



Gallipoli Medical Research Foundation
IMPACT REPORT 2019
Remembrance through Research

THANK YOU

The 2018/2019 Financial Year was 12 months of productivity and progress for the growing team of researchers, clinicians and administrators at the Gallipoli Medical Research Foundation (GMRF).

As this Impact Report outlines, we have undergone an exciting period of expansion in our research focus areas.

Take our Veteran Mental Health Initiative for example. What started with the one-project PTSD Initiative in 2014 has grown - particularly over the past 12 months - into a much broader program.

We are now conducting a number of studies focusing on transition and reintegration issues, sleep disturbances, mental health first aid and family support. All of this research, and the impact it is now making, has stemmed from one project which came about as part of our commitment to better understanding the health issues affecting our veterans.

In 2019 we implemented a new strategic plan for 2019-2023. As you'll see from the diagram on the right, our vision remains steadfastly the same, but we have honed and strengthened the methods we'll use to achieve it.

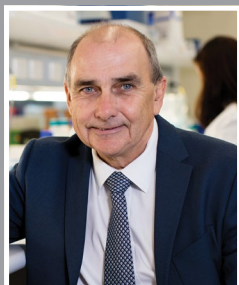
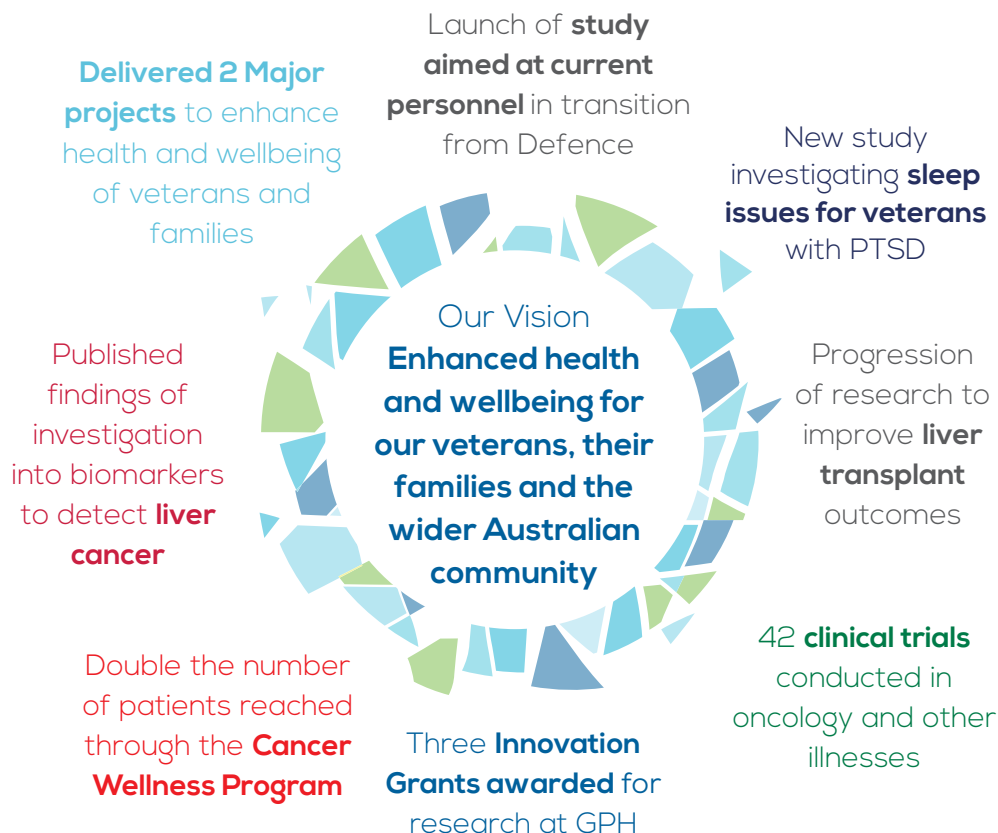
I am incredibly grateful to all of the generous individuals, community groups and business partners who have joined us on this journey of medical discovery. I would also like to thank our board and patrons for their sage advice and support in the past 12 months.

Together we have made significant progress and we are well positioned to further increase our impact in the years ahead.




Miriam Dwyer
GMRF CEO

HIGHLIGHTS FROM 2018/2019...



"Some of our work will deliver impact for patients now, while other areas will see greatest benefit for future generations. Every project commenced, study published and treatment trialled represent another step forward in our vision of creating healthier communities."

Professor Darrell Crawford, GMRF Director of Research

ALMOST 1 IN 2 VETERANS
EXPERIENCE MENTAL
ILLNESS POST SERVICE



VETERAN MENTAL HEALTH

THE VETERAN MENTAL HEALTH INITIATIVE IS COMMITTED TO UNDERSTANDING REINTEGRATION ISSUES AND ENSURING VETERANS GET THE SUPPORT THEY DESERVE

Military Transition and Reintegration Studies

Launched in 2016 in partnership with RSL Queensland, the Veteran Reintegration Study is a five year, multi-phase study aimed at improving transition for Australian veterans.

Over the past 12 months, the team has developed and trialled a tool to assess how a veteran is adjusting post-service, as well as an individualised 'needs profile' to enable targeted treatment. The team has also commenced the Military Transition and Reintegration Study, an extension of the Veteran Reintegration Study, to identify service personnels' psychological and cultural readiness for civilian life.



"The tools we are developing to help our veterans transition will be the first of their kind globally." Dr Madeline Romaniuk, Associate Director of Mental Health

What's next?

The team is analysing quantitative data from 725 ex-serving veterans who completed the Reintegration Survey and is collecting data for current serving ADF members for the next 12 months.



RSL
Queensland

Partnering with RSL Queensland

GMRF is incredibly grateful for our partnership with RSL Queensland. Together we are already putting the Veteran Reintegration Study findings into practice. The findings have been used to inform RSL Queensland's 'Veterans Onboard' Employment Initiative, which includes two e-learning modules helping educate employers on the value veterans can provide in their workplace.

THE PTSD INITIATIVE

OUR WORLD-FIRST STUDY INTO THE WHOLE BODY IMPACT OF POSTTRAUMATIC STRESS DISORDER (PTSD) CONTINUES TO INFORM TREATMENT AND RESEARCH.

In the past 12 months, we had a further 177 GPs complete our online education module to better manage the comorbidities of PTSD. We have also launched new sub-studies investigating issues associated with PTSD.

Improving sleep quality for veterans with PTSD

Launched in 2019, the Veteran Sleep Therapy Study is investigating cognitive behavioural therapy for insomnia, the current gold standard treatment, in combination with Imagery Rehearsal Therapy - a novel intervention of re-scripting disturbing and recurring nightmares. This study is funded by a grant from the Department of Veterans' Affairs (DVA).

What's next?

We aim to recruit 60 participants for the study and use the findings to contribute to improved understanding among treatment providers on how to best manage sleep disturbances.



11 publications
from the PTSD and
VMH Initiatives

KEY PUBLICATION - Detailed Polysomnography in Australian Vietnam Veterans with and without Posttraumatic Stress Disorder

The first study to objectively investigate the prevalence of sleep disorders in this group using polysomnography (a sleep study recording brain waves, blood oxygen, heart rate, breathing and eye/leg movement). The findings are now informing the Veteran Sleep Therapy Study.

VETERAN MENTAL HEALTH

WE BELIEVE SUPPORT FOR VETERANS MEANS ENSURING SUPPORT FOR THEIR FAMILIES AS WELL. IN 2018/2019 WE CONDUCTED TWO MAJOR STUDIES IN THIS AREA:

Mental Health First Aid for Families of Veterans

Mental Health First Aid (MHFA) training teaches participants about mental health, warning signs of distress and how to access health services. Our study conducted in 2018/2019 was the first to investigate MHFA training with family members of veterans. We had 59 participants complete the training over an eight month period. The findings are being prepared for publication and may inform a national rollout of the training offered through government and ex-service organisations.



Task Group Taji 8
Farewell Parade
© Commonwealth of Australia,
Department of Defence

Compassionate Mind Training for Veterans and Partners

We began the Compassionate Mind Training (CMT) Study in 2018 to address feelings of self-criticism and shame among veterans who have been exposed to trauma. The aim of the study is to investigate the benefit of CMT for veterans and their partners and determine long term relational well-being, self-compassion and the reduction of psychological symptoms.

These studies are funded by Medibank's Mental Health and Wellbeing Fund.



INFORMING NATIONAL POLICY

Dr Madeline Romaniuk was a key contributor to the Senate Inquiry in Transition from the Australian Defence Force, released in April 2019. She also contributed to the DVA Veterans Mental Health & Wellbeing Summit in June 2019.

6 Million

Australians have LIVER DISEASE

It's a big problem. So what are we doing about it? Right now, GMRF researchers are:

Investigating cell death to improve liver transplant outcomes



Identifying how to target cancer stem cells effectively



Identifying links between iron, fat tissue and disease progression



Developing liquid biopsies to replace invasive surgical biopsies



STEATOHEPATITIS

- Experts estimate that up to 20% of people with
- fatty liver will have the more serious non-alcoholic
- steatohepatitis. This puts them at risk of liver cancer
- and cirrhosis or scarring of the liver.



8 publications in
2018/2019

KEY PUBLICATION - Iron inhibits the secretion of apolipoprotein E in cultured human adipocytes

Published in 2018, this study provided further evidence that iron has significant effects on fat tissue and that the targeting of iron in fatty liver disease may have a positive clinical impact. The findings have led to the unit's current studies in fatty liver disease.

LIVER DISEASE

FATTY LIVER DISEASE IS INCREASING RAPIDLY IN AUSTRALIA. LEFT UNCHECKED, IT CAN CAUSE SIGNIFICANT AND POTENTIALLY IRREVERSIBLE DAMAGE, LEADING TO CIRRHOSIS AND LIVER CANCER.

The GMRF Liver Research Unit has been working to better understand fatty liver disease in order to develop better treatment options for the one in four Australian adults who will face this illness. We're doing this through two main research areas:

Understanding the role of iron in fatty liver disease progression

Over the past 12 months, the unit has furthered research into the links between iron, adipose tissue (fat tissue) and the liver. Fat tissue is responsible for production of inflammatory mediators that may affect the liver. This research follows on from the work of GMRF PhD Student Dr Laurence Britton, who was awarded his PhD in 2019, which examined factors that lead to worsening liver injury in fatty liver disease.

Improving liver transplant outcomes

The unit is exploring how more fatty livers could be successfully used in liver transplantation. At present, approximately 40% of livers are rejected for use as donor organs, with excess fat significantly increasing the risk of failure post-transplant. PhD student Raji Baidya has identified key cell death pathways in liver cells injured by fat and hypoxia (lack of oxygen). These findings are applicable to livers undergoing liver transplantation. This work will now focus on targeting these pathways to reduce cell death with the ultimate aim of improving outcomes following liver transplantation.



"We're aiming to slow the progression of liver disease. Our research could have a massive positive impact to the health and wellbeing of millions of Australians."

Dr Kim Bridle, Liver Disease Researcher



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**THERE HAS BEEN A 400% INCREASE
IN THE RATE OF LIVER CANCER IN
AUSTRALIA OVER THE PAST 25 YEARS.
GMRF IS AT THE FOREFRONT OF NEW
TREATMENTS.**

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LIVER CANCER

OUR LIVER CANCER UNIT IS FIGHTING THE FASTEST INCREASING CAUSE OF CANCER DEATH IN AUSTRALIA. WITH YOUR HELP, WE ARE DEDICATED TO:

Striking Cancer Harder

Our researchers are going after the heart of liver cancer – stem cells. These cells sustain the growth of a tumour, evade detection and are resistant to drug treatments. We are investigating how these cells change their function and what drugs specifically target this cell type.

Striking Cancer Earlier

Too often, liver cancer goes undetected until it is in its advanced stages and treatment options are extremely limited. Over the past 12 months, our liver cancer researchers have been developing a non-invasive test to identify cancer early. This saliva-based test would enable patients with significant liver disease to be monitored more regularly, and cancer detected earlier.

Discovery Through Collaboration

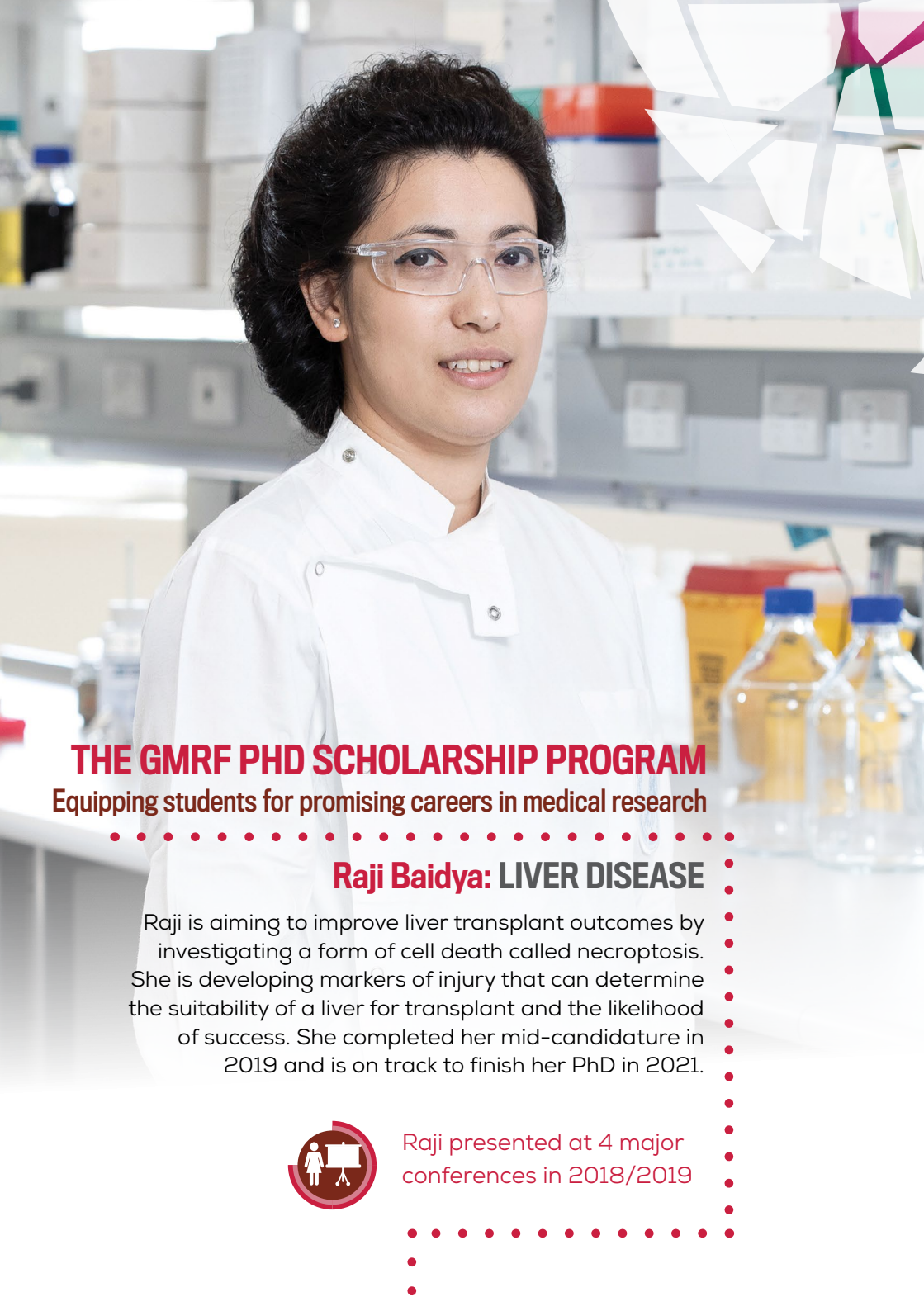
GMRF hosted its second annual Liver Cancer Forum in November 2018. The forum brought together researchers and clinicians to share updates and establish opportunities for collaboration. Through this event, GMRF has established the Australian Experimental Liver Cancer Research Network which has a primary focus of getting liver cancer on the national health agenda.



**6 publications in
2018/2019**

KEY PUBLICATION - Monitoring immune checkpoint regulators as predictive biomarkers in hepatocellular carcinoma (HCC)

Published in July 2018, this study will help identify the best treatments available to maximise primary liver cancer survival rates. The findings have also provided insight into key biomarkers for predicting HCC (primary liver cancer).



THE GMRF PHD SCHOLARSHIP PROGRAM

Equipping students for promising careers in medical research

Raji Baidya: LIVER DISEASE

Raji is aiming to improve liver transplant outcomes by investigating a form of cell death called necroptosis. She is developing markers of injury that can determine the suitability of a liver for transplant and the likelihood of success. She completed her mid-candidature in 2019 and is on track to finish her PhD in 2021.



Raji presented at 4 major
conferences in 2018/2019

RESPIRATORY

THE BRONCHIECTASIS AND MYCOBACTERIAL DISEASE RESEARCH UNIT IS MAKING A SIGNIFICANT CONTRIBUTION TO THE UNDERSTANDING AND TREATMENT OF RESPIRATORY ILLNESSES THROUGH RESEARCH AND CLINICAL TRIALS.

Lab processes have been established and the unit is on the verge of a major breakthrough in understanding the genomic evolution of *Mycobacterium abscessus* in humans and the environment. The unit secured funding to progress research in genetic sequencing of more patient isolates and to expand water sampling of distribution systems in Brisbane and other cities.

Clinical trial activity within the research unit has increased significantly, with two new bronchiectasis trials, a nontuberculous mycobacteria (NTM) trial and a respiratory infection prevention trial. The unit was selected to be the first site worldwide to trial a novel intervention for refractory NTM infections. This study will start recruiting in early 2020.



"Our work looks at how these diseases are contracted, the ways they affect patients, how they are managed and how we can improve quality of life."

Dr Rachel Thomson,
Head of Bronchiectasis
& Mycobacterial
Disease Research Unit



20 PUBLICATIONS
in journals, abstracts
and book chapters



4 NEW TRIALS
covering a number of
respiratory illnesses



ESTABLISHED the
NTM Research Network
in Queensland

OTHER CANCER RESEARCH

OUR CONTRIBUTION TO CANCER RESEARCH GOES BEYOND OUR OWN CANCER UNIT THANKS TO OUR DONOR-FUNDED CYRIL GILBERT TESTIMONIAL FUND.

GMRF Affiliated Researcher, Dr Luke Hourigan received funding from the grant for a project in 2015 which was published in prominent journal, 'Gastroenterology', in February 2019.

Dr Hourigan's study explored new endoscopic techniques aimed at reducing the risk of large bowel polyps recurring (pre-cancerous lesions) after removal.

Since publication, the findings have been having a direct impact on clinical practice. Dr Hourigan's technique was evidenced to result in a fourfold reduction in adenoma recurrence rates and was simple, safe, and inexpensive. It also has the potential to be incorporated in conventional polypectomy to enhance effectiveness of the procedure.

What's next?

Thanks to further funding by GMRF donors, Dr Hourigan is about to commence a new study into Barrett's Oesophagus (BO), a potential precursor to a type of cancer called oesophageal adenocarcinoma (OAC).

The incidence of OAC has risen seven fold in the last three decades, far outstripping the rate of change for any other malignancy in the developed world. One thousand Australians will be newly diagnosed with OAC annually, with most expected to die from the disease.

The data collected from this study will help identify at-risk patients for earlier detection and treatment of OAC. This research study also aims to help to establish optimal treatment options for dysplastic BO. By targeting and treating BO in this stage, carcinoma can potentially be prevented.



**Dr Luke Hourigan,
Gastroenterologist
& GMRF Affiliate
Researcher**

“This trial has made an incredible difference because it gave me options. If you’re supporting the work of GMRF, then you have made this possible.”

Howard, diagnosed with melanoma in 2016.



CLINICAL TRIALS

CLINICAL TRIALS ARE THE ALL IMPORTANT FINAL STEPS THAT TURN GROUND-BREAKING MEDICAL DISCOVERY INTO LIFE-CHANGING THERAPIES. THE GMRF CLINICAL TRIALS UNIT (CTU) IS LEADING THE WAY IN PROVIDING PATIENTS ACCESS TO NEW TREATMENTS IN A SAFE AND REGULATED ENVIRONMENT.

The CTU complements the focus of GMRF's lab-based research, with trials in respiratory illnesses, liver illnesses and oncology. Over the past 12 months, the unit has expanded into lung cancer, accompanying existing cancer trials in melanoma, prostate, gastric and multi-oncology disease.

In 2018, The CTU was the first in Australia to recruit for an early phase international Haemochromatosis study where the target was originally identified 25 years ago by researchers who are now part of the GMRF Liver Disease Research Unit.



"Our aim is to have opportunity for all patients at various stages of their disease to be able to participate in a clinical trial."

Dr Suzanne Elliott,
Associate Director of
Clinical Trials



In 2019, the unit was awarded Favourite Investigational Site by the Association of Regulatory and Clinical Scientists (ARCS) Australia for the third year in a row and the fourth time overall.

42

TOTAL TRIALS
conducted in
2018/2019 (30
oncology & 12 other)

14

NEW TRIALS
across oncology,
liver disease and
respiratory illnesses

5

INTERNATIONAL
PUBLICATIONS from
GMRF trials in the
area of melanoma



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**“The Wellness Program helped me both as a
person and a patient - it rescued me
while I was on treatment!”**

**Kim, cancer patient,
with Program Coordinator Amanda Lucas**

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CANCER WELLNESS

THE GREENSLOPES PRIVATE HOSPITAL CANCER WELLNESS PROGRAM HAS GROWN SIGNIFICANTLY SINCE ITS LAUNCH IN 2017 THANKS TO GMRF FUNDING.

Program Coordinator Amanda Lucas facilitates seminars and activities which complement the hospitals existing oncology departments with a holistic approach to cancer care. The goal is simple – to optimise patients health and wellbeing during their cancer journey.

The program covers a variety of topics relevant to patients undergoing treatment, including:

- Finance, superannuation and legal services
- Exercise, yoga, and nutrition
- Craft sessions
- Survivorship
- Stress management and mental health self-care
- Journaling
- Caring for carers

Feedback has been overwhelmingly positive. Patients have stated they feel empowered in navigating cancer treatment and supported by health professionals and a community of fellow patients.

What's Next?

The growth and success of the program has prompted GMRF, together with Greenslopes Private Hospital, to begin plans for an expanded program, including more regular activities as well as piloting a Cancer Wellness Program for Men.

460 Patients reached, over 200% growth in 12 months

96 Attendees at craft and yoga activities

248 Attendees at regular education sessions

21 Sessions and activities during 2018/2019



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• PROJECT 1

• Implementation of an education program to help
• nursing staff better identify and treat hospital
• acquired pressure injuries. In 2018/2019, 136
• staff members received training.
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INNOVATION GRANTS

WHILE MANY OF OUR RESEARCH PROJECTS FOCUS ON DISCOVERING NEW TREATMENT OPTIONS FOR FUTURE GENERATIONS, WE'RE ALSO FACILITATING RESEARCH AIMED AT PROVIDING IMMEDIATE BENEFIT TO CURRENT PATIENTS.

The GMRF Innovation Grants Program equips nurses and other health professionals at Greenslopes Private Hospital to conduct their own research project aimed at enhancing clinical outcomes through new procedures, training methods and equipment.

In 2018, we awarded \$35,620 in grants for three projects.



PROJECT 2

Development and trial of a temporary cardiac pacing simulator to train cardiac care nurses. Five participants have completed training and provided positive feedback.



PROJECT 3

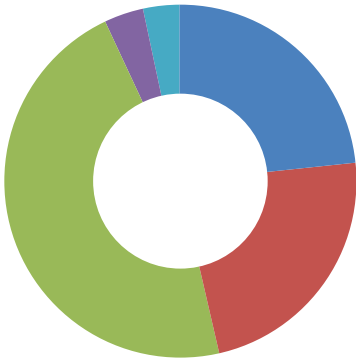
Trial of a novel therapy program to address the impact of cognitive impairment on orthopaedic patients undergoing rehabilitation. This program has been extended to a 12 month trial.



"I'm grateful for the opportunity to research something with the potential to be such a benefit to a variety of patients. Not only could this help patients during rehab, but also longer term, enabling them to live at home safely with a better quality of life,"

Carissa, GPH Occupational therapist - Project 3

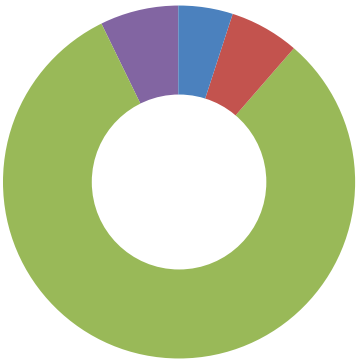
GMRF FUNDING



Legend for Funding

- Donations and fundraising - 23.09%
- Grants - 23.37%
- Clinical Trials - 46.87%
- Interest - 3.35%
- Other - 3.32%

GMRF SPENDING



Legend for Spending

- Insurance and Administration - 5.26%
- Fundraising - 6.26%
- Research Units - 81.34%
- Maintenance of Research Equipment and Facilities - 7.12%

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ZERO. THAT'S HOW MUCH OF YOUR DONATION IS SPENT ON ADMINISTRATION AND FUNDRAISING.

These costs are covered by in-kind support from Greenslopes Private Hospital and income from our Clinical Trials Unit. Your donation goes directly to life-changing medical research and support initiatives.

OUR PARTNERS

OVER THE PAST 12 MONTHS, GMRF'S INDIVIDUAL, COMMUNITY AND CORPORATE PARTNERS CONTINUED TO PLAY A VITAL ROLE IN OUR PROGRESS.

GMRF does not receive government funding, but we do receive an incredible amount of support from our local communities. Individuals and families have given generously and community groups have worked tirelessly to organise fundraising events. It all adds up, and every dollar raised goes directly to funding life-changing medical research and support initiatives.

We are also proud to have the backing of a number of businesses and organisations. We are particularly grateful to the following Corporate Partners for their substantial contribution to our research, initiatives, and events.



The Right Note, a social group from Greenslopes Private Hospital have raised almost \$10,000 in 2018/2019 to the GPH Cancer Wellness Program through a cookbook and events.





YOUR SUPPORT CAN CHANGE LIVES

WE ARE INCREDIBLY PROUD OF THE PROGRESS WE HAVE MADE TOGETHER IN 2018/2019, BUT OUR WORK IS FAR FROM FINISHED.

For as long as serious illnesses continue to devastate countless lives, we remain committed to the development and trial of new treatment options.

Whether you're an individual, part of a community group or business, your support of medical research can make a meaningful and lasting difference to both current and future patients.

Contact us on 07 3394 7284 to discuss the ways you can contribute to our work, or find out more at GallipoliResearch.com.au.



Remembrance through research

Gallipoli Medical Research Foundation

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