15 YRS
2005-2020
GALLIPOLI
MEDICAL RESEARCH FOUNDATION

IMPACT REPORT 2020

Remembrance through Research

THANK YOU

Medical research takes time, tenacity and a lot of hard work by a team of dedicated professionals.

Sometimes the light at the end of the tunnel seems very far away. It is the support and encouragement of our research participants and generous donors that keep us focused on our vision of enhancing the health and wellbeing of the Australian community though the highest quality medical research.

The Gallipoli Medical Research Foundation (GMRF) continues to progress research that will have lasting impact. In the pages of this impact report you will see the results of this research and the life-changing difference the work is making.

2020 has been a challenging year for all of us, but the GMRF team remain 100% committed to stay the course. I am incredibly proud of the team's dedication and of the collaborations we have forged in the past 12 months.

My heartfelt thanks to everyone who supported our research and initiatives. By working together, we can achieve real and meaningful change for our veterans, their families and our communities for generations to come.

Kind Regards,

Miriam Dwyer
Chief Executive Officer
Gallipoli Medical Research Foundation

In 2019/2020, we launched several new research projects and welcomed high-calibre researchers who further strengthen our team. As such, the next 12 months will likely be the most productive year to date for GMRF. The outcomes we're producing could not be achieved without the generous support of our donors and sponsors.

Professor Darrell Crawford, GMRF Director of Research

HIGHLIGHTS FROM 2019/2020

OUR VISION:
Enhancing the health and wellbeing of the Australian community though the highest quality medical research.

4 new major projects expanding our scope of liver cancer research	**2** New studies launched into the comorbidities of PTSD	**47** clinical trials for new treatments in cancer, lung disease and other illnesses
Published research findings on new treatments to target liver cancer cells	Validated a psychometric needs assessment measure for veterans adjusting to civilian life	Published trials data leading to registration of new melanoma treatment
17 publications improving understanding of respiratory illnesses	Contribution of data from over **200** patients to a national bronchiectasis registry	**328** active participants in the GPH Cancer Wellness Program

VETERAN HEALTH INITIATIVE

GMRF is committed to understanding the physical and psychological impact military service has on veterans and their families.

With the partnership of RSL Queensland, our Veteran Health Initiative takes a holistic approach to research, aiming to develop evidence-based real-world solutions to enhance the quality of life for our veterans and their families.

In 2019/2020, our Veteran Health Initiative:

- Completed three projects, launched four new projects, with a further three ongoing.
- Projects encompassed three central research themes:
  1. PTSD and associated comorbidities
  2. Transition from military service and reintegration to civilian life
  3. Mental health and wellbeing programs for veterans and their families.
- Expanded the team to 15 staff of clinical psychologists, researchers and project officers.
- Published two papers, taking the total for the Veteran Health Initiative to 25 published manuscripts.
- Presented at 12 major national and international conferences.

INFORMING NATIONAL POLICY

As a recognised expert in veteran health research, Associate Director Dr Madeline Romaniuk was invited to the Minister's Veteran Mental Health and Wellbeing Summit in 2019. Through this, Dr Romaniuk contributed to the development of the Department of Veterans' Affairs new 'Veteran Mental Health & Wellbeing Strategy 2020 – 2023'.

PTSD AND ASSOCIATED COMORBIDITIES

Our world-first PTSD Initiative findings, published in 2017, revealed the whole-body impact of posttraumatic stress disorder (PTSD). Gastrointestinal conditions were common among veterans with PTSD, while one in three may face problems due to multiple medications prescribed for mental health issues.

In 2020 we launched two new projects:

Investigating the link between PTSD and gut disorders

- Launched an analysis of the rates of endoscopic investigations on veterans, with and without PTSD. The study aims to confirm the higher rate of endoscopic procedures for veterans with PTSD and expand on the limited clinical knowledge on the association between PTSD and gut symptoms. Data has been collected and statistical analysis is now underway.

The quality use of medication

- Launched the Quality Use of Medication Study to investigate the prevalence and impact of polypharmacy (the regular use of multiple medications) for treating veterans with PTSD. Data collection and analysis for this study is due to commence by the end of 2020. The study aims to identify risks associated with polypharmacy to inform clinical practice and prescribing guidelines.

TRANSITION FROM MILITARY SERVICE & REINTEGRATION TO CIVILIAN LIFE

Veterans may struggle with transition from service to civilian life. In a recent study commissioned by the Departments of Defence and Veterans' Affairs, it was estimated nearly half of Australian service personnel who had recently transitioned met 12-month criteria for a mental health condition.

In partnership with RSL Queensland, we aim to improve the transition process and enhance quality of life for our veterans.

In 2019/2020 we progressed two major studies in this area:

Identifying the reintegration support needs of veterans

- Development, trial and analysis of an adjustment and reintegration assessment measure. Led by Associate Director of Veteran Health, Dr Madeline Romaniuk, the project team have submitted the manuscript on the study of these measures. These tools – the first of their kind available globally – will enable timely detection and assessment of reintegration difficulties. It will also significantly enhance clinicians' understanding of the relationship between transition and reintegration difficulties and mental health, which will lead to more targeted intervention.
- Findings are being used to develop a self-directed education program for veterans which addresses identified needs. The program will be piloted by the end of 2020.

"I completely oversimplified the transition process. I told myself, 'if you can survive in the Army, you can survive in civilian life'. But civilian life is a totally different landscape – both physically and mentally. No one explained that to me or gave me tools to deal with it."

Tim Thomas, GMRF Veteran Ambassador

Assessing readiness for civilian life

- An extension of the Veteran Reintegration Study, the Civilian Readiness Study aims to improve transition for Australian service veterans by focusing on developing a method to determine 'readiness' for civilian life prior to discharge.
- Recruitment activities commenced in 2019, with over 200 current service personnel in the process of transition completing the first in a series of three surveys.
- The project received endorsement and support from ADF Joint Health Command and Major General Natasha Fox (Head of People Capability, Defence People Group).
- The measure produced by this research will enable the timely detection and assessment of an individual's needs prior to transition. It will also inform the development of education programs to 'upskill' current serving ADF members based on their needs and better equip them for the transition process.

MENTAL HEALTH AND WELLBEING PROGRAMS FOR VETERANS AND FAMILIES

In 2019/2020, the Veteran Health Initiative conducted a number of research projects aimed at addressing mental health issues and improving overall wellbeing for veterans and their families.

Improving sleep quality for veterans with PTSD

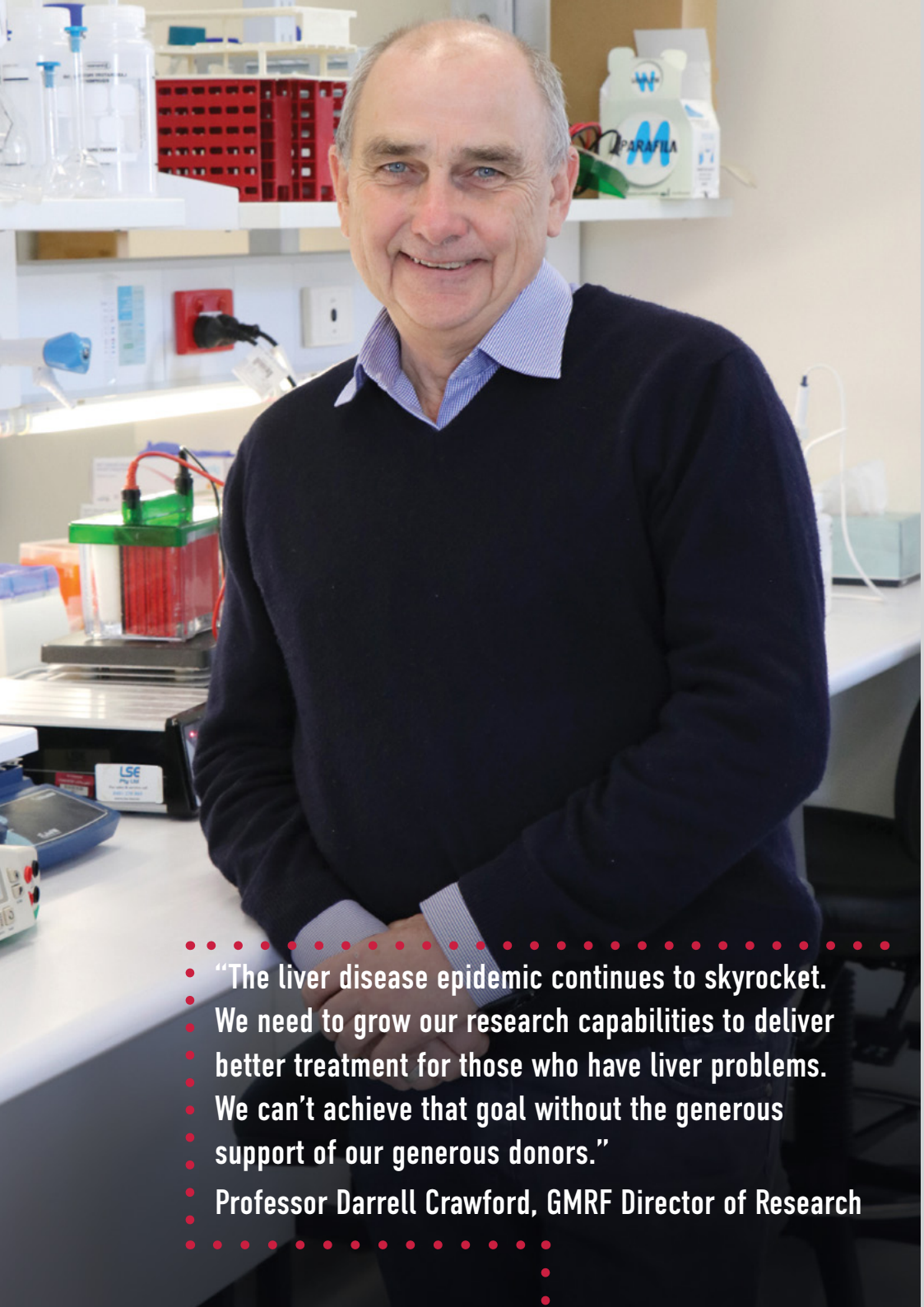
- Continued the Veteran Sleep Therapy Study investigating the use of both evidence-based and novel psychological interventions to improve sleep quality. 91% of veterans with PTSD suffer from sleep disturbances.
- Completed the first round of group therapy sessions in December 2019, with groups to continue throughout 2020.
- A manuscript on the methodology of the study is being prepared for submission. The research aims to use findings from the study to inform treatment to improve sleep and overall quality of life for veterans with PTSD.

Investigating mental health programs for veterans and their families

- Completion of two major projects investigating mental health programs for veterans and families. The Mental Health First Aid and Compassionate Mind Training studies contributed to further understanding on these interventions and recommendations for improving clinical practice.

Enhancing support for families with a veteran

- Conducted research to improve health and wellbeing outcomes for veteran families. The project developed recommendations for a model of care to guide service delivery for veteran families with complex, multi-agency needs. The recommendations will form the basis for a pilot implementation of the proposed model of care.



"The liver disease epidemic continues to skyrocket. We need to grow our research capabilities to deliver better treatment for those who have liver problems. We can't achieve that goal without the generous support of our generous donors."

Professor Darrell Crawford, GMRF Director of Research

LIVER RESEARCH

The growing Liver Research Unit at GMRF is investigating new ways to predict, prevent and treat illnesses of the liver, as well as increasing the number of donor livers suitable for transplant.

In 2019/2020, our Liver Research Unit:

- Partnered with University of Queensland Diamantina Institute and introduced Dr Tina Liang and Dr Haolu Wang as Liver Cancer Research Leads. The expanded Liver Research Unit now includes 4 research leads, 2 research fellows and 4 PhD students working across projects in liver disease, liver cancer and bile duct disorders.
- Published 21 journal articles and abstracts.
- Presented at five national and international conferences.
- Expanded the scope of research with two new projects in bile duct disorders – an area of liver injury that is currently poorly studied.
- Facilitated new and strengthened existing collaborations in liver cancer research by hosting the third annual Experimental Liver Cancer Forum.

KEY PUBLICATION: TNF–α-mediated epithelial-to-mesenchymal transition regulates expression of immune checkpoint molecules in hepatocellular carcinoma. Published in 'Molecular Medicine', 2020.

There are very few treatments for liver cancer and the mortality rate is increasing. Even with treatment, recurrence of cancer is high and cancer cells evade detection. We urgently need to find novel therapies. This publication examines ways that cancer cells change their behaviour to escape detection and proposes new treatments to target cancer cells that could be used along with current treatments to improve patient outcomes.

LIVER DISEASE

Liver disease is a silent epidemic that affects around six million Australians. Contributing factors can include excess iron, fat and/or alcohol.

Fatty liver disease is challenging to treat. There are often no obvious symptoms until it becomes a serious problem. Currently, 40% of livers are rejected as donor organs, with excess fat greatly increasing the risk of failure post-transplant.

In 2019/2020, we progressed two liver disease research projects:

Combating the role of iron in liver injury

- Continued ongoing research into understanding how co-toxic liver injury (caused by excess iron and alcohol) progresses and how it can be counteracted. PhD Student, Afolabi Akanbi is now testing the theory that restoring iron balance using hepcidin can eliminate liver injury.
- This would be a new therapeutic approach and has strong translational potential – taking it from bench to bedside.

Afolabi commenced his PhD with the GMRF Liver Research Unit in July 2019. He has successfully completed his Confirmation of Candidature and has drafted his review manuscript for publication.

What's next? Afolabi aims to generate enough data on the therapeutic potential of hepcidin to begin presenting at conferences in 2021.

Improving liver transplant outcomes

- Progressed a study exploring how more fatty livers could become viable for liver transplantation. PhD Student Raji Baidya identified key cell death pathways in injured livers and therapeutic agents which could prevent cell death and reduce the risk of transplant failure.

  Raji's research will lead to more fatty livers successfully used in liver transplantation.

Raji is in the final year of her PhD project. In the past 12 months, she submitted her final progress report and presented at Australian Gastroenterology Week 2019.

What's next? Raji will continue work on her thesis review with planned submission in January 2021.

BILE DUCT DISORDERS

There are very few treatments for bile duct disorders and cholangiocarcinoma (cancer of the bile duct) and publications on these disorders are limited.

In 2019/2020, we launched two new research projects into bile duct disorders:

Improving treatment efficacy of stem cell-based therapy for bile duct disorders

- Launched a new study investigating methods to improve the effectiveness of current treatments in treating bile duct disorders, including cholangiocarcinoma.

Identifying new drug targets for bile duct disorders

- Launched study identifying new treatment approaches to bile duct cancer. The study is exploring the significant differences between how bile duct and liver cell cancers behave. The study aims to inform treatment selection in the future, combining established and emerging treatments.

Hepatocellular carcinoma (primary liver cancer) is the third leading cause of cancer mortality worldwide.

Major contributors to the high mortality rate are the limited treatment options and the fact that diagnosis often comes in advanced stages of the disease.

LIVER CANCER

In 2019/2020, we focused on five key liver cancer research projects:

Developing a liver cancer nanovaccine

- Launched a project to develop a therapeutic vaccine for liver cancer to help immune cells recognise and kill cancer cells. Led by Dr Haolu Wang, the project is nearing completion of the first phase with early findings planned for publication in 2020. The aim of the treatment is not only to kill cancer cells, but to prevent the tumour coming back long-term.

Dr Wang joined the unit as a research lead in 2019. He is leading two major liver cancer projects. In 2020 Dr Wang was successful for a UQ Early Career Researcher Grant through the University of Queensland Diamantina Institute.

Inhibiting tumour self-seeding and cancer recurrence

- Commenced an investigation into a potential drug treatment that would prevent detached liver cancer cells from returning to the tumour.
- Project lead, Dr Tina Liang will begin validation of the treatment model later in 2020.

Altering the tumour microenvironment

- Commenced a research project to investigate how the liver microenvironment contributes to tumour progression. The study aims to improve sensitivity of cancer cells to chemotherapeautic agents.

Joining the team in 2019, **Dr Liang** is leading two major liver cancer projects. In 2019/2020, Dr Liang received the Promoting Women Fellowship and the NanoString Fibrosis Grant Award, one of just four recipients globally.

One in four

Australians has or will develop fatty liver disease.

If left untreated, it can lead to liver cancer – the **fastest increasing cause of cancer death in Australia.** For some people, a liver transplant is the only option.

LIVER CANCER

Improving screening measures for liver disease and liver cancer

- Commenced research into the development of a saliva and blood-based method to detect liver disease and liver cancers at an early stage. PhD student Lucas Trevisan Franca de Lima has conducted a pilot study to compare identifiable biomarkers in patients with liver cirrhosis.

  The aim of this research is to develop an inexpensive, painless, non-invasive screening test for liver disease, which would be particularly beneficial in rural communities and locations with limited access to hospitals.

Lucas started his PhD with the GMRF Liver Research Unit in January 2020 and has recently completed his first progress report.

What's next? Lucas will soon expand the study to a larger patient cohort to further examine saliva biomarkers and the corresponding degree of scarring in the liver.

Identifying druggable targets in liver cancer

- Continued ongoing research targeting cancer stem cells. PhD Student, Ritu Strestha, is conducting research to determine what makes cancer stem cells resistant to current therapies so that they can be re-sensitised to drug treatment. Her findings will identify novel therapeutic approaches in liver cancer that aim to improve treatment response rates and patient survival.

Ritu was a finalist of the GESA Young Investigator Award 2019. She has published four papers and presented at five national and international conferences.

What's next? Final lab experiments, data analysis and thesis review. Ritu aims to submit her final thesis in January 2021.

RESPIRATORY RESEARCH

Non-tuberculous mycobacterial (NTM) infections and bronchiectasis are closely connected respiratory illnesses that are rising in prevalence.

We are working to better address the significant gap in understanding of these illnesses – the incidence, how they are acquired, how we may be able to diagnose and control them through prevention and better treatment options for those affected.

In 2019/2020 our Respiratory Research Unit:

- Published 17 journal and abstract publications.
- Presented at four major conferences.
- Launched three new projects with a further nine ongoing.
- Worked with 22 international, national and local collaborators.

"This is an exciting time of growth for our unit, with increasing awareness of the significance of bronchiectasis and NTM lung disease in the community. Our high-calibre team are excited to be tackling the major issues facing patients with these conditions."

Professor Rachel Thomson,
Head of the GMRF Respiratory Research Unit

KEY PUBLICATION: Management of Australian adults with bronchiectasis in tertiary care: evidence-based or access driven? Published in 'Lung', 2019.

Using data from the Australian Bronchiectasis Registry, the publication revealed discrepancies between guideline recommendations and real-world treatment of bronchiectasis. The findings highlight the need for a review of treatment access and will inform ongoing education to promote evidence-based care for people living with bronchiectasis.

Bronchiectasis

- Contributed data for nearly 200 patients to the first national bronchiectasis registry. The unit is part of a national collaborative project with a network of 11 researchers and clinical experts contributing comprehensive data to the Australian Bronchiectasis Registry.

  The learnings from this project will lead to improved health outcomes through better education, treatment and support.

Non-tuberculous mycobacterial infections (NTM)

- Continued ongoing research into understanding the environmental and transmission aspects of NTM in order to develop better ways of controlling the spread of infection and reducing the risk of contracting an infection. Explored aspects of patients' immune system that might lead them to getting these infections, in an effort to offer better treatments.
- Contributed to ongoing epidemiology study and national treatment trials to provide high quality evidence to guide clinicians towards better treatment protocols for NTM and bronchiectasis, minimise toxicity and treatment burden and maximise patient health outcomes. This includes NTM in cystic fibrosis and treatment of non-CF bronchiectasis.
- Unit lead Prof Rachel Thomson is a Principal Investigator of the ground-breaking FORMAT trial to assess combination therapies for *M. abscessus* infection at multiple international sites.

CLINICAL TRIALS

Our Clinical Trials Unit (CTU) works with leading clinicians to provide patients early access to ground-breaking treatments – a vital step in the drug development pathway from research to standard of care for future patients.

Over the last 12 months, the CTU has worked with 15 clinical investigators across 47 active trials. We have commenced eight new trials with a further five in start-up, including 'first in man' and 'proof of concept' studies.

The CTU contributed to further clinical trials through the Ramsay Health Care Clinical Trials Network. One of 14 centres, the CTU assisted in site start-up processes, enabling trials to start sooner and improving patient access to new treatments, particularly in regional areas.

15	47	8
clinical investigators	active trials	new trials

In 2019/2020, the CTU continued its focus on three key disease areas:

Oncology

- Expansion of oncology trials in lung cancer and cutaneous squamous cell carcinoma (a type of skin cancer).
- Launched earlier disease stage clinical trials in melanoma and prostate cancer aimed at preventing disease progression.
- Publication of five clinical trial studies in high-impact journals involving GMRF affiliated investigators in melanoma and squamous cell carcinoma.
- Produced trial outcome data which contributed to the registration of earlier Stage III Melanoma Immunotherapy treatment on the Pharmaceutical Benefits Scheme, giving the community affordable access to this ground-breaking new treatment.

"The whole team were absolutely outstanding. They treat you like family. It was an exceptional experience and such a great result for me."
Bruce, completed GMRF melanoma trial in 2020.

Liver Disease

- Continued ongoing clinical trials in non-alcoholic fatty liver disease and haemochromatosis. These predominantly Phase III trials have received encouraging interim results.

Respiratory Illness

- Expanded trials in non-cystic fibrosis bronchiectasis in isolation and with other infectious agents such as Non Tuberculous Mycobacterium (NTM). The trials data of a Phase II study has translated to the expansion into Phase III Trials – the phase before a new treatment can be registered and made available to the community.

"Our reach has continued to grow. We know not every trial will succeed, but the process is still vital. It's the path of discovery and the commitment of our team and patients that produces the potential cure."

Dr Suzanne Elliott, Associate Director of Clinical Trials

"The Cancer Wellness Program has been such a wonderful support – you've always got someone there to help you. It's given me the knowledge and resources I need, from a source I trust, to take charge of my cancer journey."
Bianca, Cancer Wellness Participant

CANCER WELLNESS

The Greenslopes Private Hospital Cancer Wellness Program continues to grow, providing information and support to patients and their carers throughout the cancer journey.

Now in its fourth year, the program forms a vital part of the hospital's holistic approach to cancer care and complements clinical and allied health services.

In 2019/2020, the GPH Cancer Wellness Program:

- Delivered monthly seminars covering topics on stress management, mindfulness, exercise, finance and legal services, and survivorship.
- Facilitated a supportive community with regular activities such as yoga and craft.
- Adapted in response to the coronavirus pandemic to continue delivering information and support online. Weekly newsletters were sent to participants and online resources such as exercise videos were offered through GMRF's website.
- Conducted the Men's Cancer Wellness Pilot Program. The six week program provided tailored activity sessions and practical ways for participants to improve mental and physical health and make positive changes to their daily lives.

What's Next?

As patient safety is the highest priority, the program will continue to be operated in an online capacity. Regular online seminars are planned for the 2020/2021 Financial Year.

600 Patients reached since the program launched in 2017

328 Active participants in the program in 2019/2020

AFFILIATED RESEARCH

The rate of oesophageal cancer has risen seven fold in the last three decades, causing over 1,500 deaths in Australia in 2018 alone.

Affiliated researcher and clinician, Associate Professor Luke Hourigan, is conducting research into Barrett's Oesophagus (BO), a precursor to oesophageal adenocarcinoma (OAC).

In 2019/2020, Assoc Prof Hourigan's research focused on:

Identifying more effective treatment options for oesophageal adenocarcinoma

- Launched the Australian Barrett's Cohort with Dysplasia and Early Cancer Study (ABCDE Cancer Study) in late 2019. The focus of this study is to contribute to and analyse a national database to identify at-risk patients for earlier detection and identify optimal treatment options for OAC.
- The first publication on this study was recently published in industry-leading journal 'Endoscopy'. The endoscopic management of BO published in this journal represents a paradigm shift for the treatment of this disease, which previously required surgical oesophagectomy.

  This endoscopic technique, in combination with superficial thermal therapy, is now used in clinical practice and is producing high rates of cure while enhancing quality of life for patients.

"The outcomes of this study could be life-changing for thousands of Australians. If we can recognise patient risk factors that lead to progression of cancer, our surveillance strategies and treatment options could potentially be more targeted and effective."

Assoc Prof Luke Hourigan

GMRF INNOVATION GRANTS

The GMRF Innovations Grants Programs empowers health professionals at Greenslopes Private Hospital to conduct their own research projects.

Through GMRF grant funding and the support of Thynne + Macartney, hospital staff have improved clinical outcomes by investigating new processes, education and training methods and the trial of innovative software and equipment.

In 2019, a Thynne + Macartney Discovery Grant funded:

Education to improve Junior Medical Officers (JMOs) communication skills with patients

- Medical Education Coordinator, Dr Tracey Papinczak, conducted a project to improve communication skills of JMOs. Dr Papinczak developed six interactive online modules focused on vulnerable groups and those with specific needs. The modules were trialled by 28 interns at Greenslopes Private Hospital.
- Positive feedback was received and statistically significant increases in understanding were shown in:
  - Awareness of Aboriginal and Torres Strait Islander culture and communication.
  - Skills in delivering culturally safe care to Aboriginal and Torres Strait Islander patients.
  - Confidence in managing challenging communication with Aboriginal and Torres Strait Islander patients.

"This project demonstrates improvements can be made in JMOs' awareness of, and confidence in, techniques for communication with all patients. I am very thankful for the Thynne + Macartney Discovery Grant and GMRF for making this research possible."

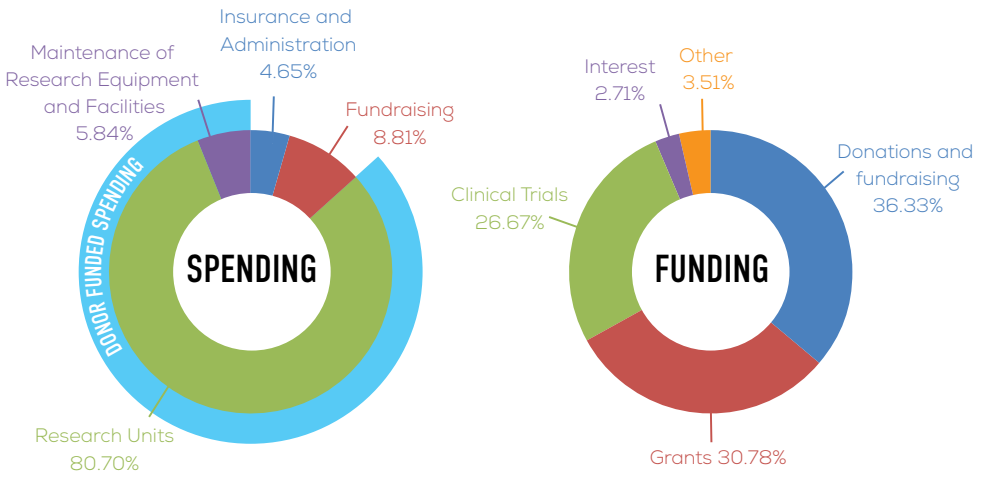
Dr Tracey Papinczak

FINANCIAL OVERVIEW

GMRF relies on the generous support of our community. We strive to repay this generosity by ensuring every donation goes directly to innovative medical research and life-changing support initiatives.

In 2019/2020, we received close to $2 Million in funding from our generous donors, fundraisers and Discovery Partners. This level of support has enabled GMRF to maintain a strong financial position through the coronavirus pandemic and continue our research progress.

We pride ourselves on our low operating costs and efficient fundraising and administrative units. These expenses are offset by the in-kind support of Greenslopes Private Hospital and revenue from our Clinical Trials Unit.



"Despite the challenges 2020 has brought, the generosity of our supporters allowed the Foundation to maintain a sound financial position. Most importantly, it has enabled our research initiatives and programs to progress. For that we are very grateful."

Jane O'Brien, GMRF Chief Operating Officer.

OUR PARTNERS

Our heartfelt thanks to the 1,010 donors who gave generously in 2019/2020 to fund our research and initiatives.

Special mention to the Thorsen Family Foundation, Doukas Family, Logan Family Foundation, Civic Solutions, Curavis Fund, Ramsay Hospital Research Foundation and NFIA Patron's Walk for Charity. Combined, these supporters donated $562,233.

GMRF was honoured to receive generous bequests from Jean Pockett, Joan Smith and Barbara Gay. These supporters have left a lasting legacy of medical discovery.

We are also proud to partner with leading and respected organisations. The following Corporate Discovery Partners made significant financial and in-kind contributions to our work.

Greenslopes Private Hospital
Part of Ramsay Health Care

RSL Queensland

The University Of Queensland
AUSTRALIA

Ramsay Hospital Research Foundation

Sullivan Nicolaides PATHOLOGY
Quality is in our DNA

Thynne Macartney Lawyers

7NEWS

medibank
For Better Health

"Supporting medical research is part of the hospital's DNA. Even after 15 years, we're only just getting started in the impact we can make together!"

Chris Went, CEO
Greenslopes Private Hospital

"Our partnership with GMRF is a key pillar in our strategy to ensure a bright future and enduring legacy for all Australian veterans and their families."

Melanie Wilson, CEO
RSL Queensland

We are incredibly proud of the progress we have made together in 2019/2020, but our work is far from over.

The impact of serious illness still has a heavy burden on our veterans, their families, and our communities.

Through the power of innovative research we can create lasting solutions. By working together, we can discover new treatments and interventions to address the impact of illness, both now and for generations to come.

Your ongoing support makes this journey of discovery possible.

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

15 YRS 2005-2020
GALLIPOLI MEDICAL RESEARCH FOUNDATION
Remembrance through research

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