew is now coordinating the MIDAS Fatigue Trial at HMRI using the drug Modafinil to assist stroke survivors in overcoming persistent tiredness.

During a six-year research career since commencing his PhD, he has given oral presentations at 18 international conferences, published 40 peer reviewed articles (16 as first author) and authored four book chapters. He is a CI on three NHMRC funded projects and received over $2.4 million in funding during his short career.

Dr Bivard is also an external reviewer for NHMRC grants and supervisor for eight PhD candidates, displaying considerable leadership skills.
HMRI
PROJECT GRANTS AND SUPPORT FUNDING
HMRI Project Grants are funded by many smaller donations made by the community, while those who have contributed more than $6,000 are acknowledged as project supporters. Community donors and organisations who have contributed more than $20,000 in a financial year are invited to sponsor a named project grant. This funding enables vital pilot data to be collected and analysed for larger studies.

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<th>Gastronomic Lunch of the Year, supporting:</th>
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<td>Doug Smith Cholesterol metabolism in the ageing brain – implications for dementia</td>
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<td>Supported by the Rotary Club of Newcastle Enterprise</td>
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<td>Estelle Sontag Can methylfolate improve the treatment of Alzheimer’s disease patients, alone or in combination with the drug, Memantine?</td>
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<th>Jean-Marie Sontag Targeting LCMT1-mediated neuroprotective mechanisms in Alzheimer's disease</th>
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<td>Clare Collins &amp; Tracy Burrows Nutrition Connect: providing an online platform to link rural families to health professional advice and support for healthy eating, especially for obese children</td>
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<th>Port Waratah Coal Services, supporting:</th>
<th>Megan Rollo Evaluation of a type 2 diabetes risk reduction program for women with recent gestational diabetes</th>
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<td>Phil Morgan Engaging dads and daughters to increase physical activity and social and emotional well-being in pre-adolescent girls: The DADEE (Dads And Daughters Exercising and Empowered) program</td>
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<th>The Cameron Family Project Grant</th>
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<td>Jamie Flynn Seeing pain pathways in 3D</td>
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Bob and Terry Kennedy Children's Research Project Grant in Pregnancy and Reproduction

Geoffry De Iuliis
The measurement of an oxidative stress molecule to predict IVF outcome for infertile men

The Warner Family Project Grant

Lucy Murtha
Characterising the role of Fibulin-3 in health and disease

HMRI Brain & Mental Health Project Grant

Supported by the Estate of the Late Reginald Leslie Radford, and the Estate of the Late Ferma Armstrong McLean

Sally Chan
Supporting postnatal first-time mothers – a RCT of a new mobile application

HMRI Children's Cancer Project Grant

Supported by the Estate of the Late James Scott Lawrie, and Hunter District Hunting Club

Chen Chen Jiang
Improving the treatment benefit of immunotherapy in cancer

HMRI Project Grant in Cardiovascular Disease

Supported by the Estate of the Late Janet Helen Winn

Mark McEvoy
The role of dietary inorganic nitrate and nitrite in cardiovascular disease prevention

HMRI Project Grant in Stroke

Supported by the Estate of the Late Marianne Keultjes, and the Estate of the Late Ronald Geary

Coralie English
BUST-Stroke “Breaking Up Sitting Time after Stroke. A new paradigm for reducing recurrent stroke risk”

HMRI VIVA Project Grant

Supported by the Estate of the Late Marie Therese Laffy

Malcolm Starkey
Understanding how immune cells repair the kidney after acute kidney injury

HMRI Cancer Project Grant

Supported by the Estate of the Late Anthony John Eccelston, and West-Wallsend High School

Nicole Verrills
Targeting a tumour suppressor for new cancer therapies

Newcastle Innovation Commercialisation in Medical Research Grant

Joerg Mattes
Brand new assay for prediction of anaphylaxis risk

HMRI BRICs Nursing and Midwifery Network Grant

Trent Williams
A prospective systematic examination of radial artery occlusion, injury and complication post cardiac catheterisation: A nursing led review of procedural complications

CFMEU Mining and Energy Division, supporting:

Judith Weidenhofer
Tetraspanin CD9 - A novel biomarker to target for prostate cancer
The Haggarty Foundation, supporting:
Kaushik Maiti
Is placental ageing the key to understanding, predicting and preventing stillbirth?

MM Sawyer Estate, supporting:
Joshua Brzozowski
Developing Synthetic Exosomes to Target and Deliver Anti-Cancer Agents to Prostate Cancer Cells

Natalie Dodd
Improving uptake of colorectal cancer screening among primary care attendees

Dalara Foundation, supporting:
Neil Spratt
Novel Mechanisms of ‘Stroke-in-Progression’: Intracranial pressure elevation and collateral blood vessel failure after minor stroke

Nona Broadbent, supporting:
Phillip Dickson & Peter Dunkley
Role of Infection in the development of Parkinson’s Disease

Millennium Foundation, supporting:
Roger Smith
Mothers and Babies research

Honda Foundation Equipment Grant
Jennifer Martin
Bioimpedence Scales for cancer patients

Kath Elliott, supporting:
Suku Thambar
Double-blind placebo-controlled trial on Direct Endomyocardial Injection of Autologous bone marrow cells for enhancement of Neovascularization in Patients with Ischaemic Heart Failure

Rainbow Foundation, supporting:
Clare Collins
Nutrition’s role in chronic pain management

Clare Collins
eHealth research project measuring the impact of web-based feedback on dietary intake in improving eating patterns and health

Phil Hansbro
Investigating the role of microbiomes in COPD

Richard and Paula Anicich, supporting:
Glenn Reeves & Marline Squance
Discovering genetic predictors of inflammatory activity in a group of female Australian lupus patients

McDonald Jones Charitable Foundation, supporting:
Fatemeh Moheimani
A novel approach in restoring the airway epithelium integrity in asthmatics

Glenn Moss, supporting:
Brett Graham
Using new light-based approaches to study chronic pain

Ian Potter Foundation, supporting:
Rodney Scott
Strengthening the genomic capacity of HMRI

Jurox, supporting:
Matthew Dun
Targeting DNA-PK in Acute Myeloid Leukaemia

Jurox (with HMRI Sydney Foundation donors), supporting:
Chris Levi
Stroke Helmet
Yakiti Family Trust, supporting:

Christopher Scarlett
Cancer secretory molecules as a novel diagnostic biomarker for pancreatic cancer

Lauren Harms
How does a potential new treatment for schizophrenia affect brain activity to improve cognition?

Jeannette Lechner-Scott
Magnetic resonance scanning of brain of MS patients for biochemical changes

Caroline Blackwell
Describing the bacterial flora of the middle ear in health and disease

Hunter New England Local Health District Drug and Alcohol Services, supporting:

Billie Bonevski
A feasibility pilot study of electronic nicotine devices for smoking cessation with alcohol and other drug (AOD) treatment clients

Prime Minister and Cabinet Wellbeing Project, supporting:

Kym Rae
Gomeroi gaaynggal

Australasian Paediatric Endocrine Group, supporting:

Carmel Smart
Establishment of an insulin dosing schedule for high fat, high protein meals in individuals with type 1 diabetes using insulin pump therapy

Teachers Health Foundation, supporting:

Ronald Plotnikoff
The feasibility and preliminary efficacy of referral to exercise physiologists, psychologists, and supplementary physical behaviour change strategies for school teachers ‘at risk’ for Type 2 Diabetes, with pre diabetes or with Type 2 Diabetes
JHH Charitable Trust, supporting:

Christopher Grainge
Novel use of Cyoprobe Transbronchial Lung Biopsies In The Diagnosis Of Interstitial Lung Disease

Bruce King
Splitting the Insulin Combination Bolus

Carmel Smart
In children and young people with type 1 diabetes and newly diagnosed coeliac disease, does commencement of a gluten-free diet improve daily glycaemic variability?

Anthony Quail
The effects of dexmedetomidine on the cardiorespiratory responses to severe hypoxaemia

Michael Pollack
Development and implementation of improved monitoring of psychological stress loads in patients recovering from stroke

Coal Services Health and Safety Trust, supporting:

Chris Williams
Reducing the impact of back pain in miners

Vanessa McQuigan Memorial Fund, supporting:

Nikola Bowden
Development of a chemotherapy test for ovarian cancer

Estate of the Late RT Hall, supporting:

Andrew Boyle
Fibulin-3 and Cardiac Fibrosis

Hunter Children’s Research Foundation (HCRF), supporting:

Adam Collison
The role of microbiome development in the early origins of asthma in a high risk population

Komal Vora
Prader-Willi Syndrome: assessment of central hypothyroidism using novel biomarkers (serum micro-RNA)

Scott Nightingale
Development and pilot study of an evidence-based internet intervention to improve symptoms, functioning and health-related quality of life in children with functional abdominal pain

Mark Hughes Foundation, supporting:

Jennette Sakoff
EphA2 as a circulating biomarker for GBM progression

Robyn Leonard
Underpinning Australian brain cancer research: creating the resources essential to accelerate access and sharing of biospecimens and associated clinical data vital to advancing research in brain cancer.

Jamie Flynn
Bringing CLARITY to brain cancer

James Lynam
Defining and predicting clinical toxicity in GBM patients undergoing temozolomide-radiation treatment: A multivariate study.

Kathryn Skelding
BAALC - a novel target for the development of new treatments for brain cancer.

We acknowledge and thank the following groups in the HMRI fundraising family, raising funds for specific research areas:
SCHOLARSHIPS, PRIZES AND SUPPORT FUNDING

Jennie Thomas Medical Research Postgraduate Scholarship
Bettina Mihalas
Bridie Goggins

Jennie Thomas Medical Research Travel Grant
Binod Bindu Sharma
Elizabeth Bromfield
Jordan Smith
Kelly Smith
Zachery McPherson

Equal Futures Awards
Jessie Sutherland
Tracy Burrows

HMRI Student Association ‘Future’ Medical Research Travel Grant
Sarah Delforce
Jacqueline Coombe

HMRI Student Association ‘Future’ Postgraduate Medical Research Scholarship
Jessica Ferguson
Caitlin Chambers

Felicity and Michael Thomson, supporting:
Rutger De Zoete
PhD Scholarship Top-Up

Greaves Family Early Career Support Grant
Kirrilly Pursey
Lucy Murtha

Greaves Family Postgraduate Scholarship in Medical Research
Kurtis Budden
Jacinta Martin

Tour de Cure Travel Grant
Nikola Bowden
AACR Conference, USA

Hunter Melanoma Foundation Travel Grant
Nikola Bowden
AACR Conference, USA

Margaret Taylor Travel Award
Sam Faulkner
TrkA is overexpressed and is a potential adjunct therapeutic target in HER2-positive breast cancers
GOVERNANCE

HMRI Board
HMRI Research Council
HMRI Foundation
2015/16 Financial Snapshot
The HMRI Board oversees the management and strategic direction of HMRI, comprising three independent Directors from each of HMRI’s principal partners – Hunter New England Local Health District, the University of Newcastle and the Community. The Chair of the Board is also a community appointment. The Chair of the HMRI Foundation and the Director of HMRI are also offered a position on the HMRI Board.

Community
Mr Glenn Turner - Chair, HMRI Board  
(resigned December 2016)

Dr Kirsten Molloy  
(appointed June 2016)

Mr Don Magin

Mr Neville Sawyer AM  
(resigned December 2016)

Ms Kirsten Mulley  
(appointed October 2016)

The University of Newcastle
Laureate Professor John Aitken  
Pro Vice-Chancellor (Health and Medicine),  
The University of Newcastle

Professor Kevin Hall  
Deputy Vice-Chancellor  
(Research and Innovation),  
The University of Newcastle

Professor Caroline McMillen  
Vice-Chancellor and President,  
The University of Newcastle

Hunter New England Local Health District
Dr Martin Cohen  
Board Director and Consultant,  
Hunter New England Local Health District

Mr Michael DiRienzo  
Chief Executive,  
Hunter New England Local Health District,

Professor Chris Levi  
Director, Clinical Research and Translation,  
Hunter New England Local Health District

HMRI Director
Professor Michael Nilsson MD PhD  
Director, Hunter Medical Research Institute  
Burges Professor of Medical Science

HMRI Foundation Chair
Mr Kyle Loades  
(appointed Chair December 2016)

Company Secretary
Mr Richard Howard  
(appointed June 2016)  
HMRI General Manager Corporate Services
HMRI RESEARCH COUNCIL

The HMRI Research Council includes the Program Leaders from each of HMRI's seven Research Programs, as well as representatives from the Hunter Children’s Research Executive, Hunter New England Local Health District, the University of Newcastle and the HMRI Clinical Trials Support Unit. The Research Council reports to the HMRI Board.

Laureate Professor Paul Foster - Chair
Professor Stephen Ackland
Professor Billie Bonevski
Professor Andrew Boyle
Professor Julie Byles
Professor Robert Callister
Dr Peter Choi
Professor Peter Gibson
Professor Brian Kelly
Professor Deborah Loxton
Professor Joerg Mattes
Professor Michael Nilsson
Professor Ronald Plotnikoff
Dr Jennette Sakoff
Laureate Professor Rodney Scott
Laureate Professor Roger Smith AM
Professor Neil Spratt
Laureate Professor Nick Talley
Associate Professor Dirk van Helden
Professor John Wiggers
HMRI FOUNDATION

The HMRI Foundation is a group of highly qualified community leaders, who volunteer their time and expertise to assist with HMRI’s fundraising activities. The Foundation reports to the HMRI Board, and the Chair of the Foundation is invited to be a member of the HMRI Board.

Mr Kyle Loades - Chair
Ms Kristie Atkins
Mr Steve Burgess
(appointed May 2016)
Mrs Jan Bynon
Mr Stephen Connell
Mr Mark Heanly
Mr Brett Lewis
Ms Cathrine Long
Mrs Lynn Mangovski
Mrs Simmone Markey
Mr Stephen Mount
(resigned February 2016)
Mr Chad Nean
Ms Heidi Pollard
(resigned August 2016)
Mr Scott Walkom
Mrs Vicki Woods
2015-16
FINANCIAL SNAPSHOT
### INCOME STATEMENT
For the year ending 30 June 2016

<table>
<thead>
<tr>
<th></th>
<th>2016 ($'000)</th>
<th>2015 ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundraising and philanthropic funding</td>
<td>6,186</td>
<td>4,602</td>
</tr>
<tr>
<td>Research funding</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Infrastructure funding</td>
<td>18,795</td>
<td>12,911</td>
</tr>
<tr>
<td>Investment income</td>
<td>128</td>
<td>215</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>25,110</td>
<td>17,727</td>
</tr>
</tbody>
</table>

| **EXPENDITURE**      |              |              |
| Research expenditure | 15,515       | 14,972       |
| Fundraising event expenditure | 265        | 194          |
| Fundraising administration expenditure | 509       | 623          |
| Depreciation and amortisation expense | 3,784      | 3,574        |
| Other expenditure    | 552          | 327          |
| **Total Expenditure** | 20,625       | 19,691       |
| **Retained Surplus** | 4,485        | (1,964)      |

### BALANCE SHEET
For the year ending 30 June 2016

<table>
<thead>
<tr>
<th></th>
<th>2016 ($'000)</th>
<th>2015 ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Held to maturity investments</td>
<td>12,469</td>
<td>10,757</td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>11,373</td>
<td>2,466</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>23,842</td>
<td>13,223</td>
</tr>
<tr>
<td><strong>Property, plant and equipment</strong></td>
<td>85,852</td>
<td>88,946</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>109,694</td>
<td>102,169</td>
</tr>
</tbody>
</table>

|                      |              |              |
| **Current Liabilities** |            |              |
| Provisions            | 4,636        | 1,582        |
| **Total Liabilities** | 4,636        | 1,582        |
| **Net Assets**        | 104,998      | 100,513      |

Represented by:

|                      |              |              |
| Accumulated Surplus  | 104,998      | 100,513      |

A full copy of the audited annual financial statements can be requested by mailing HMRI, Locked Bag 1000 New Lambton Heights, NSW, Australia 2305, or by phoning 1300 993 822.