

Research Saves Lives







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Heart Research



After 12 years of having the privilege of serving on the board of Heart Research Australia, 10 of those as Chairman, I will be stepping down from the board at the AGM in November 2023. It has been absolute privilege and a pleasure to have observed the phenomenal progress this small not-for-profit charity has made over this time, which has been brought about by the generosity of our donors, and the hard work of our researchers, and our dedicated staff.

Last year, has been a year of significant achievement for the organisation. We supported 19 cutting-edge research projects, gave out a remarkable \$1.764 million in grant funding commitments, and awareness of who we are and what we do has reached new heights, with REDFEB's digital reach surpassing 128 million connections. We also embarked on the first year of our revamped bequest strategy, resulting in the acquisition of 2,000 new donors which has already lead to an increase in bequestor support.

We've also had more reasons than ever to celebrate our researchers, with Professor Gemma Figtree recognised on the Australia Day honours list and appointed a Member of the Order of Australia for her services to medicine in the field of cardiology. In a world-first, Dr Carmine Gentile and his team of researchers have demonstrated that bio-engineered heart tissues can safely and effectively help patients recover from the damage caused by an extensive heart attack.

While the trends for heart disease are heading in the right direction, sadly it continues to be Australia's leading cause of death.

So supporting heart research is as important as ever. In closing, I would like to thank Nicci Dent and her fantastic team at Heart Research Australia and the dedicated researchers for their wonderful work. I would also like to thank my board colleagues for their contribution and support over the years and to wish Heart Research Australia every success in the years to come.

Tony Crowford.

Tony Crawford Chairman

Message From Our CEO



Heart disease remains the leading cause of death in Australia, impacting the lives of countless individuals and families. It accounts for 60% of deaths in men and 40% in women. In Australia, 1 in 6 people are likely to be living with heart disease at this very moment, statistics that emphasise the importance and urgency of our work, and the impact it can have on countless lives.

Information is key to our battle against heart disease and this hinges on knowledge - better knowledge leads to improved prevention and treatments, and all of this is made possible through research. Thanks to your generous support in the past year, Heart Research Australia has funded 19 crucial projects, provided PhD grants, and acquired vital equipment. This remarkable achievement is a testament to the collective effort of everyone involved, and I extend my heartfelt gratitude to each one of you for being a part of this journey.



Among the projects we've helped support, one that has made significant progress is BioHEART, led by Professor Gemma Figtree. This project, made possible by your support, aims to revolutionize heart disease prevention by developing a simple blood test that can identify individuals at risk a decade or more before a heart attack or stroke occurs. The potential for this test to detect unstable plaque at an early stage is incredibly promising.

BioHEART is on the verge of conducting headto-head trials against the Calcium Risk score, which is currently the closest we have to a non-invasive internal test. Success in these trials could pave the way for a new, low-cost blood test that is not only more accurate but also affordable for government health departments. This breakthrough has the potential to save thousands of lives and reduce disability for those living with cardiovascular diseases, including stroke. It is nothing short of a game changer.

It is the dream of many of us to change the future of heart disease in our lifetime, and Heart Research Australia is determined to make that dream a reality. Your continued support in our fundraising efforts will help keep families together for longer. I hope you enjoy reading about what all the wonderful things we've achieved this year.

Diai One

Nicci Dent Chief Executive Officer



"Sean's heart attack was a terrifying shock. It just didn't make sense. I kept asking 'Why is this happening to us?""

Heart Research

> When Lauren's husband Sean went out for his daily bike ride, he didn't come back. Instead, Lauren received a shocking call telling her Sean had had an out-of-the-blue heart attack and was on his way to hospital in an ambulance fighting for his life. Her world was turned upside down when, at the age of just 55, Sean was struck by the kind of heart attack so serious it's often known as the 'widow maker'.

> 'I'll never forget that morning. I was in bed reading the paper. Then the phone rang and our lives changed forever.

Sean had gone on a bike ride with some friends. One of his mates had just had heart bypass surgery so, when Sean started feeling unwell, his mate recognised the symptoms and called an ambulance.

He rang me too, and said, 'We are on the way to the hospital.' I was confused when he mentioned a heart attack. I thought it was probably just that Sean had been going at it too hard. 'Go hard or go home' was a favourite saying of his!

But when I saw Sean in the



hospital, he was very vulnerable and weak looking. It scared me to think of what might have happened to him if he'd been alone that morning.'

Every hour, an Australian like Sean loses their life to a heart attack, with nearly a third of these incidents occurring without any warning or known cause.

Sean had always taken good care of himself, doing everything 'right' by not smoking, limiting alcohol and exercising regularly so it was a huge shock when he collapsed with crushing chest pain. Luckily Sean had been with a friend who recognised the signs of a heart attack and quickly rang for help. 'One of the main reasons Sean had always exercised and tried to do everything right, was to avoid the same fate as his father, who'd had a quadruple heart bypass. There have been heart problems on my side of the family too, and we both really worry that our sons will inherit it.'

Sean's parents and siblings were, understandably, shocked and shaken when they heard the news. They'd already been through so much when his father had a quadruple heart bypass some years before. Breaking the news to his sons, 21-year-old Noah and 19-year-old Campbell, was even harder. The thought of their invincible dad fighting for his life just didn't make any sense to them and it affected them profoundly, "Our youngest son is very sensitive, and it hit him hard. He got very sad about it. The oldest one now worries every time he has any pain near his chest".

Thankfully, Sean was in good hands at the hospital and was operated on by cardiologist Professor Gemma Figtree, who happened to be on emergency call. She fitted three life-saving stents in his arteries and, within just a few days, he was making excellent progress. Sean knows exactly how much he owes to Prof. Figtree's skill and dedication. He told us: "I lucked out, getting her as my emergency surgeon. I really count my blessings."

Lauren was overjoyed and relieved that Sean was going to be OK. She'd been so afraid of losing him – just knowing he was still going to be around seemed like a wonderful miracle. Understandably they had so many questions.

Why had it happened? What would it take to make sure no more families had to go through this agony? Why could nobody tell her what caused Sam's sudden heart attack? Why did nobody have the answers?

Prof. Figtree explained that she is leading a team that's carrying out an innovative study called the BioHEART project. This brings together cardiologists, nurses, clinicians and radiologists in a search for answers about what causes heart attacks like Sean's. At the core of the project is the 'BioBank', which contains over 5,000 blood samples collected from people who have had heart attacks and those who are known to be at risk.



By comparing the samples of patients with and without traditional risk factors for heart disease, the team hopes to unlock the mysteries of unexpected heart attacks like Sean's.

Sean didn't hesitate in saying yes to donating a blood sample.

'We are now so happy to be part of Prof. Figtree's BioHEART trial and to contribute whatever way we can, to help science understand why healthy people have heart attacks. We need to know what we can do to prevent it. I want



there to be diagnostics, treatment and prevention available before our sons get to the scary age where it all seems to start.

That's exactly what Prof. Figtree's BioHEART trial is trying to do. But I know that, to make this kind of research possible, scientists like

her rely on funding from Heart Research Australia. And I know that Heart Research Australia can only provide the funding thanks to generous donations.

Sean nearly died from a heart attack we never saw coming. We were lucky but, every day, other families like ours lose someone to a heart attack. We need to make sure nobody has to go through that kind of pain.

Lauren. X

Our Work

About Us

Heart Research Australia was established in 1986 by concerned cardiologists at Sydney's Royal North Shore Hospital who recognised the pressing need to find new ways to reduce the high death rate and devastating impact heart disease has on families and the community. Unfortunately, although there have been some great improvements over the years, heart disease is still the number one killer of all Australians.¹



The Heart Research Australia team and some of their researchers.

Our goal is to reduce the devastating impact heart disease has on families and the community, keeping families together for longer.

Our Vision

Making life-saving breakthroughs in heart disease happen.

Our Mission

We support world class and emerging researchers to conduct ground-breaking research into the prevention, diagnosis and treatment of heart disease.

Heart Research Australia supports:

Seed funding

First-stage or 'seed' funding allows researchers to turn their innovative, 'out of the notebook' ideas into reality. This first-stage research often does not qualify for government funding, so the investigation of these ideas is only possible thanks to wonderful supporters like you.

Your generosity gives researchers the opportunity to progress their ideas into research that could result in life-saving medical breakthroughs. Your support also helps them progress their research to a point where they become eligible for larger, competitive grants from government funding bodies such as the National Health and Medical Research Council.

PhD students

Heart Research Australia provides scholarships for PhD students whose research is supervised by some of Australia's leading cardiac researchers. These scholarships play an integral role in nurturing and developing some of Australia's most promising heart health scientists.

'Bench to Bedside'

Most of our senior researchers are also practicing clinical cardiologists, which puts them in the best position to identify research opportunities and translate their discoveries 'on the bench' into benefits for patients 'at the bedside'. The breakthroughs they make contribute to and inspire the international body of knowledge on cardiac research.

¹ AIHW - Australian Institute of Health and Welfare (2022) Australia's health 2022: data insights, AIHW, Australian Government.

How do we differ from other heart organisations?

Heart Research Australia raises funds for innovative research into the prevention, diagnosis and treatment of heart disease.

Our **goal** is to reduce the devastation heart disease has on families and the community. Our **focus** on seed-funding for cardiac researchers helps investigate new areas and supports our **aim** to make their work competitive for larger grants from national bodies, such as the National Health and Medical Research Council.

Most of our researchers are practicing cardiologists based at Royal North Shore Hospital, which places them in the best position to translate knowledge from the 'bench' to patients 'at the bedside'. Direct patient interaction assists research and triggers new areas for investigation.

'Bench to beside' has led to the discovery that an increasing number of patients experience a heart attack with no traditional modifiable risk factors, such as high blood pressure, cholesterol, diabetes, hypertension or a family history of heart disease – known as "SMuRFless" heart attacks. This is currently being investigated by our researchers



- to identify new methods of diagnosis and early identification and treatment to better protect patients. It has led to the opening of a new 'SMuRFless Clinic' at RNSH. This clinic has been established by a global team of experts whose aim, based on their research efforts, is to find out why some people develop CAD without having risk factors, and why these people have poorer health outcomes in comparison to people with CAD who do have one or more SMuRFs.
- SMuRFless heart attacks (Standard Modifiable cardiovascular Risk Factors) are believed to account for up to 27% of heart attacks and are associated with higher 30-day mortality. The rate of these heart attacks has increased in the last decade, and the lack of knowledge as to why this is happening has sparked worldwide interest. Prof. Gemma Figtree heads up the BioHEART study which is researching the reasons behind these heart attacks.
- Heart Research Australia donors have been generously funding Prof. Figtree since her days as an early career researcher and we continue to help fund many of the projects that make up the BioHEART study today.

How you can support us change the future of heart disease and keep families together for longer!

Our research needs your support to help make life-saving breakthroughs.

The funds you donate help us support research into the prevention, diagnosis and treatment of heart disease and work towards our vision of making breakthroughs in heart disease happen so we can keep families together for longer and protect future generations.

How you can show your support?

Heart Research

- Become a 'Heart Hero' regular donor
- Make a gift in memory or celebration
- Share your birthday by asking for donations instead of gifts
- Host a fundraising event
- Participate in our annual 'REDFEB' event
- ♥ Purchase a ticket in 'Play for purpose'
- ♥ Leave a gift in your Will even small gifts can make a significant difference
- Become a Heart Research Australia Community Champion sharing your personal experience of heart disease to help others.

For more information visit our website heartresearch.com.au/support-us or call us on 02 9436 0056.

3. Australian Institute of Health and Welfare 2020. Coronary heart disease. Canberra: AIHW 6. ABS National Health Survey: 2020-21

Highlights From The Year

Heart Research

The community support Heart Research Australia continues to receive has been incredible. In the wake of the pandemic and with the current cost of living crisis there are understandably some challenges for the not-for-profit industry. The unwavering dedication from our passionate supporters in raising awareness and funds to change the future of heart disease has been gratefully appreciated. It has enabled us to continue to support research and share much needed education to the community throughout the year.

The generosity of all our supporters is crucial to providing seed funding for our researchers and the next generation of heart scientists, enabling them to continue their life-saving research into heart disease. As this type of first-stage research receives little government funding, we are 100% reliant on community support for this work to continue.

This year, support from events and community fundraising has raised over **\$111,000** for Heart Research Australia. Without your dedicated support this amazing result would not be possible. Thank you.

Bond University Students

A group of students from Bond University donated the profits from their group project to Heart Research Australia. As part of their studies, they were given the challenge to create and sell products that would help their fellow students. The team had success sourcing and selling clever stick-on phone wallets for easy swipe card access, and diffusers and oils to help make life on campus feel more relaxing. They donated their profit of \$4,201 and facilitated an additional \$3,000 in donations from other sponsors, donating an incredible total of \$7,201. The group chose to support Heart Research Australia as sadly most of them have had family and friends affected by heart disease.

Peak Body Health and Fitness

Peak Body Health and Fitness sadly lost one of their beloved coaches Simon Atkinson in March 2021 to a heart attack, devastating the local community.

Simon was an incredibly fit, healthy young man and dedicated personal trainer for almost 30 years. His passion for health and ongoing drive to support others helped many become the best versions of themselves.

The Northern Beaches Sun Run

In what's becoming a favourite tradition, the Heart Research Australia team kicked off **REDFEB** by taking part in the Northern Beaches Sun Run, a 7km run from Dee Why to Manly raising awareness and funds for heart research.

In memory of Simon and to help raise funds for Heart Research Australia, Peak Body Health and Fitness now run an annual Captains Conditioning Championship in memory of Coach Simon. This event was run at the end of November with the 'Captain's Champion' title was taken out by Leigh Lucas.

Highlights From The Year continued

Bridge to Brisbane

Heart Research

On the 28th of August Alistair Brightman ran 10km as part of the Bridge2Brisbane to raise money for heart research after his mum passed away due to a heart attack 20 years ago. His target was \$700 and he ended up raising an incredible \$1205. Thank you, Alistair - we are so grateful.

World Heart Day

Norths Fitness invited us to chat all things heart health for World Heart Day, sharing education and the importance of heart research alongside RNSH Cardiac Nurse, Ann Kirkness.

Webinar

We held an incredibly successful webinar for Women's Health Week with Ali Daddo (author of Queen Menopause) and Dr Monique Watts discussing the impact of menopause on a woman's heart health, the importance of sharing your obstetric history with your GP, and how heart disease for women can differ in terms of prevention, presentation and treatment.

HealthEd Podcast

In order to help raise much needed education within the community, Heart Research Australia arranged two episodes of HealthEd podcast.

Dr Monique Watts from Victoria Heart Cardiology in Melbourne chatted with **Dr Terri Foran** on the HealthEd podcast - Women's and Children's health about issues surrounding women's heart health, and Ann Kirkness joined Dr David Lim to talk about the importance of cardiac rehabilitation.

This is a podcast channel that broadcasts medical content solely to GPs and medical professionals and we were able to receive a unique link to the content so our donors can listen irregardless of having a medical registration number.

If you would like to listen to Monique's episode, please click here. If you would like to listen to Ann's episode, please click here.

Bake Stall

Oscar Symes is just 7 years old and wants to be a baker when he grows up. He decided to do a bake stall for Father's Day for all the local dads and families in his local community to raise funds for charity. After discussing a number of different charities he could support with his parents, he decided to choose Heart Research Australia:

"so research can help [my friend] who was born with heart disease."

Whilst the rain wasn't on board with his plans, it didn't keep the community away. Neighbours, family and friends came to support him, raising a total of \$196.

After school on Thursday the 15th of September, he proudly visited our office and presented us with his cheque.

It's truly beautiful seeing the next generation of donors valuing the importance of heart research.

Charity Golf Challenge

Heart Research

It was wonderful to see the Charity Challenge Golf Day return post the COVID Pandemic cancellations. Smokey, as always, organised a fun, light-hearted and engaging event and we are thankful to his ongoing kindness and generosity.

It was wonderful to see everyone together again on such a beautiful, albeit windy, day. Bidding was prolific and lots of fun!

Morning Tea with the Researchers

We have loved the return of in-person events. It was great to be back in the room with some of our supporters and Heart Health Club members for our morning tea with the researchers event, held at Northbridge Golf Club.

Ambassador and long term supporter Chris Russell AM hosted a wonderful morning talking to Dr Eveline Staub, Dr Avedis Ekmejian and Professor Helge Rasmussen about their research projects. Hearing these experts speak so passionately about their work left us inspired and hopeful for the future!

REDFEB 2023

REDFEB is our annual community fundraising event to help share vital heart health education with the community whilst raising much needed funds for life-saving heart research.

Our 2023 REDFEB campaign focused on raising awareness for the risk factors and early warning signs of heart disease unique to women.

We aim to arm ALL Australians with the knowledge to be able to actively seek help vs dismissing early warning signs and hoping they go away.

Thank you to all the individuals and organisations who got involved in REDFEB and generously donated funds, time, and their stories to help change the future of heart disease and keep families together for longer.

In support of REDFEB, the North Shore Private team created a series of short videos featuring Dr Usaid Allahwala sharing different snippets of heart health information:

The benefits of research

The signs and symptoms of a heart attack and how they can differ between men and women

Air locker training Penrith raised \$500 to see their trainer complete 500 burpees!

RNSH staff from Cardiac ward **6D** signed up to support us for REDFEB. Seeing first hand the devastation heart disease causes families, the team were keen to

Symptoms ca include

- Nausea
- Sweating
- Heartburn

Who should get a heart health check

be involved to raise awareness and funds to help support research into Australia's leading cause of death.

Highlights From The Year continued

We absolutely love seeing communities coming together to organize and support events, and seeing our social media filled with people wearing red.

In addition to the numerous individuals and organisations that shared images and videos wearing RED and supporting REDFEB on social media, we were so fortunate to have a number of individuals and groups with strong followings support REDFEB.

MIA FREEDMAN

shared our Heart Attack wallet card to her social media community.

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Best-selling author **Sally Hepworth** (29K followers) was a wonderful advocate for Heart Research Australia again this year. Sally shared a link on her profiles for the whole month

of February calling for people to donate and sharing several iimportant educational posts. She also featured REDFEB and women in heart disease as a topic in her email newsletter.

In the News

A huge thank you to the community and all the media outlets who helped us share the incredible work our researchers are doing and raise much needed awareness in the community about heart disease this **REDFEB**. We are always grateful to the numerous media channels who allowed us to use their powerful platforms to share our life-saving messages and we thank every person involved in making these stories public.

We had a wonderful response from the media for REDFEB 2023 with 4 TV spots, 19 radio shows, 2 podcast features, 6 print stories and over 216 digital articles. The support given to share our message is hugely appreciated – in digital stories alone we achieved an incredible reach of over 128M.

We were lucky enough to talk to Channel 7's Sunrise, Channel 7 and Channel 9 news, Studio 10 with Tristan MacManus and Sarah Harris, as well as radio shows, podcasts and magazines for printed and digital media articles to share our REDFEB message. Of course, our heartfelt thanks goes to our spokespeople and ambassadors who gave up their time to share their stories and wisdom to help spread the message.

They advocated for the importance of heart research and education whilst covering the risk factors, signs people should be more aware of when considering heart health and the importance of check-ups.

Channel 7 Sunrise

Cardiologist Dr Monique Watts spoke with the team from Sunrise about why women have worse consequences than men when it comes to heart disease.

Heart health warning for women: why women are more likely to die than men

Channel 7 News

A beloved husband, father of three and grandfather of 7, Danny Herbert suffered a fatal heart attack in February 2021 at just 58 years old.

His loving wife Sue said, "When I came across REDFEB, it opened up my heart and I knew this is what we had to do. To be a part of fundraising for Heart Research Australia, so our loss would make a difference to others and to help our hearts to heal."

"Because when Danny died, it didn't feel fair. He was always on the phone making sure others were ok. We felt we had to make his passing heard, especially in the farming community where the guys think that getting a checkup isn't always a priority in their busy lives." The Herbert family and friends decided to organise a "Paddle the Pallinup" gathering

in WA, and spent a weekend camping to honour Danny and raise funds for life-saving research into heart disease. Apart from looking like they had a truly special and memorable time, they smashed their \$10,000 fundraising goal. To date they have raised over **\$13,000** for heart research, in addition to generating an enormous amount of awareness surrounding heart

disease and the importance of getting checked out.

Sue and her family joined Heart Research Australia CEO Nicci Dent, and Cardiologist Dr Monique Watts to share their story and raise awareness this REDFEB.

Thank you so much to the Herbert family, for turning your tragedy into something so positive.

In the News continued

Studio 10

Heart Research Australia ambassador and heart attack survivor Jen O'Neill shared her experience with Sarah Harris and Tristan MacManus from Studio 10. Encouraging people to not dismiss the symptoms of a heart attack, especially aiming to reach women who are more likely to dismiss these early warning signs. She shared how REDFEB resonates with her, and why the research conducted by Heart Research Australia is so important and vital to the community.

Our vision at Heart Research Australia is to keep families together for longer and through REDFEB we hope to alert women and men on what to look out for if those early warning signs arise so they can seek the urgent medical attention they need to prevent long-term, irreversible damage.

MamaM!a Get up to speed. Daily.

MamaMia podcast -The Quicky

Heart Research Australia Communications Manager Jenny Bartrop speaks with Claire Murphy, host and producer of 'The Quicky' about the risk factors that specifically affect women, and what you can do to look after your heart health.

Click here to listen to this episode.

Channel 9 news

Heart disease sufferer Jessica shared her story with Channel 9, highlighting how the symptoms of heart disease for women can be different to men and helping encourage people to take symptoms seriously and get checked.

Radio Show -The House of Wellness

Cardiologist Dr Monique Watts discuss the under diagnosis and under treatment of women when it comes to heart disease and why women are more likely to die, develop heart failure or have another heart attack than men within the five years following their heart attack.

Click here to listen.

To see many more wonderful news articles and stories from REDFEB 2023 visit heartresearch.com.au/redfeb-2023-media/

It was a huge pleasure to chat with the following radio stations during REDFEB:

- ♥ ABC Radio Broken Hill
- Vision Australia Radio
- Koori radio
- ♥ HIT 104.9FM Radio
- ♥ 2SER FM Radio
- ♥ River 94.9FM Radio
- ♥ ABC Western Qld Radio
- V 2SM
- ♥ ABC Radio Adelaide
- Southern FM 88.3 Radio

Heart Research

Community fundraising and participating in **REDFEB** is a great way to help make a difference to the future of heart disease and help protect the hearts of future generations.

What impact does your generous donation to Heart Research Australia have?

- Help communities access information and resources
- Ensure our researchers have necessary laboratory equipment to assist their findings
- Contribute to building research projects dedicated to exploring new ways of protecting Australia's hearts
- Goes towards the funding of world-class medical equipment
- Supports the next generation of heart researchers

We also had media coverage of some exciting research breakthroughs.

In a world-first, Dr Carmine Gentile and his research team demonstrated that bio-engineered heart tissues can safely and effectively help patients recover from the damage caused by an extensive heart attack. Every day 110 Australian's have a heart attack and currently there is no cure for the damage a heart attack causes to the heart muscle.

Heart Research Australia is proud to have funded

this ground-breaking work which has given a better understanding of how bio-engineered heart tissues work in the body after transplantation.

The new technology creates personalised 'bio-inks' made of a patient's own stem cells. The 'bio-inks' are then used to 3D-print cardiac tissues to repair areas of dead tissue caused by heart attacks.

You can read more about this breakthrough on our website. Please click here.

Pedestrian.TV

Due to the success of the Heart Research Australia Play for Purpose charity raffle, Play for Purpose offered us the opportunity to work with Pedestrian.TV for a digital article promoting the work we do and encouraging people to purchase a Play for Purpose raffle

ticket supporting Heart Research Australia.

Pedestrian, TV have a Facebook following of over 327K and shared the article online and on Facebook. Given the younger audience, the focus was a

research angle using Dr Carmine Gentile's project on bioprinting 3D hearts. The article was published featuring an interview with Dr Carmine Gentile and was a great way for us to bring visibility of our support for Dr Gentile to his networks.

NEOS KOSMOS - Philip Dalidakis interview

The tragic death of Shane Warne has been a trigger for many to have their heart health checked. Philp Dalidakis, former Victorian member of parliament, shared his story on how the sad news encouraged him to take action.

"We were having lunch as a group of mates when one of the group told us that he had a heart check." Dalidakis said, "soon after the death [from heart attack of cricket great], Shane Warne."

"He then turned around and said, 'you should all get checked', we

looked at each other and thought, 'good idea.'"

After this discussion, he and a group of his friends booked in for a heart health check which highlighted that he was only a few percentages away from having a full artery blockage and heart attack.

He shared his story with NEOS KOSMOS who guoted the HeartFoundation website as well as Heart Research Australia's website. This article reached 131K people..

Read the article here.

If you or someone around you was suffering from a heart attack, would you know what it was? Would you know what to do? Visit <u>heartresearch.com.au/heart-attack</u> to learn the symptoms of a heart attack as well as a heart attack action plan.

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Philip Dalidakis

Our Heartfelt Thanks

Thank you for helping us make life-saving breakthroughs happen. Every gift and donation we receive gets us closer to our goal to help keep families together for longer.

Gifts in Wills to help the hearts of future generations

Heart Research Australia is incredibly thankful to the men and women who help make our research possible through a gift in their Will. A large portion of our research is funded in this very special way. Last financial year, Heart research Australia received **\$1,611,780** by Australians who remembered us in their Will.

Our wish is for a future free of heart disease. There is still a long way to go but as we've seen, research has led to life-saving developments in heart research. Donations from Gifts in Wills, no matter how large or small, are invested in innovative heart research projects so our researchers can transform their ideas into life-saving treatments that will continue to benefit future generations. A gift of 1% in your Will, after loved ones are taken care of, will help reduce the

devastating impact heart disease has on families and the community.

We would like to give special acknowledgement to our 'Breakthrough Partners'. This very special group of people have told us that they have left a gift in their Will to Heart Research Australia. We love to hear if someone has made this decision, so we can thank them and keep them informed of the work our researchers are doing. Of course, you can always remain anonymous and we are also incredibly thankful to those who prefer to keep their decisions private.

> A gift of just 1% in your will can help us save lives

In Memory

We wish to acknowledge and thank the families who have chosen to create a gift in memory this past year when going through the pain of having a loved one pass away from heart disease.

It is an emotional and stressful time for families and communities when a loved one passes away, and we are truly grateful to the families who chose Heart Research Australia as an option to honour their loved ones, allowing their memory to help others in the future.

The death of a family member or friend is one of the most difficult experiences to go through. For some

people, making a donation in their memory can be a positive and special way of honouring their life. If this is ever something you may have to consider then there are a few options like setting up a tribute page, (click here to visit our tribute page site) donating online or via special in-memory donation envelopes.

Saying goodbye is never easy, but choosing to honour the life of someone special to you can be a positive and lasting way of celebrating a life, while helping to fund heart research that can save thousands more.

Your generosity will help us in our goal to reduce the devastating impact heart disease has on families and the community.

Graydon Dobson Van Phan Nguyen Hamish Wilkinson

Rita James - A gift from the heart

We are so grateful to anyone who leaves a gift in their Will for heart research. One of these kind people was The Late Rita James. Rita sadly passed away in 2021. In her Will she had left 25% of her the residue from her Estate for Heart Research and left similar gifts for Cancer, Kidney and Stroke research. Rita was born in King's Norton in the UK. When she was 3 years old, she moved to Australia with her parents and they settled in Adelaide. When war was declared, Rita enlisted with the H.M.A.S. Sydney and was accepted in the Searchlight unit. Later she was promoted to Lance Corporal and then Acting Bombardier. In 1953 she married Michael, who had been in Africa with the RAAF and they moved to Victoria where they built their house in Heathmont. She was an active member of the Country Women's Association for 47 years and even became Group President of the branch and received a Life Membership. She was a wonderful speaker and in later years shared her knowledge in a local history group. She won a Deakin Award for Community Service.

Rita truly valued the importance of medical research and in this very special way she is helping our researchers to continue their work to find more breakthroughs and improve the outcomes for people with heart disease.

Regular Giving

We are so grateful to all our generous donors as we navigate these hard times. We are especially grateful to our "Heart Heroes" - who choose to donate monthly. The impact they have had on advancing,

understanding and improving outcomes for heart disease patients is immeasurable. A big thank you to all our monthly donors - we couldn't do it without you!

The quicker we find cures for

In memory of the late:

David Bell Jeff Nagorcka

heart disease the more lives are saved. impact on advancing understanding and improving outcomes for heart disease patients is immeasurable. So, a big thank you to all our monthly donors - we couldn't do it without you!

Corporate Supporters

Heart Research Australia is so thankful to the following corporate supporters and their teams. Their significant support helps fund our researcher's life-saving work and upcoming breakthroughs. Thank you for helping us keep families together for longer.

Abbott Vascular

This knowledge will encourage people to seek medical attention sooner if they suspect they are experiencing a heart attack saving long term damage done to the heart muscle.

Without the ongoing support Abbott Vascular has provided to Heart Research Australia, REDFEB would not have been the success it was, and we are beyond grateful to them for ongoing dedicated support.

In addition to being the supporting partner for REDFEB, Abbott Vascular is also supporting the BioHEART program through a grant for the Clinician Research PhD Program. In this way Abbott is contributing towards the BioHEART program and its development of biomarkers for early risk identification as well as the potential identification of new pathophysiological pathways and novel therapeutic targets for coronary artery disease.

Ormeggio, Chiosco and a'Mare

Alessandro Pavoni has been an ambassador for Heart Research Australia for a number of years now, a partnership we are truly so appreciative of and grateful for. Together with his wife Anna Pavoni, they own Ormeggio at the Spit, Chiosco and a'Mare. They consistently support Heart

ORMEGGIO CHIOSCO

Research Australia by donating a dinner for 20 at Ormeggio and other generous prizes of their gorgeous venues to our Charity Challenge Golf Day and other events. We are so appreciative of both him and Anna for sharing their personal stories, promoting the importance of heart health

and for their dedication and continuous support for us each year.

The dedes Group

Year after year the dedes group continue to support Heart Research Australia and we are overwhelmingly grateful to their generous contributions to prizes throughout the year. Thank you for helping Heart Research Australia fund life-saving heart research.

ZOLL

For the last three years, ZOLL has supported Heart Research Australia's REDFEB campaign by generously donating two of their lifesaving AEDs, and for the last two years they have donated \$10 for every AED sold in the month of February, raising **\$5,425**. This ongoing support has driven thousands of dollars for research by engaging fundraisers and communities in the campaign.

Sue Herbert was one of this year's winners. Sue lives in rural WA and there is no defibrillator for miles where she is wanting to position it, so her entire community got behind her to support her fundraising efforts with local businesses donating prizes for an online auction,

BYRONS

BYRONS accountants and advisors proudly support Heart Research Australia by providing pro bono auditing services of our accounts. Our relationship began in 2019 and importantly also focuses on helping to raise awareness of heart disease with their staff, clients and greater community. We are so truly

raising a total of **\$13,086**! Sue wanted to donate the defibrillator to her local community on behalf of her husband who passed away last year from a heart attack and is putting a plaque in his name above where they are positioning the defib. Sue also did a wonderful Channel 7 news story for us to help boost awareness.

grateful for their support and allowing us to focus our efforts and funding on the prevention, diagnosis, and treatment of heart disease.

Holman Webb Lawyers

Holman Webb Lawyers have been supporting Heart Research Australia for almost 20 years by offering pro bono legal support - a long-term relationship we

Heart Research

are hugely grateful for. Their ongoing support allows us to focus our time and funds on funding medical breakthroughs in the prevention, diagnosis and treatment of heart disease and we are incredible grateful for this relationship.

4. Australian Institute of Health and Welfare 2020, Australia's health 2020 data insights, Australia's health series no. 17. Cat. no. AUS 231. Canberra: AIHW

Giving the Gift of Life at Work

Thank you to everyone who supports our life-giving research through workplace donation programs. Every year more Australians embrace this tax-effective mode of regular giving with donations to Heart Research Australia through their payroll from their pre-tax pay, thereby reducing their taxable income. Some employers also match donations made by employees, doubling the impact of their support.

Workplace or payroll giving is an easy and effective way to support pioneering heart research. It provides a reliable income stream to more effectively fund life-saving heart research to prevent, diagnose and treat heart disease - Australia's biggest killer. To learn more or get involved visit: heartresearch.com.au/workplace-giving/

1. AIHW - Australian Institute of Health and Welfare (2022) Australia's health 2022: data insights, AIHW, Australian Government.

30 Annual Report 2023

Every **10** MINUTES an Australian suffers a heart attack⁴

Our Research

Heart Research

Keeping families together for longer through life-saving heart research

Heart Research Australia focuses on funding research which identifies new ways to prevent, treat and diagnose heart disease, Australia's leading cause of death. This report features just some of the many inspiring projects our researchers are working on. To read more about the work our researchers are doing visit

https://www.heartresearch.com.au/our-researchers/, sign up for our newsletter, and follow us on social media to stay up to date with the latest research and news.

Why research is so important

Heart disease kills one Australian every 30 minutes¹. Despite major advances in the understanding and treatment of heart disease, there remains a large gap in our knowledge. Without further understanding of the disease, its diagnosis and treatment, families will continue to lose their loved ones to heart disease each year.

Research is imperative to shift the current status quo of heart disease and reducing devastating statistics.

1. Australian Institute of Health and Welfare 2021. Deaths in Australia. Cat. no. PHE 229. Canberra: AIHW

Research Projects

Novel Treatment of Pre-eclampsia

Project Title:

Re-purposing of Beta3 Adrenergic Receptor Agonists as a Novel Treatment for Pre-eclampsia.

Lead Researcher:

Professor Helge Rasmussen

Maternal and neonatal mortality is a global public health problem, that leads to about 295,000 maternal deaths every year during pregnancy and childbirth, and 5.2 million deaths among children under five years of age. It remains one of the few fatal complications of pregnancy in industrialised countries today. In contrast to other diseases, the field has not progressed significantly despite the massive global burden it represents.

Professor Rasmussen and his team have been looking at repurposing Beta3 Adrenergic receptor agonists, a drug already FDA-approved for the treatment of overactive bladders, as a treatment that could offer improved care of 'high-risk' pregnancies with pre-eclampsia and/or IUGR. It's hoped that this will enhance future maternal cardiovascular health.

Oxidative damage occurs when there is an increase in the production of reactive oxygen species (ROS) within cells. ROS are highly reactive molecules that can cause damage to cells and tissues, contributing to various diseases, including pre-eclampsia which the team are specifically looking at in this project. They have discovered an abnormality that occurs on part of the Na+-K+ pump that is caused by ROS.

The team have established that when cells were exposed to low oxygen levels followed by reoxygenation (which is a change from low oxygen to normal oxygen levels), two important proteins involved in cell function, namely the β 1 subunit of the Na+-K+ pump and eNOS, had a significant increase in glutathionylation, where they had a molecule called glutathione attached to them, causing an impairment to their function. Additionally,

the team observed that another protein called NADPH oxidase, which is responsible for generating reactive oxygen species (ROS), also became more active under these conditions, indicating an increase in ROS formation.

Adding the β 3AR agonist drug, CL, reduced the increase in glutathionylation of the β 1 subunit of the Na+-K+ pump, as well as the activity of some important enzymes.

Professor Rasmussen and his team have found that β 3AR agonists are able to counteract the damage that occurs due to oxidative damage which holds promise for potential therapeutic interventions. By targeting and activating the β 3AR with drugs, the team aims to mitigate the effects of oxidative damage that are present in pre-eclampsia and potentially use this as a treatment – a hugely exciting discovery.

Development of novel method to reduce radiotherapy-induced heart damage in breast cancer

radiation exposure during

Project Title:

Heart Research

Development of novel method to reduce radiotherapy-induced heart damage in breast cancer.

Lead Researcher:

Prof. Helge Rasmussen

This project was looking at a compound that could reduce the heart damage caused by radiotherapy in patients with breast cancer.

Some cancers produce a protein called FXYD3, which protects them from cancer treatments like radiotherapy. However, this protection can lead to serious cardiac side effects due to

breast cancer treatment. The compound, FXYD3-pep, can replace FXYD3 in cancer cells without providing the protective effect. In tests, FXYD3-pep effectively killed breast cancer cells with high FXYD3 levels using much less anticancer drug. By neutralising FXYD3, the team were aiming to reduce the radiation dose needed for breast cancer treatment, lowering the risk of heart disease while maintaining effectiveness against cancer.

The team did not observe significant difference caused by the addition of FXYD3pep treatment, possibly because it's features might break down guickly when exposed to host enzymes and before it reached the targeted tumour. This can be a problem with peptide drugs and can be addressed by modifying amino acid sequences at specific points, and such modifications are typically performed by major pharmaceutical companies. To facilitate any future developments, the team has made their cell-based studies available by publication in the cancer journal Frontiers in Oncology.

Heart Disease Kills

Australians every day²

1 in 3 Australians aged 18 and over have high blood pressure -

one of the risk factors for heart disease¹

Oxidation inhibition of sodium pump: a novel pathophysiological relevant biomarker for hypertensive disorders in pregnancy

Project Title:

Oxidation inhibition of sodium pump: a novel pathophysiological relevant biomarker for hypertensive disorders in pregnancy.

Lead Researcher: Dr Chia-Chi Liu

When a baby in the womb doesn't receive enough oxygen and nutrients through the placenta, it can significantly affect their growth and development. This can lead to pregnancy complications such as fetal growth restriction and preeclampsia. Mothers and babies who experience these issues may be at a higher risk of long-term health problems. However, issues with the placenta can be identified during pregnancy, we can take early action to improve the health of

has the potential to identify pregnancies that are at risk for complications.

In the pilot study, the oxi-pump has shown promise in predicting or diagnosing pregnancy-related complications sooner.

If issues with the placenta are identified during pregnancy, early action can be taken to improve the baby's health before they are born.

a modification in the placenta's sodium pump, referred to as the 'oxi-pump,' which is associated with reduced effectiveness. This modification is present in women with fetal growth restriction and pre-eclampsia. In severe pre-eclampsia cases, the pump's activity is reduced by 43% in red blood cells. In a small study, it was found that levels of the oxi-pump in red blood cells were about three times higher in women with fetal growth restriction compared to healthy women.

The aim is to validate whether measuring the oxi-pump in a mother's blood is a better and earlier method to identify

both the mother and the baby.

- A validated maternal blood test
- Dr Liu's research has discovered

pregnancies that are at risk for complications. If successful, this could provide a new tool for monitoring pregnancies and identifying issues with the placenta sooner. In the long term, it may lead to the use of a maternal blood test in clinics to assess the baby's health during pregnancy. Several blood samples have been collected from patients at the Royal North Shore Hospital, with appropriate ethics approval and informed patient consent. The initial results show that red blood cells (RBCs) from healthy pregnancies exhibit increased oxi-pump levels when exposed to chemical-induced oxidative stress. A small number of RBCs from pregnancies with fetal growth restriction and gestational diabetes also show elevated levels of the oxi-pump. The team are currently recruiting additional patients to address the need for a larger sample size.

Dr. Liu is also focusing on the development of a specialised blood test chip that will enable convenient assessment of the oxi-pump. This innovative chip will simplify the process of evaluating oxi-pump levels in patients.

^{1.} AIHW - Australian Institute of Health and Welfare (2022) Australia's Health 2022: data insights, AIHW, Australian Government, 2. ABS Causes of Death, Australia.

Unravelling the calcification – inflammation axis to predict the risk of heart disease

successful in establishing a

Project Title:Unravelling the calcification– inflammation axis to predict the risk of heart disease.

Lead Researcher: Professor Gemma Figtree

Cardiovascular disease remains the greatest health burden for Australia and has an enormous social and economic impact across the globe. Despite common perceptions, it is not all solved. There is an urgent need for the development of an improved clinical pathway for management of coronary artery disease (CAD) patients who are suffering heart attacks, despite having no standard modifiable risk factors, and the need for novel biomarkers for early detection of CAD. Professor Gemma Figtree and the BioHEART team have been

cardiology BioBank for biomarker discovery, which has grown into a large multi-centre study and is continuing to expand nationally. Together, the team has created an extremely powerful, secure, and user-friendly platform to discover and validate markers of early atherosclerosis and cardiovascular disease risk. Using the state-of-the-art platform, Professor Figtree and her team have profiled many thousands of human samples providing multiple large datasets that are now being used for the identification and development of biosignatures for CAD. When we integrate this with genomic data on the same individuals,

it provides us with the ability to make causal inference about the specific metabolic pathways and to select the optimal biomarkers.

The team collected atheromas from human carotid arteries and used imaging mass cytometry (IMC) to analyze them, helping the team to understand the complexity and variation in atherosclerotic plaques based on cell marker expression. Specifically, they identified key cell types and their distribution within the plaques, with T cells being more concentrated in the shoulder region, while macrophages were more widespread throughout the lesions.

The team also made significant progress in identifying multiomics biomarkers for CAD. By analysing blood samples from a large cohort, they discovered specific cell subsets related to CAD, particularly T-regulatory cells expressing certain markers. These findings could guide the development of new therapeutic targets. Additionally, the team identified a metabolite, DMGV, strongly associated with CAD, which may have clinical applications. Lipid profiles and machine learning were used to predict cardiovascular disease risk, showing promise in early CAD detection, especially in low to intermediate risk groups.

With the generosity and ongoing support of Heart Research Australia, The BioHEART team are a step closer to unravelling new mechanisms and finding new biomarkers

for coronary artery disease. They were able to identify previously unrecognised molecules exist in the blood that can be powerful biomarkers to inform us regarding the burden and activity of silent coronary artery disease. The team are working collaboratively with many researchers across Australia and overseas to test these novel therapeutic targets with the hopes of translating these findings back to the clinics.

"The team is beyond grateful to the donors who have supported the research program at Heart

Prevention is the best medicine. Healthy lifestyle behaviours can prevent 8 in 10 cases of premature heart disease and stroke.

Cardiologist Dr Edward Barin has established a straightforward approach to keeping your heart healthy before and after serious illness, at any age. He calls it the 4-M approach.

4 simple steps to a healthy heart The 4-M approach

1. Move

Keep moving at any age and fitness level

- 2. Meals Eat intelligently
- 3. Measure Keep track of your health

4. Mental Approach Stay optimistic

Read more about the steps here: heartresearch.com.au/heart-disease/simple-steps/

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Research Australia. The success of this research program would not have been possible without the research funds from Heart Research Australia."

Prevention of arterial hypertension and cardiovascular disease in premature infants later in life by examining early kidney vascular development

Project Title:

Prevention of arterial hypertension and cardiovascular disease in premature infants later in life by examining early kidney vascular development.

Lead Researchers:

Dr Eveline Staub Prof Martin Kluckow

Heart Research Australia and the Mill House Foundation have been supporting newborn cardiac research projects in the department of Neonatology at Royal North Shore Hospital for over 23 years.

Each year 26,000 babies are born prematurely in Australia, approximately 450 to 500 of which are treated in the Neonatal Intensive Care Unit at Royal North Shore Hospital. Results from studies conducted by the research team have helped shape several new diagnostic and therapeutic approaches on how cardiovascular problems are treated for some of their tiniest patients locally, and around the world. Due to these improved practices, even the smallest of their premature patients increasingly survive their NICU stay and grow up free of major disabilities.

The RNSH NICU research team continue to expand their cardiovascular studies to research longer term outcomes, especially in preterm infants.

These cardiovascular studies represent a significant group of trials in newborn babies examining the transition from a fetus to a newborn, often premature or sick, infant. They have progressively documented the cardiovascular changes at birth and the effect these have on the infant from blood flow to the brain to the problem of the PDA (patent blood vessel between heart and lungs) and ways of treating this. The team have also examined the most appropriate timing of clamping

the umbilical cord from a heart function point of view.

Excitingly the team are now starting to examine the short and long term consequences of preterm baby birth on cardiovascular and kidney status - particularly in relation to hypertension, as they start to assess older children after preterm birth.

The key message coming out of this new area of research is that it is critical for babies born prematurely to raise this with medical care givers when they are teenagers and young adults, otherwise significant cardiovascular pathology may be missed.

The generous and continued support that Heart Research Australia's donors have contributed to the newborn care center has had far reaching impact on the understanding of the cardiovascular system and heart.

"The team's work has resulted in over 50 original manuscripts and over 30 international conference presentations. It has saved many lives and prevented major complications. Thanks to Heart Research Australia donors - and in particular, The Millhouse Foundation. Together we have made such a difference.

Thank You!"

Masters Football and Cardiovascular Risk Reduction

Project Title: Masters Football and Cardiovascular Risk Reduction. Lead Researcher: Professor Geoffrey Tofler

The knowledge and prevention of modifiable cardiac risk factors are of paramount importance in healthcare and public health due to their significant impact on cardiovascular health and overall well-being. Cardiovascular diseases, including heart attacks and strokes, remain the leading causes of death globally. Many of these devastating events are preventable through the identification and management of modifiable risk factors.

Modifiable cardiac risk factors are lifestyle and health-related factors that, when addressed proactively, can significantly reduce the likelihood of developing heartrelated problems. These factors include high blood pressure,

elevated cholesterol levels. smoking, obesity, physical inactivity, unhealthy diet, excessive alcohol consumption, and diabetes.

Prof. Tofler and his team are looking at these risks with Masters age (≥35 years) football. Masters football is increasingly popular but its link with cardiac risk has not been well studied. This project aims to create an online program educating players on awareness of cardiac risk factors and how to reduce them.

Modifiable cardiac risk factors are common in this group and gaps have been identified in the knowledge of cardiac symptoms, so this educational program has potential for significant impact. The benefits include improved knowledge, attitudes, and behaviours, including player advocacy for defibrillators at games and familiarity in their use.

These outcomes will result in reduced risk of cardiovascular events - each event prevented and every person saved would have a major impact, not least on family wellbeing and financial security.

Knowledge and prevention of modifiable cardiac risk factors will enable individuals to take proactive steps in reducing the burden of cardiovascular diseases. By addressing these

risk factors, we can significantly improve heart health, enhance quality of life, and ultimately save lives.

The program will be evaluated using randomised, controlled prospective design and the findings will help initiate implementation of the educational program for Masters footballers and subsequently other Masters sports. By raising awareness and providing education about these modifiable risk factors, individuals can make informed choices to reduce their risk of heart disease. Lifestyle modifications, such as adopting a heart-healthy diet, engaging in regular physical activity, quitting smoking, and managing chronic conditions like diabetes and hypertension, can have a profound impact on cardiovascular health. Additionally, early detection and intervention through regular check-ups and screenings are vital in preventing heart-related complications.

This project has significant societal impact and has incredibly important implications for cardiac health and prevention.

You can hear Prof. Tofler talk about this project in our Webinar from June 2023. Search for 'Tea with the Experts' on our website.

Use of blood Extracellular Vesicles as biomarkers for hidden coronary artery disease in patients

Project Title:

Use of blood extracellular vesicles (EVs) as biomarkers for "hidden" coronary artery disease in patients

Lead Researchers:

Dr Hooi Hooi Ng and Dr Sina Fathieh

Atherosclerosis is a chronic vascular condition characterised by the buildup of plaque within arteries, leading to their narrowing and hardening. This condition restricts blood flow, increasing the risk of heart attacks and strokes which poses a significant health problem.

This cutting-edge project has been investigating EV (extracellular vesicle) profiles and how they change in the presence of atherosclerosis. The research has been looking at identifying unique vibrational patterns in EVs that could serve as markers to diagnose and predict earlystage coronary artery disease, and discovering new molecules within EVs that could be targeted for future treatments to combat atherosclerosis.

Using Vibrational Spectroscopy the team have looked at the molecular composition of EVs to find specific patterns or characteristics that could be used for both diagnosis and prognosis for early stage CAD that might not yet have shown noticeable symptoms. Using a nondestructive FTIR and advanced machine learning techniques, they have been able to identify regions of interest which can be traced back to molecular groups. The next step is to verify these regions using other statistical and

biological techniques in the hope they could potentially become a 'bio-signature'' of CAD.

The second part of this project has been looking at the lipidomic signatures of atherosclerosis.

By looking at previous work using blood serum samples to study lipidomic profiles of patients with atherosclerosis, and the current research which focuses on investigating markers of resilience - factors that protect against disease development/ progression - these studies aim to help identify specific lipids that are present in EVs and are associated with different stages of disease, including atherosclerosis.

The researchers have successfully used targeted mass spectroscopy to analyse and identify the concentrations of more than 500 different lipids in extracellular vesicles (EVs) for each patient.

Understanding the differences between serum and EV lipidomics could reveal information about how EVs contribute to the development of atherosclerosis, providing valuable insights into the underlying mechanisms of how atherosclerosis is progressed by EVs. Electron microscopy analysis will further study EV characteristics and provide more detailed information about how EVs might

be involved in the development of atherosclerosis.

The preliminary results of this research are novel in showing that our EV profile changes in the presence of atherosclerosis. This is a hugely significant finding as it suggests there may be elements in EV packets that increase an individual's risk of atherosclerosis which could be a promising

method for detecting patients at risk of a heart attack using a simple blood test.

This also justifies further research into exploring EVs as a potential therapeutic and drug-delivery option for the treatment of CAD. The team has successfully identified a potential biological signature in advanced coronary artery disease. After validation

Dissecting the susceptibility of humans to coronary artery disease (CAD)

Project Title: Dissecting the susceptibility of humans to coronary artery disease (CAD).

Lead Researcher: Dr. Hooi Hooi NG

This research aims to identify distinct immune cell populations in peripheral blood mononuclear cells (PBMCs) and the circulating biomarker signatures through

mass spectrometry-based omics analysis and to characterize the subcellular changes in cryopreserved human coronary artery from donor and ischemic heart disease individuals using imaging mass cytometry. Heart Research Australia has funded instruments required for this research.

The mass cytometry and multiomics approach to analyse collected samples provides multiple large datasets that can be used to identify novel biomarkers and therapeutic targets to tackle CAD, and in particular finding clues as to why some humans are more susceptible to developing CAD.

The success of this research program would not have been possible without research funds

this can become an additional biomarker in screening the general population to identify their risk of heart attack.

"We would like to thank donors whose generous donations enabled our group to pursue this cutting edge research, which will surely contribute to our quest for zero preventable heart attacks."

from Heart Research Australia.

The team will be able to identify previously unrecognised molecules that exist in the blood that can be used as powerful biomarkers. The team are working collaboratively with many researchers across Australia and overseas to test these novel therapeutic targets with the hopes of translating the findings back to the clinics.

"Our team is beyond grateful to the donors who have supported the research program at Heart Research Australia. With the generosity and ongoing support of Heart Research Australia. we are a step closer to understanding the susceptibility of humans to CAD and finding new biomarkers for this deadly disease."

Novel anti-inflammatory treatment to protect against maladaptive cardiac remodelling and repair after myocardial infarction

Project Title:

Novel anti-inflammatory treatment to protect against maladaptive cardiac remodelling and repair after myocardial infarction.

Lead Researcher: Dr Giannie Barsha

Dr Barsha and the team will be looking at using the drug PKT Inhibitor X and aiming to determine for the first time whether it could be a treatment to improve the outcome of a heart attack. At the end of FY23 this project was in the preplanning phase and the team had been busy ensuring they have all the required materials, resources and personnel ready to start.

Once the experiments have started the team will be able to unravel important inflammatory response processes that occur in the heart following a heart attack and be able to confirm the benefit of using a drug like PKT Inhibitor X in slowing down or reversing these responses.

"My team and I would like to express our sincere gratitude for your donation and support. Thanks to your contribution, scientists like us can turn our research passion and ideas into real projects that can help us address pressing problems which heart attack suffers face. Your support and generosity are what gives future heart attack suffers hope for better medical treatment that can pave the way for a better quality of life."

Indigenous Australians had cardiovascular disease hospitalisation and death rates that were over 50% higher

5. Cardiovascular disease - heart, stroke, and vascular diseases Last updated 1/12/2020 v16.0 @ Australian Institute of Health and Welfare 2021.

than non-indigenous Australians⁵

Equipment Funding

Developing 3D bioprinted cardiac tissues containing patient's stem cells to prevent and treat heart disease - partial funding for MappingLab Electrode Mapping System

Dr Carmine Gentile

Time is muscle. Every ten minutes an Australian has a heart attack. A quarter of these patients will not be able to receive suitable treatment in time and will develop heart failure due to irreversible damage to their heart. Dr Carmine Gentile and his team are working towards producing heart patches made of special 'bio-ink' that aim to regenerate the parts of the heart that have died following a severe heart attack.

Dr Gentile's multidisciplinary team has created a novel way to 3D bioprint heart tissues using patients' own cells in an attempt to repair heart damage and regain cardiac muscle function. Cells isolated from patients' own blood are first used to generate stem cells and then transformed into heart cells. Dr Gentile has

developed a new way to use these cells by generating personalised "bio-inks" that can be extruded through the nozzle of a 3D bioprinter to produce 3D bioprinted heart tissues.

The MappingLab Electrode Mapping System is an important instrument that tests how well bioprinted heart tissues contract in healthy and diseased (arrhythmic) conditions. Heart tissues are tested for their safety and regenerative properties and the instrument can test if the bioprinted patches can improve heart function without risk to the patient.

The team's results have shown that the 3D bioprinted patches improve heart infarction contraction without harmful side effects. The formulation of the 3D bioprinted patch was able to not just improve how an infarcted heart contracts, but it was also the best treatment among others using similar approaches. The results of this study have been published in an article in the March 2023 edition of

"Bioprinting", which is highly recognised within the 3D bioprinting community. It also attracted a lot of attention featuring in several media outlets and a news segment for 7News Sydney. This was possible thanks to the MappingLab system that enabled the team to test the way bioprinted tissues contracted before and after their transplantation.

Dr Gentile's studies have shown that patches can improve how the heart pumps blood into the body to look like it never had a heart attack after a month of the transplantation. New studies are required to test long-term effects and durability of the patch beyond one month.

7 7NEWS Sydney

One Australian loses their life to cardiovascular disease every 12 minutes, but even heart attack survivors are often left with organ damage. Now, in a world-first, Australian scientists have come up with a safe and cost-effective way to mend broken hearts. #7NEWS

rom 7NEWS Melbourne 11:01 PM · Mar 13, 2023 · 5.657 Views

This will help the team to move closer to clinical trials and make the technology available for heart failure patients.

The MappingLab system is used to test whether these novel patches maintain a healthy phenotype before and after their transplantation, ensuring safety and efficacy with the novel

approaches used. Funds from foundations are being used to purchase the Optical Mapping System which will enable control of the electrical activity in bioengineered heart tissues before they are transplanted, and also to gain information on the molecular signaling controlling the contractile

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function for the first time. This critical step in assessing Dr Gentile's technology represents a safe treatment for heart failure patients and has the potential to make it quickly available in the clinic.

Equipment Funding

Heart Research

Improving differentiation between Myocarditis (inflammation of the heart muscle) and myocardial infarction (heart attack):

Purchase for life - EchoInsight (by Epsilon)

Dr Ashleigh Dind

Dr Ashleigh Dind's research is focussed on better understanding the differences between myocarditis (inflammation of the heart muscle) and myocardial infarction MI (MI, commonly known as a heart attack).

In both conditions, patients present with chest pain, a rise in troponin levels (a biomarker used to detect heart muscle damage), and often ECG changes. Both require urgent intervention, but the treatment differs for each. Dr Dind aims to identify ways to differentiate between the two without the need for invasive testing.

Heart Research Australia has funded new software called EchoInsight which can assess strain analysis. Strain analysis is a valuable tool in cardiology that uses medical imaging to measure how the heart muscle deforms during the cardiac cycle, providing essential information for diagnosing and managing various heart conditions and assessing cardiac function.

The initial phase of the team's research comparing troponin levels and MRI data was found to be biased, mainly due to the timings around the two sets of patients having an MRI. Patients with myocarditis were more likely to have an MRI and have one sooner than MI patients who generally had theirs weeks later. This put extra importance on strain analysis for this study.

Echolnsight has enabled the research team to assess the function of the heart on ultrasound at a level that cannot be seen, with measurements that are accurate and reproducible for research standards. Due to

differences in the timing of the MRIs found in the initial phase of the study, the new ultrasound 'strain' data has become even more important in distinguishing between patients with heart attacks and heart inflammation. The results are due to be published and presented by the end of 2023.

A summary of the initial phase of this research was presented in poster form at the Annual Scientific Meeting of the Cardiac Society of Australia and New Zealand in 2020. You can view it here.

"Many thanks for your support. The software you funded has enabled an efficient and detailed analysis of the ultrasounds of our patients who have had heart attacks or heart inflammation. We continue to work on finding features to distinguish between these groups in the least invasive way."

PHD Support

Impact of Epicardial plaque composition and geometry on coronary hemodynamics and flow (iEquate)

Dr Avedis Ekmejian

Dr Ekmejian has been investigating the relationship between plaque morphology and geometry, and invasive coronary hemodynamics i.e. understanding the shape and structure of plaque, as well as how blood flow interacts with the coronary arteries. The study includes patients being investigated for coronary disease, who were identified to have moderate (50-75%) narrowing of the arteries. By assessing their hemodynamics using a coronary pressure wire

and an OCT (imaging technique) assessment of the plaque, it was possible to establish potential relationships between plaque morphology and geometry i.e. size and shape of the plaque deposits, and invasive coronary dynamics.

Invasive coronary physiology has been a guideline based tool used by interventional cardiologists to determine whether a stent may improve symptoms. Although these tools are extremely useful, there are several factors which may interfere with interpretation of these results, and clinicians should be aware of these factors. Our research has shown that micro-vascular dysfunction, which affects the small vessels in the heart that cannot be seen, may impact the validity of these tests. Our research also indicates that calcific plaque may impact the reproducibility of results using different pressure wire approaches. However this may

also be a factor of the complexity of the plaque geometry, and more detailed research using 3D modelling and computational fluid dynamics is being applied to answer this this.

"I would like to give a heartfelt thanks to the donors who have supported me. They trust that their donations will be used in a way that can improve our understanding of cardiovascular disease, and to continue to optimise outcomes for patients. Their support has meant not only has there been a deeper understanding of coronary physiology, but has started a career in cardiovascular research, where I will continue to aim to undertake relevant research which I hope will have an impact."

Novel methods to improve the minimally invasive treatment of aortic stenosis

Dr Karan Rao

Aortic stenosis is a condition where the aortic valve narrows, restricting blood flow from the heart to the body. Transcatheter aortic valve implantation, or TAVI, is a minimally invasive procedure that improves the blood flow in your heart by replacing the

diseased valve with a new one using a catheter, offering a safer and quicker alternative to traditional open-heart surgery, particularly for high-risk patients.

Dr. Rao's large-scale prospective study will help answer various important questions to help improve the treatment of aortic stenosis, and predicting patients at risk of heart block after TAVI by investigating known and novel predictors of heart block in patients.

Thanks to the data collected it's been possible for other investigations to be added to the project, such as the degree and localisation of calcium on the aortic valve and its relationship to

heart rhythm disorders.

At the time of writing he study is well under way and on track to finish at the end of 2024. We look forward to the seeing the results of this

exciting work.

"I feel very fortunate to be in an environment which wants to see its researchers excel and achieve their goals. I am so very grateful to the donors who have provided me with a platform to be able to keep a single focus on achieving my research endeavours. I am learning lots, and this will provide me with a kickstart for the rest of my academic career."

PHD Support

The classification of adverse drug reactions and adverse drug withdrawal events during the optimisation of heart failure medications in frail older people

Mai Duong

The aim of this study is to conduct focus groups, interviews and surveys to explore the views of multi-disciplinary clinicians and consumer representatives on adverse drug reactions (ADEs) and adverse drug withdrawal events (ADWEs) from optimising heart failure (HF) medications in frail older people. A multi-disciplinary approach to characterising the potential harms and/or intolerance of

HF medications will support shared decision-making between clinicians and patients and/ or their care givers. This study will inform the development of a taxonomy of ADEs and ADWEs to use during continuation or discontinuation of heart failure medications for frail older people.

Mai has completed the recruitment and data collection for her qualitative research and is currently analysing this in preparation for publication and to guide the next steps of the research.

The preliminary research findings have been well received in several oral and poster presentations to Australian and International audiences, consisting of clinicians with cardiovascular, general practice, pharmacology and geriatric specialties. These presentations

have given Mai the opportunity to receive valuable feedback from multi-disciplinary clinicians and researchers.

"The generous support I have received through the Heart Research Australia scholarship and supporting networks have facilitated access to a very complex and hard to reach population to inform this research.

I greatly appreciate the generosity and willingness of the donors to support research in frail older people with heart failure and am thankful for the Heart Research Australia team's enthusiasm, availability and support. We identified perspectives unique to medication management in frail older people with heart failure and summarise key facilitators and barriers."

Congratulations, Mai!

Using cardiovascular mortality to better understand stroke volume and cardiac output

Dr Angus Fung

This project has been looking at better understanding the relationship between cardiac output, stroke volume, and mortality by accounting for body size, to establish data driven norms and cutoff points to identify increased mortality risk. Dr Fung and the team have created a novel method for determining cutoff points based on an increased risk of mortality.

The results of the study have determined that cardiac output and stroke volume have the highest prognostic performance when considered unindexed to body size, which challenges the current practice of using use cardiac index (cardiac output indexed to body surface area) as a preferred measure to cardiac output on its own. The team have found that unindexed cardiac output and stroke volume have a stronger association with mortality than when indexed by body size. This is a surprising discovery that brings into question current thinking that indexing by body size improves prognostic association. They have also created a novel way to determine cutoff values based on an increased risk of mortality. This

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method allows them to test how cutoff values may perform prognostically which differs from traditional methods to determine cutoffs based on what is normal in a healthy population. This is an exciting development which may have future implications in how we think about cutoff points with advances in big data in medicine. The findings are hoped to be published soon.

"Thank you very much to the generous donors who have supported our research. Your kind contributions have enabled us to conduct our research and train tomorrows generation of clinician scientists, which we hope will improve clinical practice for the benefit of patients today and for generations to come."

Keeping Hearts Beating

Heart Research Australia is passionate about raising awareness through education

The Heart Health Club

Receiving the overwhelming news you have a heart condition or may require surgery can be a very challenging time. Returning home from hospital or a doctor's surgery, or even knowing you have a family history with heart disease can leave you with a lot of questions about your condition, any potential lifestyle changes or how you can best minimise any potential modifiable risk factors.

Heart Research Australia's Heart Health Club aims to help provide some support to those directly or indirectly affected by heart disease, may be searching for information, support or connection. We share information from cardiologists, nutritionists and physiologists.

It's free to join and members receive access to exclusive offers and information, including:

- Mental Wellbeing guidance and strategies to implement in your heart health journey
- Free webinars with our cardiologists and other health experts

- Exercise tips and programmes from Accredited Exercise Physiologists
- Heart Healthy Recipes
- E-Newletters with exclusive content from heart health experts, tips and advice from Cardiologists, as well as the latest updates from our Researchers
- Access to our private Facebook community to connect with others going through a similar experience. Connecting with others in a similar situation can be helpful in supporting you and understanding what you are going through. It can also answer questions you may have. Heart Health Club members can access our private Facebook community <u>here</u> where heart patients and their carers can share support and advice.

To find out more or to join visit

www.heartresearch.com.au/heart-health-club/

The Heart Hub

The Heart Hub, featured on our website, provides easy to understand information about heart disease, risk factors and the different types of treatments, conditions and procedures available for those affected by heart disease. There are also personal stories to read about patients' experiences with heart disease.

For more information please visit **heartresearch.com.au/heart-hub**

Heart Attack Wallet Card

A common phrase in cardiology is "time is muscle", meaning the longer it takes for someone to seek medical treatment for a heart attack, the higher the risk of the heart muscle dying, and irreparable damage being done. Knowing the early warning signs of a heart attack can make all the difference in seeking treatment sooner.

People often associate the symptoms of a heart attack with crushing chest pain or pain down your arm. Whilst these are common experiences, many people aren't aware that the symptoms can drastically differ between men and women. Many people will brush the signs off as something less serious, not realizing they are experiencing a heart attack.

We have developed a Heart Attack Wallet Card with the aim of helping people become aware of heart attack symptoms and encourage them to seek help as soon as possible to prevent long-term permanent damage. Our wallet card calls out the different early warning signs women can experience when it comes to a heart attack vs men, as well as a heart

LIKE us!

Want to see all the latest updates from our researchers, events and heart health tips? Make sure you like and follow our Facebook page to keep your heart health top of mind. We are also on Instagram, LinkedIn and Twitter.

attack action plan should the situation arise. This is available as both a download and a physical card so you can have the information handy.

No family should experience the tragedy of losing a loved one unexpectedly, and we hope the Heart Attack Wallet Card could play a small roll in saving lives.

To order your free wallet card visit:

heartresearch.com.au/heart-attack-wallet-card/

Financials

Heart Research Australia's vision is "making breakthroughs in heart disease happen", and donations received from our donors makes it possible for the cardiac researchers we support to conduct ground-breaking work into the prevention, diagnosis, and treatment of heart disease.

We extend our heartfelt appreciation to our supporters, whose generosity empowers Heart Research Australia's mission to pioneer breakthroughs in heart disease. The contributions from our dedicated donors fuel the innovative research endeavors aimed at preventing, diagnosing, and treating heart diseases. With deep gratitude, we are proud of the contribution of \$35.7 million in research activities since Heart Research Australia's inception. This significant sum has played a vital role in combating the devastating effects of heart disease, uniting families for longer, and creating a profound positive impact.

During FY2023, Heart Research Australia supported 19 projects, PhD grants, and equipment. However, there was underspending in research funding due to timing issues. The planned expenditure will be carried over to the next financial year. We owe our achievements to the unwavering generosity of our supporters. We express our gratitude to those who have included us in their wills. Additionally, we are deeply thankful for the outstanding contributions from our community fundraisers, corporate partners, and Trusts and Foundations. We thank you all for the invaluable support.

How you have helped us over the part two years - Income

Income		
Fundraising activities		
Appeals		
Raffles		
Bequests		
Corporate		
Corporate In Kind		
Community		
Other Donations		
Non-operative activities		
Total income		

Expenses

Employee costs
Fundraising
Administration
Provision for Doubtful Debt
Corporate In Kind
Research support
Total expenses

Net surplus/(deficit)

Assets and Liabilities	
Cash and cash equivalents	
Trade and other receivables	
Financial investments	
Plant and equipment	
Intangibles	
Inventory for distribution	
Total assets	
Trade and other payables	
Provisions	
Total liabilities	

2023	2022
2,721,758	2,320,562
399,986	278,441
37,975	35,628
1,611,780	1,272,180
13,425	53,592
4,500	4,205
94,892	45,805
559,200	630,711
1,764,187	110,1619
4,485,945	2,430,723

2022	2023
694,580	711,582
352,735	461,608
195,163	305,842
960,723	456,201
2,203,201	1,935,233

2,550,712

6,454,975

2023	2022
3,720,839	3,082,630
49,751	107,227
3,019,625	1,343,974
11,544	14,145
53,945	15,889
24,605	24,605
6,880,309	4,588,471
331,996	589,525
93,338	94,684
425,334	684,209

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3,904,263

227,522

Our Governance

Heart Research Australia is a company limited by guarantee. We are registered with the Australian Charities and Not-for-profits Commission (ACNC) and are authorised to fundraise in most Australian States and Territories. Heart Research Australia is approved by the Australian Tax Office as a health promotion charity and a deductible gift recipient.

Heart Research Australia is an organisational member of the Fundraising Institute Australia (FIA) and abides by the FIA's Principles and Standards of Fundraising Practice.

BOARD OF DIRECTORS

Heart Research Australia is governed by a Board of Directors. Members include cardiologists, academics, researchers, and business leaders. The Board's responsibilities include oversight of the Foundation's financial management, corporate governance, and compliance with statutory requirements to ensure its long-term viability. The Board monitors the risk profile of the organisation and addresses the key risk areas of Revenue, Expenses, Research and Administration.

Office Bearers

CHAIR

Heart Research

Anthony Crawford BA, LLB, FAICD

Retired Solicitor Company Director

HONORARY TREASURER, **VICE-CHAIR:**

Dominic May

MMgmt, JP, MAICD Corporate Services Manager and Executive Member, NSPH (retired Mar'21))

VICE CHAIR:

Professor Ravinay Bhindi

MBBS (USyd), MSc (Oxon), PhD (USyd), FRACP, FCSANZ, FESC Professor, USyd Head, Department of Cardiology, RNSH Consultant and Interventional Cardiologis

DIRECTORS

Professor Levon Khachigian BSc (Hons1), PhD, DSc (UNSW), MIP (Law) (UTS) NHMRC Senior Principal **Research Fellow** Professor in Medicine, UNSW Head, Vascular Biology and Translational Research, Schoolof Medical Sciences, UNSW Medicine

Dr Rebecca Kozor

BSc (Med) MBBS PhD FRACP FCSANZ Cardiologist, RNSH and NSPH Senior Lecturer, Faculty of Medicine & Health, USyd Co-director, USyd Cardiovascular Magnetic Resonance Group part-year until Nov 2022

Brigid K. Shute

Grad Dip. ProfMktg Director, PolarMermaid Pty Ltd

Anthony Thirlwell OAM

FAICD, BSC(Hons), MBA Previously CEO National Heart Foundation of Australia (NSW)

Dr Usaid Allahwala

MBBS (Hons I) | BSc(Med)Hons (Hons) | FRACP (Cardiology) | FCSANZ | Phd (Usyd Candidate) part-year from Feb 2023

Professor Geoffrey Tofler*

MBBS MB FRACP FACC, Professor of Preventative Cardiology, USyd Staff Specialist in Cardiology at RNSH

Gary Edstein

CEO DHL Worldwide, Grad Dip. Marketing, Dip Marketing, GAICD CEO DHL Express Oceania Chair of Tasman Cargo Airlines Advisor Prince Consulting Australian Institute Company Directors part-year from Feb 2023

COMMITTEES OF THE BOARD

Heart Research Australia provides funding for Grants and Scholarships to foster high quality cardiovascular research by encouraging and supporting a continuum of research from basic to applied science, including laboratory, clinical and public health research, into the understanding, prevention, diagnosis and treatment of

cardiovascular disease. Applicants for Project Grants are encouraged to apply for seed grant funding to develop new research concepts to the point where the research is sufficiently advanced to be eligible to compete for funding from other sources, including NHMRC. Heart Research Australia Scholarships consist of a stipend and an annual grant for research consumables.

The Research Grant Advisory Committee (RGAC)

reviews applications made to the Foundation for financial support, monitors the research activities funded by the Foundation and makes

recommendations and delivers reports to the Board of Directors on matters relating to the research objectives of the Foundation. Members of the RGAC are all highly qualified researchers and practitioners.

The primary role of the Scientific Advisory Committee (SAC) is to advise the Board on future directions in research and the resources required to support future research initiatives.

CHAIR

Prof Levon Khachigian

* Prof Tofler was appointed as an Alternate

Bhindi is unavailable due to his conflicting

Director to attend meetings when Prof

responsibilities as a senior cardiologist

and Head of the Dept of Cardiology.

Governance review

The Board Charter, adopted in September 2016, commits the Board to "excellence in governance". To this end, a program of periodic review has been established to ensure all aspects of the Foundation's activities are consistent with best practice for the sector.

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Heart Research Australia applies a rigorous process to the review of applications for Project Grants and PhD Scholarships. Membership of the RGAC may be supplemented by academics, researchers, and clinicians from the broader research community to provide external expertise and advice to the review process.

	CHAIR
	Dr Michael Ward MBBS (Hons), FRACP, PhD, DDU, FCSANZ Consultant & Interventional Cardiologist
6	MEMBERS Prof Ravi Bhindi, Prof Levon Khachigian, Dr Rebecca Kozor, Dr Usaid Allahwala
	MEMBERS Prof Ravi Bhindi, Prof Gemma Figtree Brigid Shute, Tony Thirlwell

Brigid Shute, Tony Thirlwell Dr Michael Ward, Dr Usaid Allahwala Anthony Crawford BA, LLB, FAICD (ex officio)

Honours Board

Heart Research Australia supports world-class and emerging researchers to conduct groundbreaking research into the prevention, diagnosis and treatment of heart disease.

By supporting 'seed' funding, we allow our researchers to turn their innovative, 'out of the notebook' ideas into reality. This type of first stage research does not qualify for government funding, so we rely on the community to help make the investigation of such ideas possible.

We would like to recognise the incredible generosity of the following individuals and organisations who have contributed significantly to help these breakthroughs happen and save lives. We are so truly grateful for your wonderful support. Thank you.

Significant benefactors \$25,000+

Jan and Lyn Shaddock

Significant **benefactors** \$5,000+

Betty Price Geoffrey Charlesworth Hamish Mackie John & Margaret Gilfillan John and Mary Glendinning Margaret Watts Robert Fuller Sandy Shuetrim & Charlie Shuetrim AM Tony & Jane McCormick

Significant benefactors \$1,000+

Alan Puttock Alexandra Carew & Share Croker Alice Oppen OAM Allan & Lori Farrar Annette Abbott Barry Duncan Betty Armbruster Beverley Large Boden Projects Pty Ltd Brian Martin Bruce Walker Bryan Menhinnitt David Warren **Economics Students Union** Garry & Loretta Besson Graeme McOrist Gregory & Marion Breden Rear Admiral Guy Griffiths Gwen Chaikin H.E. Pratten Ingrid Kaiser J O'Brien Megan O'Leary James Holmes Janet Brierley Jennifer Smith

John Barwick John Eldershaw Judith Matear June Duncan Livingstone Investments (NSW) Lorraine Wallis Lorraine Pole Margaret Mills Marilyn Jonas Mark Rogers Maxwell Hemmy Megan O'Leary Morrish Besley AC Pamela Hinchliffe Paul Korbel Paula Flynn Paula Fox Pauline Bridge Pixie O'Neill Ronald Webb Ross Graham Sandra Ollington & Donald Hector Steve Harvey Sue Herbert Thidarut Ng Tom & Robyn Pinzone Vera Smith Warna Perera Wendy Trevor-Jones William Oxby

Trusts and Foundations

Lin Huddleston Charitable Foundation James & Jutta Lauf Foundation James N. Kirby Foundation Perpetual Ltd Skipper Jacobs Charitable Trust Wiggs Foundation Wood Family Foundation

Community Organisations and Ambassadors

Anna & Alessandro Pavoni Chris Russell AM Gary Dawson OAM Megan O'Leary Jen O'Neill Matthew Laverty Dr Monique Watts

Estate of the late

Angelo Casella Ann Louise Davies Anita Stafford McKenzie Anton Cornelius Peterson Beryl Anne Tidex George and Mary Thompson Grace Doreen Gray Hilton Richard Cooke Dr Ian Fitzpatrick Keith Clayworth Margaret Josephine Borg Marjorie Williams Maurice Sidney Pembroke **Rita James** Stephan Center

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