KEEPING FAMILIES TOGETHER FOR LONGER

ANNUAL REPORT 2017

Heart Research Australia

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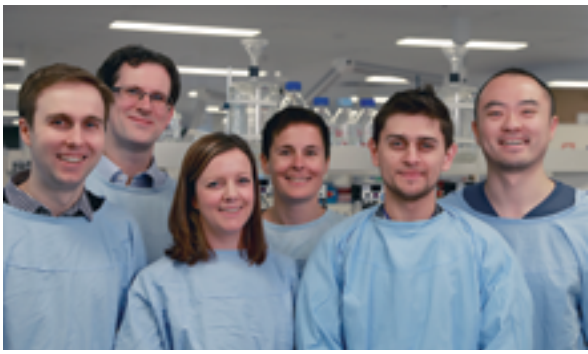


KEEPING FAMILIES TOGETHER FOR LONGER

"The first heart attack was a shock, completely out of the blue. It wasn't something we'd thought about as we were so young, fit and invincible. I just remember crying to and from the hospital every day, but trying to be strong and positive while there. It was an impossibly emotional time. I guess for us, we had no warning, no idea, that his cancer treatment could possibly lead to heart issues."

– Anna Pavoni

Alessandro's Heart Story

Heart Research Australia Ambassador Alessandro Pavoni was just 19 when he was diagnosed with cancer in his lungs and back. After undergoing treatment for a year, Alessandro was in remission and looking forward to life ahead.

Alessandro focused on his career and worked in Michelin-starred restaurants in Italy and France, before migrating to Australia and starting his first restaurant, Ormeggio at The Spit.

For his wife Anna, Alessandro's cancer was just a 'story' from his past, and they never contemplated facing any further health issues. But despite being fit and healthy, Alessandro suffered a heart attack in 2009 when he was just 36 years old. He had a second heart attack less than a year later.

Alessandro believes his coronary arteries were "ruined" as a result of the radiotherapy and chemotherapy he had undergone to treat his cancer.

Anna recalls "The first heart attack was a shock, completely out of the blue. It wasn't something we'd thought about as we were so young, fit and invincible. I just remember crying to and from the hospital every day, but trying to be strong and positive while there. It was an impossibly emotional time. I guess for us, we had no warning, no idea, that his cancer treatment could possibly lead to heart issues."

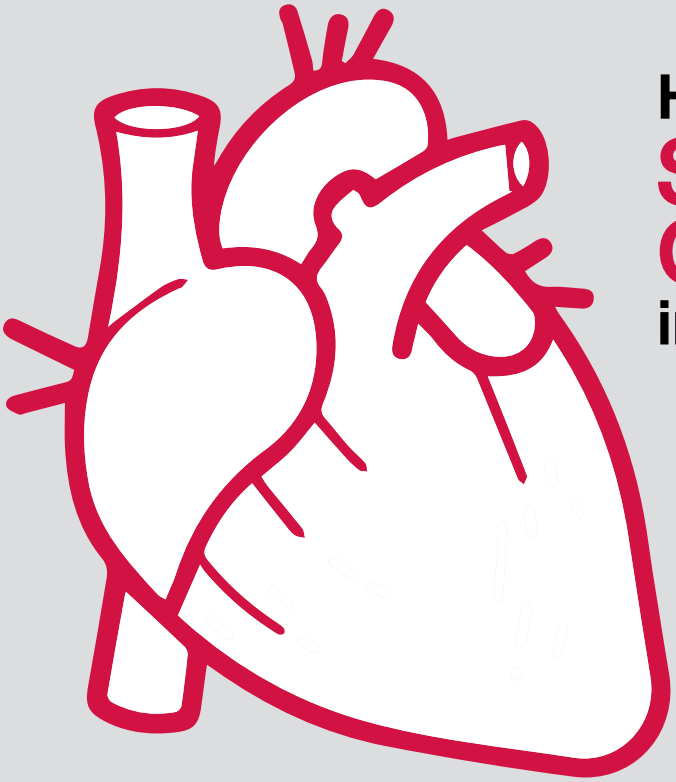
Alessandro and Anna were dealt another cruel blow when they learnt they couldn't have children due to the cancer treatment, so they began IVF which took many cycles and losses before they finally welcomed daughter Jada in 2014, and were also blessed with son Luca in 2016.

Despite these challenges, Alessandro remains positive and cherishes his career and beautiful family. He and Anna passionately believe in the power of world-class, life-changing research and hope other families can be spared the heartache they've faced as a result of cancer and heart disease.

Heart Research Australia's Chair of Cardiology, Professor Helge Rasmussen, and his team are working on a project that has the potential to reduce or even eliminate heart damage, including heart failure, by making cancer treatments more effective.

This research has the potential to make a significant difference in the lives of cancer and cardiac patients.

To read further about Professor Rasmussen's ground-breaking research, go to page 28.



Heart disease is the SINGLE LEADING CAUSE OF DEATH in Australia

23 PEOPLE DIE EACH DAY of a heart attack

Heart disease kills one Australian **EVERY 27 MINUTES**

1/4 of AUSTRALIANS have high blood pressure

33% of Australians have high cholesterol

Risk factors for heart attack and heart failure

MESSAGE FROM OUR CHAIRMAN

It has been a busy year for Heart Research Australia – our vision of making breakthroughs in heart disease happen has been taken forward with determination, energy and skill by our dedicated staff and inspiring researchers.

In FY2017 alone, our supporters raised $1.5million to help create more survivors. Each survivor has a story – a story of love, family and memories. A story that could have ended prematurely. Thanks to your investment in research, their stories will continue to unfold. Within these pages, you will meet inspiring heart survivors and the researchers who have created breakthroughs in their care. You'll see how your support is fundamentally altering the narrative for heart patients, their family and friends.

October 2016 also marked our 30th Anniversary, which is a remarkable milestone considering we are solely funded by the generosity of our wonderful donors. We celebrated at The View in Sydney, which was very generously sponsored by Mr Con Dedes, of the Dedes Waterfront Group. We look forward to achieving many more milestones in the years to come.

Our Patient Engagement program is progressing well. It is designed to support cardiac patients and their families with information, helping them understand their heart condition or upcoming procedure, and assist them in their recovery journey. To date we have produced three videos, focusing on 'What is an Angiogram', 'What is a Heart Attack' and 'The Importance of Cardiac Rehabilitation' – I invite you to view these at the Heart Hub on our website.

Our heartfelt condolences are extended to the family and friends of two of our former Board members who passed away this year. Mr John Holman was one of our founding Board members who provided pro bono legal advice to establish Heart Research Australia and served on the Board for 15 years. Another sad passing is that of Ms Anna McPhee, who was also a very valued former Board member. Anna was the first female Chief of Staff to a NSW Liberal premier and her passing will leave a large gap in the Australian business and political community.

We also pay our respects to the late Ms Beryl Raymer, who supported the new generation of our heart researchers through her generous scholarship program over many years.

Finally, I would like to thank my fellow Board members, our CEO, Nicci Dent, and our wonderful staff and volunteers for their tireless contribution to Heart Research Australia's performance over the year.

With your continued support, we can fulfil our vision of making breakthroughs in heart disease happen and keep families together for longer.

Tony Crawford

Tony Crawford
Chairman

MESSAGE FROM OUR CEO

Your support in 2017 helped us to continue funding our world-class and next generation of researchers as they explore new ways of keeping families together for longer.

Most of Heart Research Australia's researchers are practising cardiologists who are based at Royal North Shore Hospital, which places them in the best position to translate knowledge from the 'bench' to patients 'at the bedside'. This assists them in not only the progress of their research, but this patient interaction also triggers and identifies new areas of heart disease that require further investigation.

A great example of this is the discovery of an increase in heart attack patients who have no traditional risk factors such as high blood pressure, high cholesterol or diabetes at Royal North Shore Hospital. Professor Gemma Figtree's team are now investigating new ways to detect early development of heart disease in this group of people before it becomes life-threatening.

Being situated at Royal North Shore Hospital is what sets us apart from other heart organisations; allowing us to interact, not only with our researching cardiologists, but also with cardiac patients and their families. The part of my job I enjoy the most is meeting heart survivors and listening to their heart journeys. They are extremely grateful to the medical teams who saved them, but through their experience they also come to realise the important role research plays in the improvement of treatment for various heart conditions.

Through this engagement with patients, we identified the need for more information about their upcoming procedures and to help them better understand their heart conditions. We were very fortunate to receive funding to help us produce our *Matters of the Heart* cardiac video series. Thank you to Prof Greg Nelson from Royal North Shore Hospital and Mr Dominic May from North Shore Private Hospital for supporting this initiative.

Stable, sustainable revenue sources give us the certainty we need to commit to funding crucial first-stage research projects well into the future. Monthly giving offers a reliable, steady income stream that is resilient to economic ups and downs, and it also has the potential to acquire and cultivate highly-engaged supporters. Regular giving continues to grow in Australia and was the largest income source across 82 Australia charities who participated in annual benchmarking, representing almost half of all individual giving income in the 2016 calendar year. We have identified the acquisition of new regular donors as one of our biggest growth opportunities, and to date our acquisition program, which leverages digital advertising and engagement, has proven very successful and we will continue to grow this important revenue stream.

This past year we celebrated our 30th Anniversary, reflecting on how far we have come as an organisation and paying tribute to those who have supported us along the way. A special word of thanks goes to Mr Con Dedes from the Dedes Group who very generously sponsored our Anniversary Gala Dinner at his beautiful View by Sydney venue. We wouldn't have been able to celebrate this momentous occasion without this wonderful support!

The pages that follow are filled with examples of how our supporters' have created a meaningful impact.

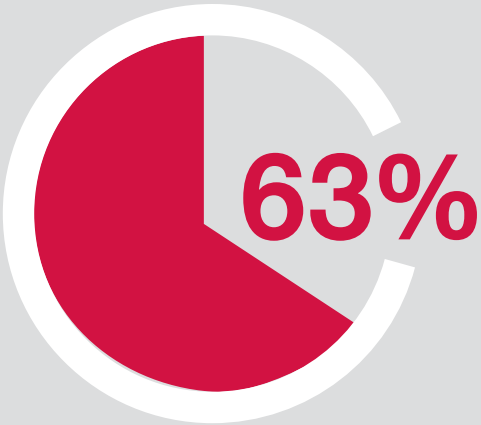
Thanks to you, research is transforming our knowledge of how to prevent and treat heart disease – which remains Australia's biggest killer. Thanks to you, we are supporting the next generation of heart researchers and helping them pursue their dream of creating a heart-healthier Australia. We also conducted essential heart health seminars, talks and activities in schools, such as Wear Red Day, aimed at raising awareness of heart disease and empowering all Australians with the right tools to protect themselves.

Finally, I would like to express my gratitude to my team for their commitment and passion. They work with limited resources, yet achieve great things, which makes me proud to be part of this team.

With help from you and other wonderful supporters, we will continue to invest in the heart health of Australians and keep hearts beating. We are profoundly grateful for your support. Thank you.

Nicci Dent
Chief Executive Officer

4 X MORE WOMEN
die of heart disease
than breast cancer



63%
of Australian adults are
overweight or obese

Indigenous deaths from Ischaemic Heart Disease in 2013 was at least

60% HIGHER
than non-Indigenous
Australians

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.

Our Vision

Making breakthroughs in heart disease happen.

Our Mission

We support a centre of excellence that attracts 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. First-stage research does not qualify for government funding, therefore it is with thanks to wonderful supporters like you who make the investigation of such ideas possible.

Your generosity gives researchers the opportunity to progress their ideas into research and clinical trials that could results 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 work is supervised by our 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 practising 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.

Chairs of Cardiology

We also fund two academic chairs of cardiology in association with the University of Sydney and Royal North Shore Hospital, as well as specialist support staff for these positions: The Chair of Cardiology is held by Professor Helge Rasmussen and the Chair of Preventative Cardiology is held by Professor Geoffrey Tofler.

By virtue of their position at the Royal North Shore Hospital, one of Sydney's foremost teaching hospitals, our Chairs supervise some of our most promising postgraduate students and early career researchers.

As mentors for future generations of heart researchers, they are building a base of faculty talent which enriches the hospital, and in turn attracts a world-class team of high quality investigators all focused on one thing: fighting heart disease.

What sets us apart from other heart organisations?

Most of Heart Research Australia's researchers are practising cardiologists based at Royal North Shore Hospital, placing them in the best position to translate knowledge from the 'bench' to patients 'at the bedside', assisting them in not only the progress of their research, but this patient interaction also triggers and identifies new areas of heart disease requiring further investigation.

A good example of this bedside to bench research trigger is the discovery of an increasing number of patients, who are experiencing a heart attack, despite having no traditional risk factors, such as high blood cholesterol, diabetes, hypertension or a family history of heart disease.

This finding is now being investigated by Heart Research Australia's researchers to identify new ways of diagnosing heart disease, and enable early identification and treatment of these patients to better protect them.

Join our fight against heart disease

Our research is powered by your support. Your donations and the funds you raise, contribute to reducing the devastating impact heart disease has on families and communities, as well as helping to protect future generations.

Here are just some of the ways you can show your support:

- Make a donation, or better still, become a regular donor
- Host a fundraising event
- Purchase raffle tickets
- Leave a gift in your Will

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

GREG'S HEART STORY

Retired Fire & Rescue NSW Commissioner Greg Mullins was only 52 years old when he suffered a heart attack in 2012. However, he wasn't a typical heart attack patient – he had no family history of heart disease, went to the gym and practiced karate almost daily, followed a healthy diet, was not overweight, and had no high cholesterol or high blood pressure.

On April 7, 2012, during the Easter break, Greg went to the gym with his wife. He was doing a boxing class when he felt a searing pain in his right shoulder.

"I think I knew immediately what it was. It was the right shoulder though, that threw me. It was like a hot knife had been pushed in. It was similar to when I'd torn my shoulder a couple of years before while lifting weights, and I thought, oh no I've torn it again!"

"It was an incredible pain, but then it spread right across, and I spent about five minutes in denial, but I've been to enough emergencies to recognise this was something more serious."

Greg was feeling very nauseas and tried to wave to his wife to let her know what was going on. He went to the change rooms and realised they were empty, and thought "I'm going to die alone in here".

He managed to make his way to the reception desk, where he collapsed, and they called an ambulance. Firefighters were the first on scene and applied oxygen until arrival of paramedics.

"The gym had a first aider who did a fantastic job, but I've been to enough cardiac arrests, heart attacks and emergencies myself to know there wasn't a lot they could do until the paramedics arrived. They kept me comfortable, went and called over my wife who is a registered nurse, who looked extremely worried".

At hospital, Greg was immediately taken to the catheter lab where an angiogram identified the blocked artery. The artery was unblocked, a stent inserted, and Greg felt an immediate incredible sense of relief.

"I went from thinking 'Well this is it, 52 years old and that's where the story ends', and after that I was angry. I was flashing through everything I'd done in my life, health wise, because I never wanted to end up in that position, and yet here I was in hospital having suffered a heart attack."

Even though the heart attack came as a big shock to Greg and his family, he made a full recovery and continues to keep fit whilst enjoying his recent retirement from Fire and Rescue NSW. Greg won a silver medal in Karate at the 2012 World Firefighter Games soon after his heart attack. In August 2017 he competed in the World Police and Fire Games in Los Angeles.

Risk factors such as high blood pressure, high cholesterol, being diabetic, or cigarette smoking, have long been used as predictors of developing heart disease.

However, a recent study led by Heart Research Australia's Professor Gemma Figtree, published in the European Journal of Preventative Cardiology, found up to 27% of patients suffering a heart attack at Royal North Shore Hospital had NO known risk factors for coronary artery disease. This percentage had increase by 16% over eight years.

Professor Figtree and her team are now investigating new ways of diagnosing heart disease to enable early identification and treatment of these patients to better protect them. See page 27 for more information.

VOLUNTEERING TO MAKE A DIFFERENCE

By giving us their time and sharing their skills, our wonderful volunteers help us with administration duties and assist with fundraising events.

We are incredibly thankful to the following people who have volunteered for us this past year.

> *"My main reasons for choosing Heart Research Australia was the fact that they looked at my skill set and tried to think of some tasks that I would find interesting and are suitable given my previous work experience."*

Carsten

Heart disease is a condition that can or will affect most of us either directly or indirectly, as is the case with me. My mother's side of the family has a history of heart disease; my grandfather suffered from a slowed heart rate, my uncle suffers from fast palpitations and my mother suffers from skipped beats and extra beats. I am still unaffected and will hopefully remain unaffected, but I see research into heart disease as a very important and worthy cause.

I used to work as a IT consultant, but had to give up work for a number of years because of Chronic Fatigue Syndrome, and volunteering was a good way for me to prepare myself for paid work while contributing to a cause that affects my family and is close to my heart.

I looked at two different charity organisations when I decided to volunteer and one of my main reasons for choosing Heart Research Australia was the fact that they looked at my skill set and tried to think of some tasks that I would find interesting and are suitable given my previous work experience. This has in turn benefitted Heart Research Australia and helped to improve my chances of returning to paid work, while giving me immense satisfaction volunteering and contributing towards a great cause.

Pam

I enjoy working as a volunteer on the monthly Heart Research Australia display at North Shore Private Hospital.

It's a wonderful opportunity to introduce hospital visitors to Heart Research Australia, to tell them about heart disease and the great work that is done by our researchers, and to raise some much-needed funds.

People often stop to chat about how heart disease has affected them or their family – and everyone loves to cuddle Hugo (the Heart Research teddy bear).

Sippy

I am a new resident in Sydney, and a qualified architect, environmental planner and currently looking for work opportunities.

Being unemployed in a new country takes a toll on your physical and mental health. A few months back, I was beginning to settle here when I came across an opportunity to work as a volunteer at Heart Research Australia.

We often hear the safety announcements in airplanes "please secure your oxygen masks prior to helping other passengers". This means one needs to be in a safe spot by him/herself already to be able to contribute to others. A few acquaintances told me not to volunteer until I have financial security to run my household. My heart knew I wanted to do it though.

I have now been volunteering at Heart Research Australia for over three months. I enjoy working with the team. Every time I visit they never fail to ask me "How are you?". When they say, "Thank you, Sippy!", they mean it by heart. They are a lovely team and affection is reflected in their eyes. Meeting them reinforces my faith in nature that energizes me to tread towards my goal.

Volunteering here has not only helped me meet positive people, but also contribute to society. I write a lot of hand written cards on behalf of the organisation, thanking those who have donated, which I think is a beautiful gesture of appreciation.

I am still working to reach my goal, but I know I will always be volunteering in some way or the other, to be able to see the good in society and help keep my sanity!

KEEPING HEARTS BEATING

Heart Research Australia's researchers are working towards a world free from heart disease, however the reality is that 4.2 million Australian are living with this insidious disease. To support them and their families, we are passionate about spreading heart health messages to ensure every Australian has access to the best information and support.

Your journey to heart health starts here.

Heart Health Seminars

8 in 10 cases of premature heart disease and stroke are preventable through healthy lifestyle behaviours.

Heart Research Australia is dedicated to reducing the alarmingly high death rate due to heart disease by offering free Heart Health Seminars, to help inform the community of the risks associated with heart disease and provide practical advice for living a long and healthy life.

The Heart Health Seminars include presentations about the latest advances in heart research from some of Australia's leading cardiologists, as well as practical advice from a range of health experts on ways to incorporate healthy eating, exercise and stress management for optimum heart health.

Heart health checks are also offered on the day with free screenings for blood pressure and blood sugar – which are both modifiable risk factors for heart disease.

Improving your heart health is just a 'click' away at heartresearch.com.au

The Heart Hub

The Heart Hub 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.

Visit heartresearch.com.au/heart-hub for more info.

The Heart Smart Club

The Heart Smart Club provides members with information on how to maintain a heart healthy lifestyle, access to online webinars, covering a range of topics focused on the prevention and treatment of heart disease, presented by our team of leading cardiologists and researchers.

Members also receive regular e-newsletters, which include research updates, heart healthy recipes, information about different heart conditions and stories from people who are fighting heart disease and how they are coping with this life-changing adjustment.

To join our Heart Smart Club simply visit heartresearch.com.au/heart-smart-club

The Heart Smart Forum

This is a closed group, where heart survivors, or their family and carers, can share their stories and interact with people who are in a similar situation. Register at heartresearch.com.au/heart-smart-forum

Matters of the Heart – Video series

Learning that you have a heart condition is a major event. It can have a significant effect on you socially, physically and emotionally. Understanding the impact, and learning about your condition and its treatment, are important steps in managing the effects – on you, and on your family and friends.

As part of our patient engagement program, we have started to produce a series of informational videos, with the aim of providing cardiac patients, their families and the wider community with helpful information.

The series covers the most common heart procedures, information on the latest cardiac research, personal stories from heart survivors and the importance of rehabilitation. The videos are available on our website and offered for use in doctor rooms and hospital TV channels.

Topics in the series include; About Angiography, What is a Heart Attack, The Importance of Cardiac Rehabilitation; with upcoming topics including All About Valves, What is a Diagnostic Electrophysiology Study, and Device Therapy for Arrhythmia and Pacemakers.

To view the *Matters of the Heart* episodes, please visit heartresearch.com.au/video

Heart Smart Pocket Guide

In December 2016, we developed the *Heart Smart Pocket Guide*, a compact, wallet-sized fold-out guide to heart attack symptoms, an action plan and risk factors.

We initially distributed around 7,500 to our existing donors and supporters, and in March 2017 began offering the pocket guides to the wider community via Facebook. By the end of June, we had sent out an additional 3,000 guides.

We have been overwhelmed by the personal stories hundreds of people have shared with us because of the pocket guide. Sadly, too many people have lost a loved one to a heart attack simply because they were unaware of the symptoms, and often, in the absence of chest pain they mistook the warning signs for heartburn, stress or another illness.

It is our hope that the pocket guide helps people be more aware of the full range of symptoms of a heart attack, and encourages them to seek medical attention if they're ever in doubt. No family should go through the tragedy of losing a loved one so unexpectedly to a heart attack, and we hope the pocket guide might play a small role in preventing such heartache.

To order your free guide visit heartresearch.com.au/free-pocket-guide

OUR HEARTFELT THANKS

Thank you for helping us to create more birthdays for more Australians

In these pages, you'll see advances made possible by your donations: research that has the potential to bring severe heart failure patients back from the brink of death, identify why more Australians with no risk factors are having heart attacks, protect cancer patients from heart toxic drugs, safeguard pregnant women from pregnancy induced heart failure and repair damaged heart tissue with a patient's own stem cells.

This research is critical if we're to succeed against the urgent threat we face. Heart disease still takes one life in Australia every twelve minutes, and the number of deaths from heart disease is predicted to rise further still, due to our ageing population, couple with the rising rates of diabetes and obesity in the community.

With your continuing support, we are ready to confront these challenges and fund the breakthroughs that will save and improve more lives. The stories you'll read in this report from survivors and researchers, are the beginning of a much bigger story, one in which you play a crucial role. Together, we will work to give Australians healthier tomorrows, so they can spend more years with the people they love.

Gifts in Wills

Gifts in Wills enable our supporters to play a crucial role in future breakthroughs by providing an opportunity to make a much greater contribution to heart research than they may otherwise be able to afford in their lifetime.

Gifts in Wills are the lifeblood of our organisation, representing more than on average one quarter of our income. Without this powerful form of support, we simply could not continue to fund future breakthroughs in heart disease.

We are indebted to the visionary men and women who have supported Heart Research Australia in this meaningful way. The George and Mary Thompson bequest received in 1990, was one such transformative gift. The generosity of this visionary couple enabled Heart Research Australia to establish an endowment fund which partially supports the Chairs of Cardiology at Royal North Shore Hospital, helping to build its reputation as an internationally recognised centre of cardiac research excellence with the aim of attracting the best and brightest minds in the field.

In 2016/17, we were humbled to receive a total of $1.1million from ordinary Australians who remembered Heart Research Australia in their Wills and honoured us with gifts both large and small. Janette Hamilton, a long-term supporter of Heart Research Australia was one of them.

Janette was a musical prodigy, whose career was tragically cut short after a horrific motor vehicle accident in 1981 almost took her life. Those who knew her say that she faced life after her accident with the same resoluteness and self-discipline she used to become a concert pianist.

△
Janette Hamilton

Janette's passion for philanthropy was informed by her faith and her strong desire to give back, and when the time came for Jan to make her Will, she chose to use it as a lasting expression of her philanthropic interests. After making sure that her loved ones were looked after, Janette divided the remainder of her estate between ten organisations she believed were doing important work for her community and for all Australians. Heart Research Australia was privileged to be included.

A gift in your Will to Heart Research Australia is a wonderful way to fulfil your desire to make a lasting impact on the lives of future generations.

This legacy could help protect the hearts of your children and your grandchildren, by helping to sustain

our world-leading research program, driving progress in areas that need it most – like finding a cure for heart failure.

"I had a mitral heart valve operation back in 1995 at Royal North Shore Hospital. Not only was I very happy with the result, I was also interested and impressed by the innovative research being undertaken by Heart Research Australia – or, as it was known back then – the North Shore Heart Research Foundation.

I decided to support the organisation through regular contributions, and my wife and I also made the decision to include a gift in our Wills to Heart Research Australia. Advances in heart research made my successful heart surgery possible, and more than twenty years later I'm still enjoying good health, and running 5km in under 30 minutes!" – Peter Gentry

"I like to think my legacy will help fund future advances and save lives."

△
Peter Gentry

Regular Giving – Our Heart Heroes

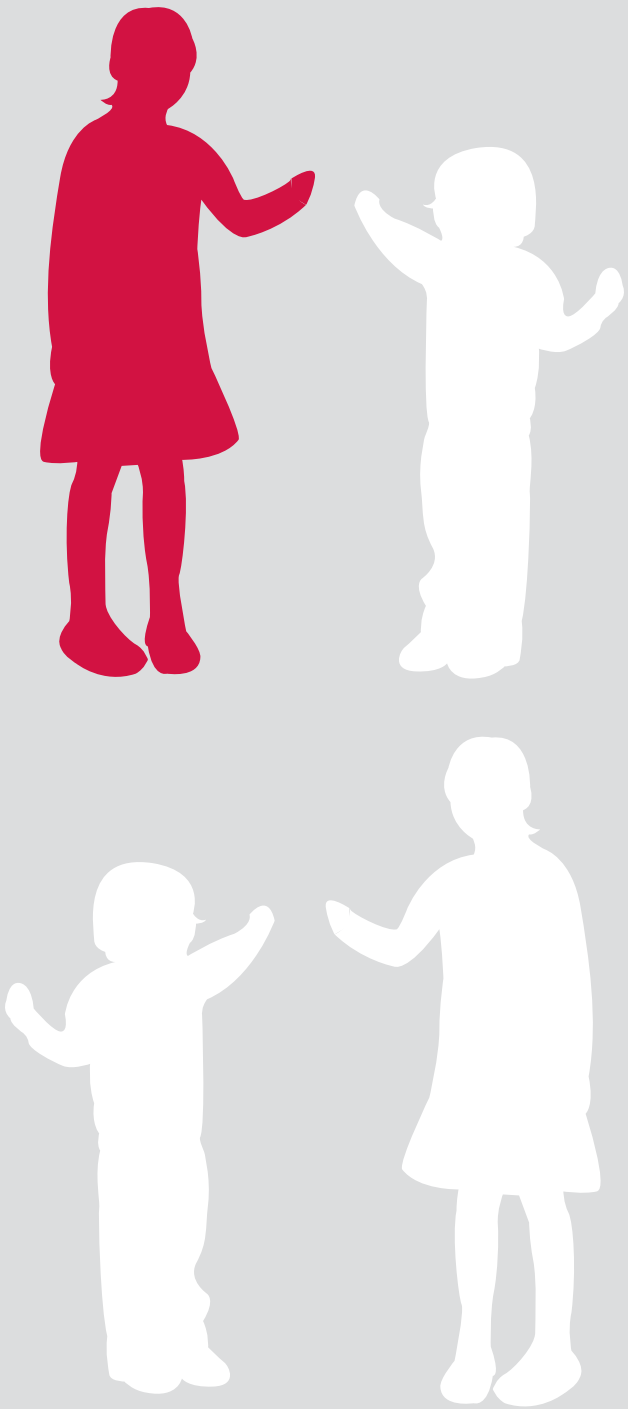
Heart Heroes are a special group of donors who have made the generous commitment to donate to us each month.

The *Heart Hero* program provides a stable, sustainable source of income that helps us commit to funding crucial research projects well into the future.

We were excited to welcome over 250 new *Heart Heroes* this year, which as a small organisation with a very small regular giving program, represented a significant increase. And while this program may still be small, it's growth is powerful, because our *Heart Heroes* are helping to accelerate the research that could lead to the next breakthrough in heart disease.

As well as welcoming new *Heart Heroes*, we would also like to acknowledge the regular givers who have been supporting us with monthly or quarterly gifts for many years. Your passion for funding heart research is incredible, and we are exceptionally thankful for your loyalty and commitment.

To all our *Heart Heroes*, thank you. Your support means the world to us, and we are beyond grateful that you have chosen to support us in this invaluable way.



1 in 4
CHILDREN AGED 2-17 YEARS
are overweight or obese,
a risk factor of heart disease

REMEMBERING A REMARKABLE MEMBER OF THE HEART RESEARCH AUSTRALIA FAMILY

△
Beryl with her scholarship alumni.
Left to right: Natasha Fry, Beryl Raymer, Muntasir Billah and Keyvan Karimi.

Heart Research Australia was deeply saddened by the passing of Beryl Raymer in 2017. Beryl had a successful career in education and believed passionately in its transformative powers. *The Beryl Raymer Scholarship* was established in 2013 to nurture the next generation of heart researchers and enable domestic and international research students to realise their potential in the field of scientific research.

The scholarships provided promising young PhD students with the necessary financial resources to focus on producing original, publishable research, that is adding to the bank of world-wide knowledge on heart disease and producing fresh avenues of research that may one day see the end of heart disease as we know it.

Beryl took a keen interest in all her scholars and their individual research projects. Her compassion, intelligence and wonderful sense of humour will be sorely missed.

HIGHLIGHTS FROM THE YEAR

As Heart Research Australia does not receive any government funding, we rely entirely on the generosity and passion of the community to support our researcher.

Every year, many of our wonderful supporters choose to go the extra mile by raising funds or attending special events to help our researchers in their quest to find new ways of saving Australia's hearts.

Here's a snapshot of some of the many ways you got involved with Heart Research Australia.

▽ Wear Red Day

Wear Red Day is Heart Research Australia's annual community fundraising campaign taking place on the day of hearts – Valentine's Day 14 February. The day is aimed at raising awareness of heart disease and raising much needed funds for life-saving research.

Now in its second year, Wear Red Day 2017 was supported by over 340 participants, ranging from individuals wanting to make a difference, to businesses supporting the heart health of their staff and creating a fun day in aid of helping us beat Australia's biggest killer.

We were excited to have 29 schools support Wear Red Day in 2017, with students wearing something red for a gold coin donation and turning Valentine's Day truly into the day of hearts.

A special mention goes to Rachel Kousel and the SAT team from the Woolworths Group in Bella Vista, who not only supported Wear Red Day with a staff morning tea, but they also took on a 30-Day Heart Healthy Challenge, with teams pledging to do one hour of exercise a day during those 30 days. The Challenge not only helped some staff members increase fitness and lose weight, but it also proved to be a fantastic team building exercise.

"We worked with Heart Research Australia to set up the 'I Love Life' challenge to help build a stronger team and support our people in achieving some personal health and fitness goals. The response was amazing, everyone got involved in some way, whether as a participant or sponsoring a colleague. The office was a buzz with step competitions, walking meetings, tennis outings and innovative fundraising. People loved the motivation it gave them, and going for 30 days, they felt they could really build some new habits. Some healthy competition between the teams led to fundraising exceeding our expectations, giving a real sense of pride to all participants. All in all, a fantastic initiative for both our team, and for an organisation doing such important and innovative work." – Rachael Kousel

Wear Red Day 2017 raised over $29,000 for heart research. A heartfelt thank you to everyone who participated or contributed, you are helping to make breakthroughs in heart disease happen!

Heart Research Australia Charity Golf Day

James Drake approached Heart Research Australia with an idea of holding a Golf Day at the Virginia Golf Club in Brisbane.

James' father had a heart attack at the Golf Club (where they are still both active members). With a family history of heart disease, a charity golf day was James' way of raising some much-needed funds for heart research.

We would like to thank and congratulate James, his wife Kasey, the entire Drake family, sponsors and players who supported this inaugural charity golf day, who collectively helped raise just over $10,000.

Bold and Beautiful Swim Squad

Ian Forster and the Bold & Beautiful Swim Squad in Manly have been some of Heart Research Australia's most avid supporters for many years now. Each year they host a fundraising swim, with approximately four hundred of their squad swimming from Manly to Shelly Beach and back to raise funds for Heart Research Australia.

This year we were invited to their monthly members' dinner, with our Chair of Cardiology Professor Geoffrey Tofler presenting on the importance of exercise and heart health, and giving the swimmers an opportunity to learn more about the role and progress of our research as well.

The fundraising swim and dinner together raised just over $1,300 through donations in total.

Charity Golf Day

Heart Research Australia's annual Golf Charity Challenge has become a firm favourite amongst our golfing enthusiast supporters.

Co-ordinated by former Board member, Paul Allison and Gary Dawson from Bullant Sports the golfers enjoyed a great day at Sydney's Long Reef Golf Club, and had the opportunity to hear the latest research updates and the positive impact heart research has on keeping families together for longer and protecting future generations.

This event raised a generous $14,000 through golf day entries, raffles and auctions. Thank you for your continued support – it is greatly appreciated.

▽ Red Heart Rugby Day

Every year the Norths Rugby Club players proudly wear their specially designed 'hearty' socks to show their support and help raise funds at the annual Red Heart Rugby Day.

Rugby supporters not only enjoy a good game of rugby, but can also win great prizes through the raffle and have a hearty fun day with the Heart Research Australia community.

Jointly, the 2016 and 2017 Red Heart Rugby Days raised over $2,700, demonstrating the importance of combining sporting communities with heart health awareness.

△ Annual Heart Health Lunch

The Annual Heart Health Lunch is organised and supported by the wonderful ladies from the Red and White Committee. After more than ten successful years of raising awareness and funds, the committee raised nearly $32,000 for Heart Research Australia through donations, raffles and ticket sales in 2016.

Under the leadership of Mrs Lori Farrar, the Committee's results continue to grow year on year. "The Red and White Committee is a group of dedicated volunteers who have held the Annual Heart Health Lunch for over a decade. Lynne Ravenhall, Fiona Taylor, Jenny Carr, Lynn Varvel and I proudly support the extraordinary research carried out by the medical team at Heart Research Australia. We appreciate the support of the cardiologists who share their expertise with the guests at the lunch and we look forward to continuing this tradition." – Lori Farrar

▷ 30th Anniversary Gala Dinner

The incredible generosity and support from our wonderful donors has made 30 years of ground-breaking research into heart disease possible.

On the 28th October 2016, friends of Heart Research Australia came together at The View in Sydney, to celebrate the great work and achievements of our researchers who have made a significant difference in improving the life-expectancy of heart patients, and helping to reduce the devastating impact heart disease has the Australian community.

Master of Ceremonies Mr Chris Russell opened the night by sharing his personal story of surviving a heart attack, and showed a touching film about how heart research has saved lives.

Special guest speaker Professor The Honourable Dame Marie Bashir AD CVO shared her views on why heart research and the

charity spirit are so important for the Australian community. Our Chairman Mr Tony Crawford spoke about Heart Research Australia's history and the vision for the future, as well as giving thanks to our wonderful family of supporters.

A special mention goes to Mr Con Dedes from the Dedes Group for the exceptionally generous venue sponsorship, and of course, we are also grateful to everyone else who donated prizes towards the successful auction.

Feedback from the evening was tremendous, with guests particularly enjoying the fine food and wine, and dancing to the The Ruby Keys Band.

The evening raised a grand total of $74,000 through auctions, ticket sales and raffles.

We would like to thank the many organisations and individuals for their generous support of our 30th Anniversary Gala dinner. Dedes Waterfront Group generously donated the wonderful venue at View by Sydney, food and beverages. Prize donors included SailCorp, The Ken Done Gallery, Accolade Wines, Savills Australia, Australian Rugby Union, Cricket Australia, Sydney Swans, Ormeggio At the Spit, Park Hyatt Sydney, Curly Flat Vineyard, Pennicott Wilderness Journeys, Farrar Legal, Jan Harrington-Johnson, Anna Meares and Bradley Guest. Thank you also to corporate sponsors Sanofi, Amgen and Siemens Healthineers for supporting and joining us.

What impact does your support have?

The money raised by our wonderful community of fundraisers and the generous donations made by their family and friends;

- Helps communities access vital heart disease information and resources.
- Ensures our researchers have the necessary laboratory equipment to assist them in their research findings.
- Contributes to building and implementing research projects dedicated to exploring new ways of protecting Australia's hearts.
- Goes towards the funding of world-class medical equipment.
- Supports two Chairs of Cardiology and the next generation of researchers.

CORPORATE SUPPORT

Heart Research Australia is thankful to the business community who contribute to our research programs and fundraising events through charitable donations, sponsorship, workplace giving, in-kind support and pro bono services.

Alessandro and Anna Pavoni, owners of Ormeggio at the Spit and Chiosco, and Con Dedes, owner of Dedes Waterfront Group, donated their wonderful venues and contributed prizes towards our 30th Anniversary Gala dinner, Director's Dinner and Golf Charity Challenge in 2016/17. Alessandro and Con are both Ambassadors and generous supporters of Heart Research Australia, and we are truly appreciative of their support.

Bayer Australia, Abbott Australasia and Biotronik Australia contributed to Heart Research Australia's Research Fellowships, funding an Interventional Research Fellowship and Cardiovascular Imaging Fellowship. This program provides invaluable training, education and clinical experience for the next generation of talented heart scientists at Sydney's Royal North Shore Hospital.

"For over 120 years, Bayer has been researching and developing innovative medicines and new therapeutic approaches that help make a difference to people's lives. Continuing this commitment, Bayer is proud to collaborate with Heart Research Australia to support a specialised training program and provide Fellowships for two PhD students - nurturing the next generation of cardiac researchers."
– Eduardo Pimenta, MD, PhD, FAHA, FESC, Associate Medical Director, Bayer Australia/NZ

Chatswood RSL Club

In 2016 Heart Research Australia received $4,595 from Chatswood RSL Club through the ClubGRANTS scheme, which allows registered clubs in NSW to give back to their local communities.

The grant enables us to co-ordinate a free Heart Health Seminar to share the latest advances in heart research from some of our leading cardiologists, and hear practical advice for living a heart healthy life. Topics included Heart Failure: causes, symptoms and breakthrough treatments; Heart Valve Disease, what is it and how can it be treated; and Increased risk of heart attack during bereavement. Free blood pressure and blood sugar checks were also provided to help identify people at risk of heart disease.

△
Cheque presentation at Chatswood RSL Club. Pictured is Willoughby Mayor Gail Giles-Gidney, Rosemary Carrick from Heart Research Australia, and Chatswood RSL Club Director, Mrs Margaret Wilton

Workplace Giving

Workplace Giving enables corporate employees to make a regular donation to Heart Research Australia through their payroll. We receive regular workplace giving donations from Blackmores Ltd, Suncorp Bank and Australia Post, and are grateful for the support of these donors and their employers.

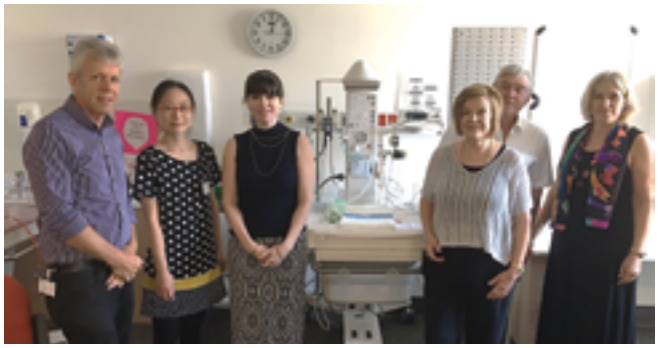
Many organisations also contribute their services and time free of charge. Probono supporters include NAB, Ernst & Young, Ord Minnett, Holmann Webb Lawyers and Hive Pictures.

TRUSTS AND FOUNDATIONS

Advances in cardiovascular research would not be possible without the assistance we receive from Trusts and Foundations. We are incredibly grateful for the loyal support from The Lady Proud Foundation, The Mill House Foundation, Emorgo Foundation, Skipper Jacobs Charitable Trust, Vonwiller Foundation, Ernst & Young Foundation, Lin Huddleston Charitable Foundation, Chatswood RSL Club (via the ClubGrants program) and Equity Trustees Charitable Foundation – Eusandes Legacy.

The Lady Proud Foundation

Heart Research Australia has enjoyed a long-standing relationship with The Lady Proud Foundation since 2012. The Foundation's amazing commitment to heart research has enabled our Chair of Cardiology, Professor Helge Rasmussen, to continue his ground-breaking work into Beta 3 adrenergic agonist treatment for heart failure. So far, the results of Professor Rasmussen's clinical trials are very encouraging for the thousands of patients whose quality of life is severely diminished by the onset of heart failure. This 'blue sky' research would not be possible without the guaranteed long term financial commitment which The Lady Proud Foundation has provided over the years.



△
Tour of the new Neo-Natal Intensive Care Unit at RNSH.
Dr Martin Kluckow, Yan Chen, Nicole O'Gorman, Denise O'Gorman, Tony O'Gorman, Heart Research Australia CEO Nicci Dent.

△
Presentation to The Mill House Foundation for their significant contribution to heart research. Pictured Denise O'Gorman from The Mill House Foundation, Professor The Honourable Dame Marie Bashir, and Heart Research Australia Chairman Tony Crawford

The Mill House Foundation

The Mill House Foundation, via Heart Research Australia, have generously supported the transitional newborn cardiac function research program at Sydney's Royal North Hospital for 20 years. Over the last 13 years, the Foundation has funded Professor Martin Kluckow's research into the relationship between heart function and brain injury in premature and sick infants requiring intensive care, and supported a Research Assistant/Nurse for 10 years which has been essential in sustaining Professor Kluckow's research.

About 1.5% of all babies are prone to the problems of inadequate heart function and subsequent brain injury. Professor Kluckow's team continues to develop new techniques of diagnosing at risk babies and investigating ways to identify, treat and prevent inadequate heart function in the first 24 hours of a premature or sick baby's life.

In 2016 the Foundation continued to fund a Research Assistant/Nurse, Ms Yan Chen, and the costs of medications and consumables to be used in a new u-PDA (Ultimate Patent Ductus Arteriosus) trial.

As well as working on the research projects above, Yan assists with other important non-cardiac projects in the Newborn Care Centre. These include several studies on respiratory support and use of oxygen in the preterm infant, new research on looking at peripheral blood vessel flow in very preterm babies, and projects around optimising nutrition in the newborn infant.

Last year The Mill House Foundation also contributed to the purchase of a BioRad digital droplet PCR machine for Dr Anthony Ashton's research on pre-eclampsia and pregnancy induced heart failure. This new equipment has transformed the way Dr Ashton and his team examine nucleic acid content in samples, a process that underpins the team's research.

We are very grateful to The Mill House Foundation for their significant contribution, which is essential to allow the continuation of this important research.

SIMON'S HEART STORY

"I was enjoying a perfect summer's day at the beach with a swim, a run and a walk up to a lighthouse. I felt a pain in the chest and fast heartbeat. My family took me to hospital and much to my shock I was informed that I had to have bypass surgery."

"Heart Research Australia was crucial in my post-operative recovery. The expert research based approach from Heart Research Australia with heart information, exercise classes, nutrition and mental wellbeing gave me confidence that I was going to get better.

Having a dedicated and co-ordinated team who I could ask any questions no matter how big or small gave me a clear pathway to recovery.

Thank you to Heart Research Australia for creating a caring environment and for the research and education that you provide to treat and prevent heart disease." – Simon

HELP US FIGHT HEART DISEASE

Become a Heart Hero

By making the commitment to donate a small amount each month, you are enabling us to commit to funding crucial research well into the future, and helping to make breakthroughs in heart disease happen sooner.

Donate

Your donations allow us to continue to support our researchers in their quest to protect Australians from this insidious disease, through innovative research.

Make a Gift in your Will

After taking care of your loved ones, a gift in your Will is a direct and valuable way of leaving a lasting legacy that will protect future generations from heart disease.

Fundraise

You can get involved our national fundraising campaign Wear Red Day, or choose us as your charity of choice during sport events, or host an event to raise funds for heart research.

Partner with Us

There are many ways we can work together to help fight heart disease. Find out how your organisation can accelerate research breakthroughs.

Visit heartresearch.com.au/support-us to help make breakthroughs in heart disease happen, and keep families together for longer.

OUR RESEARCH

Keeping families together for longer through life-saving heart research

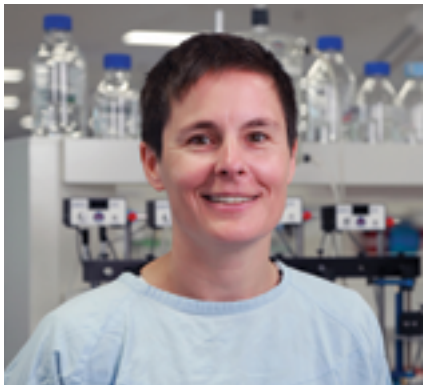
In 2016/17 our inspiring researchers continued in their quest to find new innovative ways to cure and treat heart disease.

Heart Research Australia continues to support the two Chairs of Cardiology, Professors Helge Rasmussen and Geoffrey Tofler. You will see many examples of their work and influences as you read through this report.

Salary support enables research assistants to support key investigative work and routine aspects that are part and parcel of the research process. This enables our high-level researchers to focus more of their time on research.

We are extremely proud of the $1.5million we have contributed in the 2016/17 financial year towards research that will keep families together for longer.

Discovery of new mechanisms for coronary disease



Project Title:
Discovering new mechanisms and therapeutic targets for coronary disease and protection against heart attack

Lead Investigator:
Prof Gemma Figtree

Co-Investigator: Dr Kristen Bubb

Funded since: 2017

Amount: $35,000

Cardiovascular disease is the leading cause of death in Australia. Despite major advances in the understanding and treatment of heart disease, there remains a large gap in our knowledge of what drives this.

Professor Figtree's team have established a large cohort study of patients who are at risk, or suffering from coronary artery disease. Patients volunteer, and consent to contribute a blood sample and their de-identified data to the study, allowing us to study new mechanisms of coronary artery disease.

The team is particularly interested in comparing novel markers (genomic, metabolomic, inflammatory) in people with extensive coronary disease explained by traditional risk factors, against those who have extensive disease that is not explained by traditional risk factors.

They have studied almost 700 patients presenting with life threatening heart attacks to Royal North Shore Hospital, looking particularly at the percentage of patients who have no risk factors and effectively look up from the operating table to say, "Why me doc?".

Over the last decade this percentage has increased from 11% to 27%, independent of age or sex, which highlights the need for ongoing efforts to unravel the "missing" biology of coronary disease.

Prevention of cardiac side effects of cancer treatment

Project Title:
Prevention of anthracycline-induced cardiomyopathy

Lead Investigator:
Prof Helge Rasmussen

Co-Investigator:
Dr Chia-Chi Liu

Funded since: 2016

Amount: $50,000

Heart muscle damage and heart failure is a serious side effect of cancer treatments and it is not uncommon that the life expectancy of cancer patients is limited due to heart disease induced by the cancer treatment, rather than by the cancer itself.

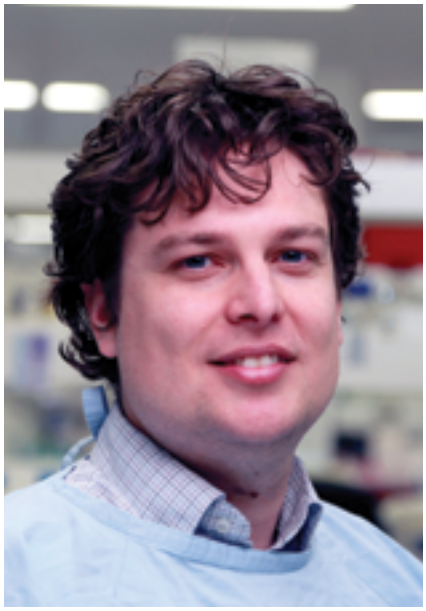
While very effective against many cancers, particular drugs can cause heart failure, and the risk increases as the total dose increases.

In a novel approach to reduce heart muscle damage, Professor Rasmussen and Dr Liu have developed a small protein molecule (peptide) that greatly increases the sensitivity of cancer cells to the drug, while its effects on the heart cells is much less pronounced.

The objective of their project is to reduce the size of the cancer-killing molecule and refine its properties, and test if it can reduce or eliminate the risk of heart failure induced by cancer treatment drugs, without decreasing the effectiveness of the drug in treating the cancer.

The team's test tube studies have found that the effectiveness of chemotherapy was increased nearly tenfold when the peptide they've developed was applied to the cancer cells.

Can we use MRI to identify arteries at most risk from plaque formation?



Project Title:
Novel redox sensitive MRI contrast agents for imaging the vulnerable plaque.

Lead Investigator:
Dr Paul Bonnitcha

Co-Investigators
Prof Gemma Figtree
A/Prof Stuart Grieve
Dr Elizabeth New

Funded since: 2014

Amount: $126,750

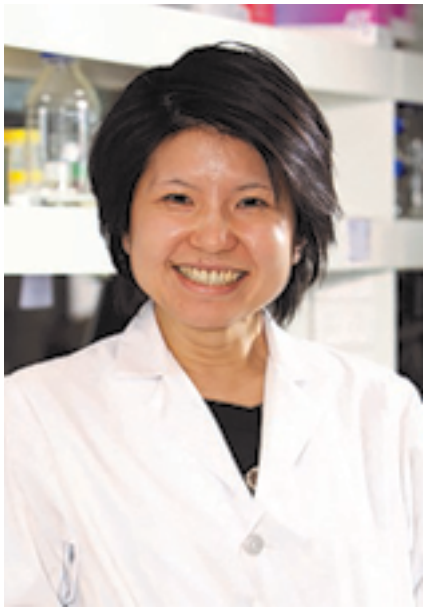
Hardening of the arteries and the formation of fatty plaques lining them are major contributors to stroke, heart attack and peripheral vascular disease.

Currently there is no way of knowing which plaques are most likely to rupture and cause problems. Recent findings indicate that plaque instability may be related to low oxygen levels within them, so a key aim of Dr Bonnitcha's research is to develop ways to detect these vulnerable plaques.

This past year Dr Bonnitcha has successfully synthesised two sets of compounds that act as 'on-off' magnetic (MRI) switches to detect low oxygen concentrations which are commonly associated with unstable plaques. He is currently doing work in cellular and biological models to identify whether different metal agent behaviours are maintained in more complex systems.

Dr Bonnitcha's research has been presented at numerous conferences and was recently published in the Royal Society of Chemistry Advances. He was also invited to attend the Integrated Medical Imaging in Cardiovascular Diseases Conference in Vienna. The next step is to publish biological data from his second round of compounds.

A novel combination for heart failure



Project Title:
Is treatment with an aldosterone antagonist beneficial in heart failure when co-administered with a beta 3 adrenergic agonist?

Lead Investigator:
Dr Chia Chi Liu

Co-Investigators:
Prof Helge Rasmussen
Dr Elisha Hamilton

Funded since: 2014

Amount: $150,000 over 3 years

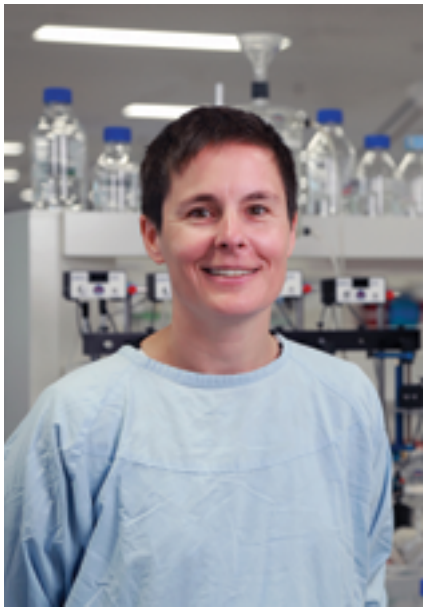
Heart failure is the leading cause of health complications and death in the world. While many drugs are used in the treatment of heart failure, this innovative research has discovered that a new group of drugs, 3-AR agonists (one of which is already used as a treatment for an overactive bladder), are beneficial for heart failure treatment.

Our research has found that administering 3-AR agonists can reduce sodium overload in heart muscle cells and decrease oxidative stress in heart failure.

We have also studied this drug as add-on to standard therapy in 70 patients with heart failure for 6 months, and results showed that the treatment is safe and the condition of patients' hearts is improved, in some cases, significantly. Additional clinical trials for patients with severe heart failure are in progress.

> *"Results showed that the treatment is safe and the condition of patients' hearts is improved"*

Can reducing free radicals improve the heart's ability to function?



Project Title:
ROS-inhibition of the Na+ pump and vascular function in vivo

Lead Investigator:
Prof Gemma Figtree

Co-Investigators:
Prof Kathy Sweadner
Prof Richard Cohen
Dr Ben Davies
Dr Chris Bursill

Funded since: 2014

Amount: $150,000 over 3 years

This project grant has supported a post-doctoral researcher, and the cost of research equipment, which is focussed on understanding the mechanism by which elevated levels of oxidative stress inhibit a key membrane protein and how the resulting cellular changes have an effect on blood vessel function.

The molecular signalling pathways involved have been delineated in cellular models, and then examined in vivo in genetically modified models. From this work we have identified an endogenous protective mechanism in the microscopic signalling compartment that this protein resides in. We are currently working on delivery mechanisms of peptides derived from this.

Given oxidative signalling abnormalities and their effect on membrane proteins has been identified as a central mechanism for vascular disease (including hypertension and atherosclerosis), these findings and theraeputic developments have broad clinical implications.

This work has resulted in a number of publications, a patent application (under review), and additional funding through the National Health and Medical Research Council.

"This work has resulted in a number of publications, a patent application (under review), and additional funding through the National Health and Medical Research Council."

Can we improve outcomes for premature babies by delaying cord clamping at birth for 60 seconds?

Project Title:
APTS (Australian Placental Transfusion Study) Follow up phase

Lead Investigators:
Prof Martin Kluckow
Dr Koert deWaal
(John Hunter Hospital)

Co-Investigator:
Yan Chen – Research nurse

Funded since: 2016
by The Mill House Foundation

Professor Kluckow and Royal North Shore Hospital were the 5th highest contributor of patients, contributing almost 150 premature infants out of the 1600 total involved in this trial.

This trial examined the benefits of waiting 60 seconds after delivery of a preterm infant before cutting the umbilical cord, hoping to allow a placental blood transfusion which would then help stabilize heart function and the circulation over the first hours of life, reducing the chance of organ injury, including brain injury.

The short-term outcomes of this trial will be presented at several international meetings and will be published in a major medical journal.

This trial now moves into the important long term follow up stage and Prof Kluckow and Royal North Shore Hospital are again one of the key institutions involved in this – they will see all of the 147 participants to see how they are at 2 years of age and this will contribute more information about the safety and longer-term benefits of placental transfusion and its effect on heart function.

At the two year follow up, they check development, IQ and the medical health of all of the surviving infants enrolled in the trial. This phase of the trial will provide reassurance regarding the long-term outcomes of this intervention and will be the largest trial to date to present this information.

“This trial now moves into the important long term follow up stage and Prof Kluckow and Royal North Shore Hospital are again one of the key institutions involved in this”

Investigating the difference in treatments to close the duct in preterm babies

Project Title:
The u-PDA Trial
(Ultimate PDATrial)

Lead Investigators:
Prof Martin Kluckow
Dr Koert deWaal
(John Hunter Hospital)

Co-Investigator:
Yan Chen – Research nurse

Funded since: 2016
by The Mill House Foundation

This is a pilot randomized control trial (RCT) of active medical treatment vs supportive care alone of the patent ductus arteriosus (PDA) in babies born before 28 weeks of pregnancy. The PDA is a normal extra blood vessel joining the heart to the lungs in premature infants. The more premature the baby the more likely it is that the PDA will stay open.

One of the major controversies in the care of the preterm infant is whether to close the PDA with medical treatment. This is because there is a significant chance of spontaneous closure, the drugs used have side effects and often don't work effectively.

More recently, Prof Kluckow's team have also observed that many infants can tolerate a PDA without significant complications. A trial is needed of active treatment versus just providing supportive care of the PDA. Up until recently doctors have been reluctant to do this but due to the improving outcomes for their smallest infants, there is now an opportunity to undertake this trial. Prof Kluckow's team have screened 20 babies and enrolled 8 so far, with a further 21 babies enrolled at another hospital.

The protocol for this trial has been presented at several National and International meetings including the PSANZ (Perinatal Society of Australia and New Zealand).

Project Title:
SMART Trial (Selecting the optimal Management for the ductus Arteriosus – a Randomised Trial)

Lead Investigators:
Prof Martin Kluckow
Dr Koert deWaal
(John Hunter Hospital)

Co-Investigator:
Yan Chen – Research nurse

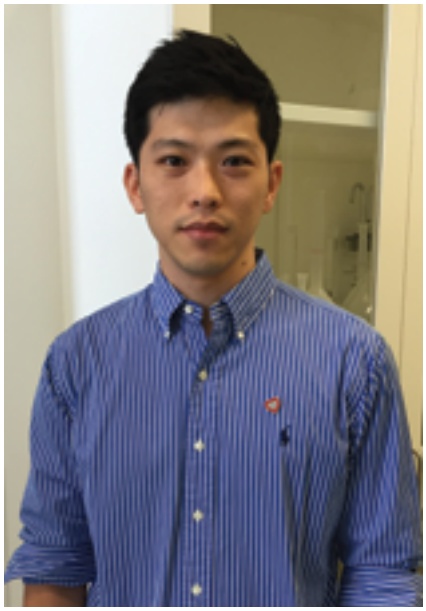
Funded since: 2016
by The Mill House Foundation

This is the definitive trial planned to follow on from the uPDA trial. It will be a large multi-centre trial with a similar protocol to the uPDA trial.

On the basis of the pilot trial supported by Heart Research Australia and The Mill House Foundation, Prof Kluckow's team have planned a much larger trial and applied for funding from the NHMRC. The protocol for this trial has been presented at several National and International meetings including the PSANZ (Perinatal Society of Australia and New Zealand).

15 of the major hospitals delivering babies in Australia and New Zealand have expressed an interest in participating in this trial, and the trial protocol has been further developed utilizing input from these hospitals. The trial is planned to start in 2018 pending decision of funding. The support of Heart Research Australia of the pilot trial (uPDA) has been integral to the application for further funding.

Does stiffened heart alter stem cell behaviour?



Project Title:
Mechanosensitivity of stem cells grown on hydrogel senses stiffness of damaged heart tissue

Lead Investigator:
Dr Yu Suk Choi

Co-Investigators:
Prof Adam Engler
Prof Justin Cooper-White

Funded since: 2014

Amount: $148,577

This last year, Dr Yu Suk Choi made a breakthrough finding which will help stiffened heart muscles due to a heart attack restore themselves to healthy cells, giving heart attack patients new hope of a better recovery.

Using hydrogel, a gel with a gradient that can be used to mimic the stiffness of human body tissues, Dr Yu Suk Choi was able to generate positive outcomes for the growth of stem cells.

Dr Choi found that by using hydrogel to mimic the stiffness of tissue, he could 'trick' the stem cells into behaving in particular ways to help them grow and encourage the cells to behave in positive, regenerative ways.

This research may have important uses in combating serious illnesses affecting the human population.

He has established that by controlling tissue stiffness, he is able to revert cell behaviour back to normal, and change the behaviour at the disease site into more regenerative behaviour. This has the potential to help treat diseases such as cancer, which is very difficult to treat.

The next step for Dr Choi and his team is to use hydrogel with patient originated cells to further understand the effect of tissue stiffness on cell behaviour.

This research was published in the Proceedings of the National Academy of Sciences of the United States of America Journal.

> ***"With Heart Research Australia's generous support, I have been able to establish an independent lab at University of WA, attract nationally competitive fellowship (Heart Foundation Future Leader Fellowship), and publish an article in one of the most prestigious Journals (PNAS)"***

Can inactivating an enzyme in the heart cell membrane improve the sodium pump's action?

Project Title:
Roles of glutathione S-transferase and glutaredoxin in redox regulation of the membrane Na+, K+ ATPase

Lead Investigator:
Prof Helge Rasmussen

Co-Investigators:
Dr Chia-Chi Liu
Dr Alvaro Garcia

Funded since: 2014

Amount: $149,770 over 3 years

The membrane sodium pump is one of nature's fundamentally most important molecules. Its molecular structure is now well defined, as is the way it pumps sodium and potassium. However, how its activity is increased or decreased in response to changing needs has been highly controversial.

Professor Rasmussen previously understood how glutathionylation can inhibit the pump. He now also understands how a decrease in glutathionylation via cell signalling can stimulate the pump.

On a broader level, his studies also detract from the widely held belief that 'antioxidants' (e.g. in red wine or vitamin pills) are beneficial. Such compounds are not nearly specific enough to have any predictable beneficial effect in cells, nor is there evidence from clinical studies for overall benefit in people. 'Antioxidant' benefit can, however, be achieved with pharmacological compounds.

Potential benefits specifically related to this project include diabetes and heart failure.

"Potential benefits specifically related to this project include diabetes and heart failure."

How does producing resistance to the loss of blood supply reduce the damage caused by a heart attack

Project Title:
Cardioprotective effect of remote ischaemic preconditioning and the role of Egr-1 as a master switch regulator.

Lead Investigator:
Dr Muntasir Billah

Co-Investigator:
Prof Ravinay Bhindi

Funded since: 2014

Amount: $90,000 over 3 years

Once the blood supply is restored after heart attack by opening up the coronary artery, the heart is further damaged by ischemia-reperfusion (I/R) injury.

Direct ischemic preconditioning has the ability to protect the heart against this injury for a brief period of time. Direct ischemic preconditioning involves cycles of non-lethal occlusion of the coronary artery and releasing. Preconditioning other organs remote to the heart such as the limbs can protect the heart from I/R injury.

This new therapeutic technique, known as remote ischemic preconditioning (rIPC) is non-invasive and easy to apply compared to direct ischemic preconditioning.

However, we still do not know the mechanism through which remote ischemic preconditioning protects the heart. There is evidence that preconditioning can decrease the level of early growth response-1 (Egr-1), a master regulator highly expressed in heart tissue followed by heart attack.

Once Egr-1 is highly expressed, a number of downstream inflammatory signaling molecules get expressed, which are well known to cause myocardial damage. In this project, we aim to assess the relationship between this master switch regulator and remote ischemic preconditioning.

Once this relationship is well understood, the underlying mechanism may become apparent and better clinical treatment options can be achieved.

Is pre-eclampsia in pregnancy related to peri-partum cardiomyopathy?

Project Title:
The role for the TPP-isoform of the thromboxane A2 receptor in pre-eclampsia.

Lead Investigator:
Dr Anthony Ashton

Co-Investigator:
Prof Jonathan Morris

Funded since: 2014

Amount: $150,000 from The Bushell Foundation

Most pregnancies end with the birth of a healthy baby to a healthy mother; however, some pregnancies end in unforeseen and currently untreatable complications. Unfortunately, there are no signs that something is wrong in these pregnancies and symptoms appear to be "normal" for most women at the end of pregnancy. Headaches, swelling and difficulty breathing are "par for the course" for the latter stages of pregnancy, but may belie an underlying and dangerous pregnancy complication called pre-eclampsia.

Pre-eclampsia affects 1 out of every 20 pregnancies in Australia and is the biggest cause of death in new mothers. The disease is a serious challenge for obstetricians because there are no effective interventions to treat, prevent or diagnose it. Pre-eclampsia is also a predisposing factor to another life-threatening complication of pregnancy, peri-partum cardiomyopathy, where the mother goes into heart failure in the last months of pregnancy or in the 6 months following it. Both conditions are life threatening and without treatments.

Dr Ashton and his team have been working on the cause of pre-eclampsia for the last 15 years and have now, they believe, discovered the reasons why it develops in some pregnancies.

Identifying the cause has enabled them to start developing the first tests to diagnose, and the first drugs to treat, pre-eclampsia. To find these drugs, the team are currently engaging with pharmaceutical companies to choose the "diamond in the rough" that will become the first prototype agent for curing pre-eclampsia.

They are also embracing new and exciting technologies in the pathology lab that will allow them to identify pre-eclampsia when it first starts to develop, so treatment can start earlier and ensure the normal, healthy delivery of babies.

Can being aware of your own stress lower your risk of heart attack?

Project Title:
The role for the TPP-isoform of the The Triggered Acute Risk Prevention (TARP) study.

Lead Investigator:
Prof Geoffrey Tofler

Co-Investigators:
Dr Thomas Buckley
Monica Spinaze
Dr Elizabeth Shaw
Prof Andrew Tonkin
A/Prof Christopher Ward

Funded since: 2014

Amount: $146,000 over 3 years

Increasing evidence shows that heart attacks in some instances can be triggered by external factors such as heavy physical exertion, acute emotional stress, heavy meals, and respiratory infection. For instance, the group published findings that respiratory infection acutely increases the relative risk of heart attack up to 16-fold. However, it is uncertain how to use this information on stressors for disease prevention.

Professor Tofler's team determined, in a randomised, controlled trial whether it is feasible for individuals with cardiac risk factors or known cardiovascular disease to take targeted medication using customised packaging for specific stressors. The team also investigated whether the treatment had an impact on inflammatory markers, lipids, perceived control and quality of life.

Subjects initially recorded episodes of heavy physical exertion, anger and anxiety, heavy meals and respiratory infection over 2 weeks. After baseline measures and questionnaires were obtained, subjects were randomised to control (usual therapy) or a treatment strategy for 4 months, during which they were additionally instructed to take either aspirin and propranolol or aspirin alone (for respiratory infection and heavy meal). Triggers were recorded for a further 2 weeks at the study end for the controls, and throughout the 4 months for the treatment group.

56 subjects were enrolled in the study and participants reported that it was indeed feasible to identify potential triggers of heart attack and take the TARP medication. Comments included that the study provided more insight into health, provided a way to stop anxiety symptoms, and may mean reduction of medication in the future. Trends to greater perceived control were observed among the treatment subjects, with a greater sense of control over things that happened to them.

The findings from this randomised controlled study provide encouragement to proceed to the next step of a multicentre trial to evaluate this approach for prevention of heart attack and stroke. Professor Tofler, the Lead investigator, has initiated discussion regarding planning a large multicentre trial, the results of which could potentially provide new insights into the prevention of heart disease.

FELLOWSHIPS

Dr Kaleab Asrress

Advanced Cardiovascular Interventional Research Fellow
Jan 2017 to July 2017
Funded by Abbott Australasia and Bayer Australia

As the Interventional Research Fellow at Royal North Shore Hospital, Dr Asrress is the lead investigator in the PACIFIC Study (Assessment of Coronary Artery Severity in the Presence of Irregular Heart Rhythm) and also provides supervision to three MD students from the University of Sydney.

A central theme within Dr Asrress's work is state of the art catheter based measurements of pressure and flow in diseased coronary arteries. This study aims to inform the optimal methods of assessing coronary stenosis severity in the presence of atrial fibrillation.

As there is currently no data in this field using these cutting-edge technologies, it is hoped that the results will directly translate to inform clinical practice, with the ultimate aim of improving the outcome of these high-risk patients with atrial fibrillation and coronary disease.

Dr Jawad Mazhar

Advanced Cardiovascular Imaging Fellow
Jan 2017 to April 2017
Funded by Biotronik Australia

Dr Mazhar provided support as an imaging fellow in the acquisition and reporting of cardiac MRI's. He also worked on the following on-going research projects:

Developing a molecular imaging technique to diagnose arrhythmogenic right ventricular cardiomyopathy (ARVC) in a mouse model

ARVC is a disease of the heart muscle associated with high risk of arrhythmia and sudden cardiac death. It is a major cause of sudden cardiac death in athletes and non-athletes under 35 years of age.

Diagnosis of ARVC is complex and challenging even with the current cardiac magnetic resonance imaging. Human and animal histology studies have shown that certain protein molecules are reduced in ARVC. Usually the expression of these molecules can only be measured by an invasive heart biopsy or on post mortem. Dr Mazhar's aim is to see if the expression of these proteins can be measured by molecular magnetic resonance imaging (MRI).

If successful, molecular MRI could be used to measure this protein in humans non-invasively and diagnose ARVC in its early phase, as well as improve our ability to diagnose ARVC in humans more accurately. This way, rather than doing a heart biopsy in humans, it could be diagnosed by MRI.

Using gold nanoparticles to target macrophages in atherosclerotic plaque in ApoE knock out mice

Plaque is a mixture of fatty tissue and cells that can develop within the walls of blood vessels. Plaque can grow in size and eventually rupture, lading a blockage of blood supply and causing a heart attack. Macrophages are cells inside the plaque that release chemicals which can damage the coating of the plaque and lead to its rupture.

At the moment, research on macrophages in the plaque is done by cutting up the tissue into fine slices, applying special stains and then looking under the microscope. This is a long and laborious process, and only allows one to view the macrophages in one slice of tissue at a time and does not give a global burden of macrophages.

The aim of this study is to develop a technique that can improve our ability to look at macrophages. "Optical coherence tomography (OCT)" is a very small tube-like catheter, that can take pictures of plaque by using a light source.

Dr Mazhar is hoping he may be able to improve this further by using tiny gold particles along with OCT. Gold particles have some special features. When injected into the body they are taken up by the macrophages. Gold particles also reflect light and appear bright and the OCT catheter will then be used to take images of the plaque. This method is proving to be better than the traditional method which only has the functionally of looking at one slice at a time. There is another special catheter that uses ultrasound waves to take a picture.

SCHOLARSHIPS

New research grants and scholarships awarded, thanks to you

We are pleased to have awarded a number of new grants and scholarships to our research portfolio in 2016/17. These new projects and scholarships are only possible because of the generosity of wonderful supporters like you, as well as contributions from a number of Trusts and Foundations.

Not only are you funding crucial first-stage research, you are also supporting emerging researchers who are dedicating their scientific or medical careers to finding innovative solutions for the prevention, diagnosis and treatment of heart disease.

According to senior researcher, cardiologist and PhD supervisor, Professor Gemma Figtree, the scholarship program is one reason why the North Shore Hospital campus has such a vibrant community of researchers. "Heart Research Australia's Scholarships are absolutely essential to the PhD students who get them," says Gemma, "These individuals are giving up a lot to commit themselves to a career in high level research. The fact is, they could earn more money doing other things but they want to do this. They want to research and learn. They want to make a difference."

The long hours, the hard work, the lifestyle sacrifices, the financial constraints – there are so many reasons why someone might decide a PhD is too hard.

"During the PhD program, each individual becomes an expert in their focussed research area. Their discoveries often make significant contributions to their fields," says Gemma. "It's such a satisfying feeling. Doing a PhD is the greatest opportunity to learn."

Each scholarship granted by Heart Research Australia is like opening another door to the future of cardiac research. With brilliant young minds applying themselves to one of Australia's greatest health challenges – heart disease – anything is possible.

The scholarship program can only exist through the generous contributions we receive from our wonderful family of supporters.

"During the PhD program, each individual becomes an expert in their focussed research area. Their discoveries often make significant contributions to their fields, it's such a satisfying feeling. Doing a PhD is the greatest opportunity to learn."

PhD Scholarship (1 year):

Project Title:
Evaluation of the effect of hospitalization on spousal/ partner or parental psychological, behavioural and physiological cardiovascular risk factors

Scholarship Recipient:
Monica Ruckholdt

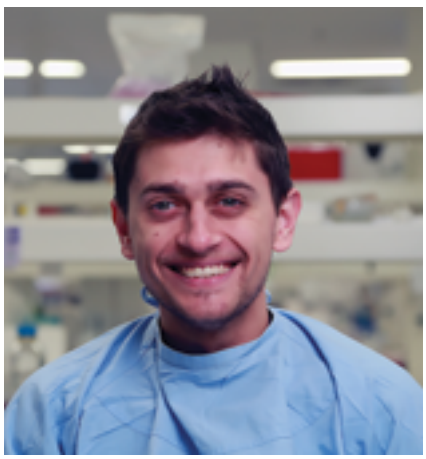
Supervisors:
Prof Geoffrey Tofler
Dr Tom Buckley

Funded since: 2017

Each year approximately 600,000 hospitalizations occur in Australia. Hospitalisation and its aftermath can be very stressful for family members of hospitalized patients. This period has been associated with an increased mortality among spouses, although the mechanism of this increased risk has not been well studied. While studies in Intensive Care Units have identified increased anxiety, depression, anger and sleep disturbance among family members, little is known about the psychological and behavioural impact on relatives of patients hospitalized in cardiology or other hospital wards. Furthermore, the effects on heart rate, blood pressure, thrombotic risk and other physiological factors among family members have not been well evaluated.

The goal of Monica's scholarship request is to address the above-mentioned gaps in knowledge. Using a prospective, controlled study design; partners, spouses, and parents of patients hospitalized in cardiology, orthopedic and intensive care, wards will be evaluated for psychological, behavioural and physiological predictors of cardiovascular risk, both in hospital and following discharge.

Identifying these changes and their modifiers will potentially explain risk and inform potential preventative strategies.



Project Title:
FXYD- An Endogenous Protector of the Vasculature

Scholarship Recipient:
Dr Thomas Hansen

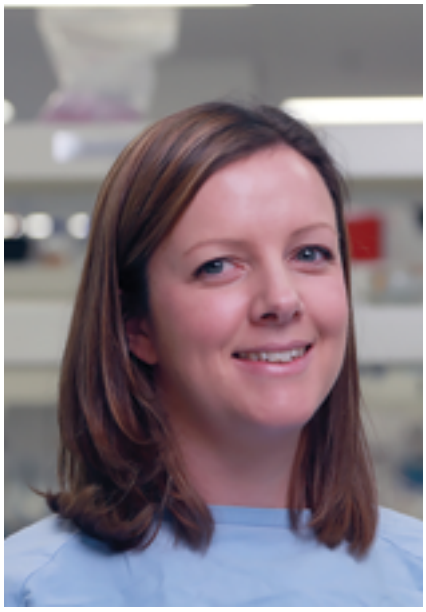
Supervisors:
Prof Gemma Figtree
Dr Kristen Bubb

Funded since: 2017

Dr Hansen is a medical doctor with a particular interest in interventional cardiology, and is undertaking a PhD in basic and translational cardiovascular research.

With an overall aim of improving the identification and treatment of patients with cardiovascular disease, Dr Hansen works in Professor Gemma Figtree's lab, and is mentored by Dr Kristen Bubb.

Early Career Research Grant:



Project Title:
A novel mechanism of caveolar protein regulation with therapeutic implications for pulmonary hypertension.

Grant Recipient:
Dr Kristen Bubb

Supervisor:
Prof Gemma Figtree

Funded since: 2017

Dr Kristen Bubb was awarded an Early Career Researcher Grant, which allows her to pursue her research interests, develop as an independent scientist and mentor a PhD student. This grant supports Dr Bubb's project on novel mechanisms in pulmonary hypertension. She also supports and mentors PhD student Dr Thomas Hansen.

The project Kristen is currently working on is investigating unknown causes and potential treatment options for pulmonary arterial hypertension (high blood pressure in the arteries in the lungs).

This disease has a 100% mortality rate, with up to 50% of patients dying within five years of diagnosis. It is a rare disease but nevertheless is devastating for those who suffer from it. It often affects younger populations, people who are normally very independent and functional. The patient's quality of life is poor, as they suffer from shortness of breath, dizziness, fatigue and chest pain.

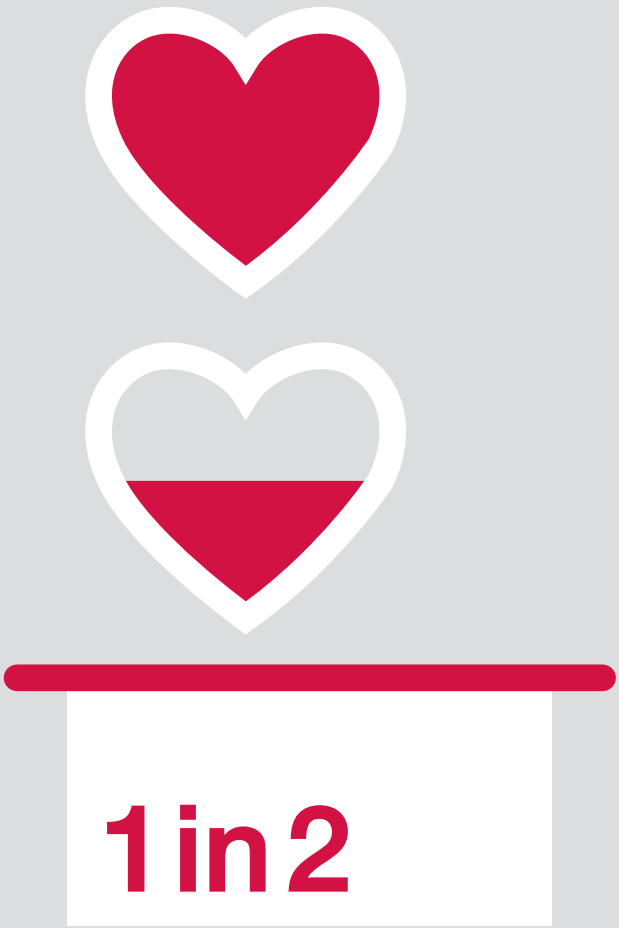
This is due to the rise in blood pressure in the lung circulation which is caused by changes in the cells that line the pulmonary arteries. These changes can cause the walls of the arteries to become stiff and thicken. The blood vessels may also become inflamed and tight.

Changes in the pulmonary arteries can reduce or block blood flow through the blood vessels which makes it harder for blood to flow, raising the blood pressure in the pulmonary arteries. As a consequence of this increased pressure, the blood can build up behind the lungs, in the right side of the heart. This can result in the right-side heart having to pump harder to move the blood and it achieves this at first by the heart muscle growing larger and the chamber increasing. However, eventually the right side of the heart will fail due to the extra load and this is what causes death in most patients.

The research team have been working on a protein called FXYD1 for many years, and have shown the role that this protein has in protecting the heart from damage from free radicals. Kristen has been investigating this protein in the blood vessels and have found that when it is absent the blood vessels have excessive free radical production and lose their ability to fully relax. Therefore, Dr Bubb's proposed that this protein may be important in the pulmonary vasculature (lung blood vessels) and could be dysfunctional in patients with pulmonary hypertension.

Despite a number of different treatments currently available, patients ultimately need to be considered for lung transplantation, especially if they develop decompensated right-sided heart failure despite optimal medical management.

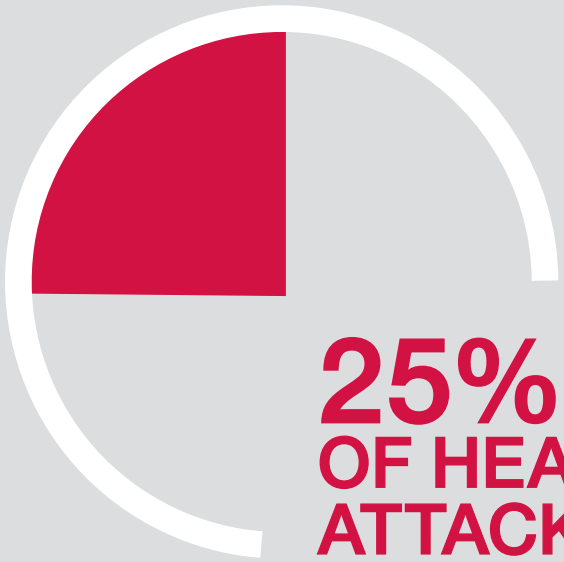
Her project has the real potential to translate into a life-saving treatment for patients with pulmonary hypertension. Improving pulmonary vascular health in these patients will likely improve their symptoms and quality of life, and as a result greatly impact patients' families who are just as significantly affected by this disease as any other chronic debilitating and progressive illness.



1 in 2

HEART ATTACK SURVIVORS

are unable to return to work to the same level as before their heart attack



25% OF HEART ATTACK SURVIVORS

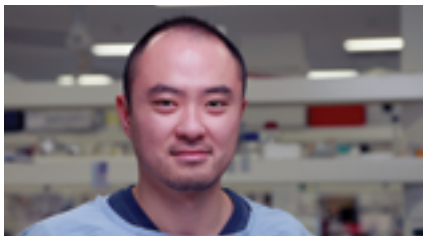
can not return to work at all after their heart attack

1 in 3

HEART ATTACK SURVIVORS

can not resume usual daily activities such as driving or grocery shopping after their heart attack

SALARY SUPPORT



Dr Owen Tang, Manager for Professor Gemma Figtree's Oxidative Signaling Laboratory

Professor Figtree's Laboratory strives to understand the way reactive oxygen species affect disease in the heart and blood vessels. Professor Figtree and her team have identified a novel protein that plays a pivotal role in protecting the cardiovascular system from these oxidative stresses and loss of this protein exacerbates disease progression. They are now dissecting into the molecular mechanisms underlying the cardioprotective effects of this protein. A novel delivery system that could be used in clinical intervention is also currently being optimised. As Manager, Dr Tang is a key figure in the lab, sharing his knowledge and expertise with graduate students and medical researchers.

"Our work has the potential not only to reduce the incidence of cardiovascular disease but also provide a better future in terms of treatment and outcome for patients with existing heart disease. This is a field of research that's close to my heart."

Dr Elisha Hamilton, Senior Researcher and Lab Manager for Professor Helge Rasmussen

Dr Hamilton is directly responsible for performing many of the experiments that are conducted within Prof Rasmussen's laboratory as well as providing a supervisory role to both students and research assistants within the lab. Her role requires that she balances the scientific needs of the staff within the Rasmussen laboratory, with the business needs of the lab. Her duties range from maintaining laboratory equipment, purchasing supplies, data management, budgeting and organising training. In addition, Dr Hamilton performs many academic administrative duties including; work health and safety representation, preparation and submission of applications to funding bodies, preparation and submission of scientific manuscripts for publication as well as preparation and submission of applications for ethics approval.

Annette McCook, Personal Assistant for Professor Gemma Figtree's Oxidative Signaling Laboratory

Administrative support from Heart Research Australia is used to fund the part time salary of Ms Annette McCook (~0.3 FTE) to perform essential administrative duties for Professor Figtree, her laboratory team, and the Cardiology Research Committee at Royal North Shore Hospital. Annette performs vital duties in administrative aspects of grant preparation and governance, communication with the research office and ethics committees, diary organisation, organisation of academic meetings, assisting visiting students and scientists with visas and paperwork and keeping record of expenditure on consumables and other research costs. Annette has also been vital in preparing reports for the university and hospital regarding research metrics from the cardiovascular group.

Sally Tandy,
Personal Assistant to
Professor Helge Rasmussen

Ms Sally Tandy provides administrative support for the work of Professor Helge Rasmussen, such as patient correspondence, proof reading and editing manuscripts, compiling reference lists and general assistance, allowing the Professor more time for his valuable research work.

Yan Chen,
Research Nurse for
Professor Martin Kluckow

The Mill House Foundation has provided continuous support for over 10 years for a part-time Research Nurse to assist in Professor Kluckow's research. This position helps Prof. Kluckow develop and conduct new clinical studies in his quest to understand the problems with heart function that affect many of the premature and sick newborns that are cared for each year at Royal North Shore Hospital and our collaborating hospitals around Australia. Yan Chen has been in the position since February 2016 and brings with her some important new skills in statistics and data management.

Yan will be assisting on several ongoing and new projects in 2017/18, the APTS (Australian Placental Transfusion Study) follow up period, seeing almost 150 infants who were enrolled in this trial at 2 years of age to assess their development and medical health, and the u-PDA Trial (Ultimate PDA Trial), a pilot trial of medical treatment to close the PDA vs supportive care alone. This trial is an important first step to implementation of a larger multi-centre trial to test the hypothesis as to whether doctors really need to close the PDA in premature infants, or whether it is acceptable to tolerate the presence of a PDA, manage its effects and await spontaneous closure.

This new trial known as the SMART trial (Selecting the optimal Management for the ductus Arteriosus – a Randomised Trial) is planned to be run in 15 Australian/NZ hospitals and funding has been applied for from the NHMRC, Australia's peak funding body.

All of these studies are dependent on the access to a state of the art ultrasound machine, donated by Heart Research Australia and The Mill House Foundation to Royal North Shore Hospital's intensive care unit. In addition to the main research projects of cardiac function and management in preterm infants mentioned above, Yan will continue to assist with several other important non-cardiac projects in the Newborn Care Centre, including a trial of a new brain protection medication and some projects around optimizing nutrition in the preterm infant.

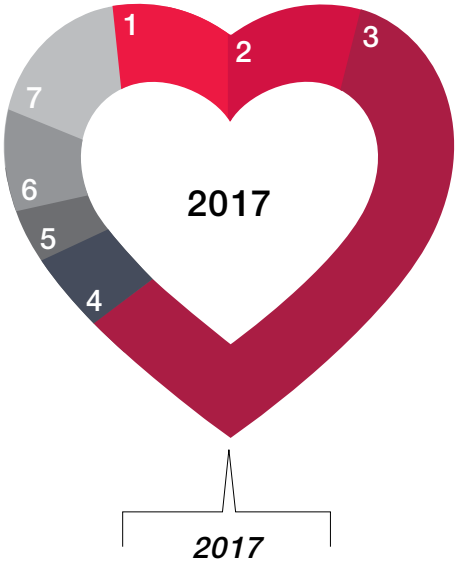
FINANCIALS

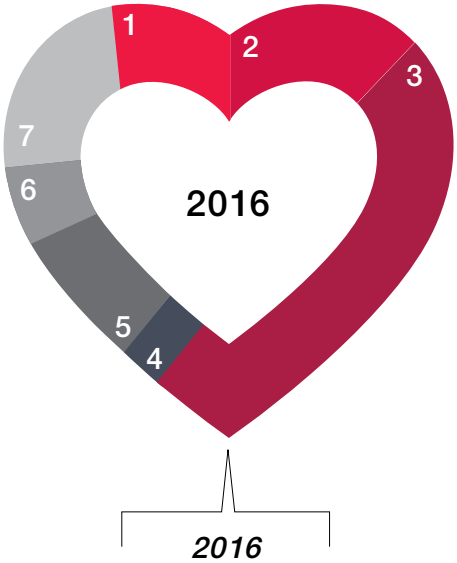
Heart Research Australia supports a centre of excellence that attracts world-class and emerging researchers to conduct ground-breaking research into the prevention, diagnosis and treatment of heart disease.

We are extremely proud of the $1.5million we have contributed in the 2016/17 financial year towards combating Australia's leading killer and creating more heart survivors.

None of our achievements would be possible without the continuing generosity of our supporters, backed by the hard work of our community fundraisers, corporate supporters and Trust & Foundations.

How you've helped us over the past two years





	2017		*2016*
1 Appeals	10.63%		10.69%
2 Raffles	9.70%		11.54%
3 Bequests	51.47%		38.39%
4 Corporate	3.87%		3.03%
5 Corporate in kind	2.92%		9.41%
6 Community	4.70%		4.82%
7 Other donations	16.72%		22.12%

INCOME	2017	2016
Fundraising activities	3,762,814	3,003,959
Appeals	399,870	321,058
Raffles	365,112	346,511
Bequests	1,936,780	1,153,285
Corporate	145,441	91,053
Corporate in kind	109,809	282,795
Community	176,719	144,761
Other donations	627,916	659,907
Merchandise	1,167	4,588
Non-operative activities	136,634	17,604
Total income	**3,899,448**	**3,021,563**

EXPENSES	2017	2016
Employee costs	737,383	819,479
Fundraising	819,657	567,168
Administration	201,083	217,936
Corporate in kind	109,809	282,795
Research support	1,486,633	1,510,508
Total expenses	**3,354,565**	**3,397,939**
Net surplus/(deficit)	**544,883**	**(376,323)**

ASSETS & LIABILITIES	2017	2016
Cash and cash equivalents	998,195	391,257
Trade and other receivables	282,696	222,365
Financial investments	1,060,681	936,289
Plant and equipment	18,629	19,966
Intangibles	71,723	83,664
Inventory for distribution	50,848	83,863
Total assets	**2,482,773**	**1,737,404**
Trade and other payables	377,656	167,421
Provisions	8,569	18,319
Total liabilities	**386,225**	**185,741**
Net assets	**2,096,548**	**1,551,663**

OUR GOVERNANCE

Heart Research Australia is a company limited by guarantee. We are registered with the Australian Charities and Not-for-profits Commission 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 of Australia (FA) 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.

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BA, LLB, FAICD
Retired Solicitor
Company Director

Deputy Chairs
Michael Lawrence
BEc, SF Fin, MAICD, Harvard Executive Program
CEO, Customer Owned Banking Association

A/Professor Gregory Nelson
MBBS, FRACP, FCSANZ
Head, Department of Cardiology, Royal North Shore Hospital
Consultant Cardiologist

Honorary Treasurer
John Pegg BComm
FCA, FCIS, FGIA, FAICD, MSID
Company Director, Chartered Accountant; Consultant Rothsay, Chartered Accountants.

Honorary Medical Director
Professor Geoffrey Tofler
MBBS, MD, FRACP, FACC
Professor of Preventative Cardiology, University of Sydney, Royal North Shore Hospital
Consultant Cardiologist

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Directors
Professor Ravinay Bhindi
MBBS (USyd), MSc(Oxon),PhD (USyd), FRACP, FCSANZ, FESC
Professor, University of Sydney
Consultant and Interventional Cardiologist

Professor Gemma Figtree
MBBS (Hons), DPhil (Oxon), FRACP, FCSANZ, FAHA
Professor, Sydney Medical School (Northern); Consultant & Interventional Cardiologist

Charlie Frew
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Managing Director, CödeClean Australia/New Zealand

Professor Levon Khachigian
BSc (Hons1), PhD, DSc (UNSW
NHMRC Senior Lead Research Fellow, Professor, UNSW Medicine, Head, Vascular Biology and Translational Research, School of Medical Sciences, UNSW Medicine

Dominic May
MMgmt, JP, MAICD Corporate Services Manager & Executive member, North Shore Private Hospital

Anthony Thirlwell
OAM, FAICD, BSc(Hons), MBA
Director Wentworth Healthcare Ltd, Previously CEO National Heart Foundation of Australia (NSW).

Dr Michael Ward
MBBS (Hons), FRACP, PhD, DDU, FCSANZ
Director, Cardiac Catheterization Laboratories, Royal North Shore Hospital & North Shore Private Hospital; Consultant & Interventional Cardiologist

Committees of the Board

The primary responsibility of the **FINANCE, AUDIT AND RISK COMMITTEE (FAC)** is to oversee the Foundation's financial management, corporate governance and compliance with statutory requirements to ensure the Foundation's long-term viability. Its duties include monitoring the performance of the Foundation's investment portfolio and oversight of the annual audit process.

The FAC also monitors the risk profile of the organisation and advises the Board on matters relating to the key risk areas of Revenue, Expenses, Research and Administration.

Chair
John Pegg

Board Members
Tony Crawford
Mike Lawrence
Dominic May
A/Prof Greg Nelson

The **SCIENTIFIC ADVISORY COUNCIL** reviews the current priorities for research expenditure.

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Professor Gemma Figtree

Board Members
Professor Ravinay Bhindi
Professor Levon Khachigian
A/Professor Gregory Nelson
Tony Thirlwell
Professor Geoffrey Tofler
Dr Michael Ward

External Members
Dr Joshua Funder
Healthcare Investor & Entrepeneur

Professor Vlado Perkovic
Executive Director, The George Institute Australia & George Clinical; Professor of Medicine, University of Sydney

The **RESEARCH ADVISORY COMMITTEE (RAC)** 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 RAC are all highly qualified researchers and practitioners.

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Dr Michael Ward

Board Members
Professor Ravinay Bhindi
Professor Levon Khachigian
Professor Geoffrey Tofler

External Members
Dr Christina Bursill
Immunobiology Group Leader, Heart Research Institute

Professor Ben Freedman
Deputy Director Research Strategy, Heart Research Institute/ Charles Perkins Centre; Professor of Cardiology, Sydney Medical School, University of Sydney; Head Vascular Biology Anzac Research Institute

Professor Carol Pollock
Professor & Chair of Medicine, Royal North Shore Hospital, University of Sydney; Research Chairman, Northern Sydney Area Health Service; Convenor and Director, BioMed North

Professor Carolyn Sue
Professor and Director of Neurogenetics; Interim Director, Kolling Institute of Medical Research, University of Sydney

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.

In 2016, the Board established a **STRATEGIC FUNDING REVIEW WORKING PARTY** to review and provide expert advice and guidance on critical issues relating to sources and allocation of funds, with a view to development of medium to long-term funding strategies. Members included current Board members Tony Crawford (Chair), A/Prof Greg Nelson, Prof Levon Khachigian and Tony Thirlwell, with the addition of Professor Phillip Harris (Chair, South Western Sydney Area Health Service) and Professor Bob Graham (Executive Director, Victor Chang Cardiac Research Institute). The Working Party's recommendations will guide the ongoing activities of the Board and its Committees.

HONOURS BOARD

Heart Research Australia is totally dependent on community support to fund our pioneering research. We would like to recognise the extraordinary generosity of the following individuals and organisations who have contributed significantly to our mission to make breakthroughs in heart disease happen.

Significant Benefactors $10,000 and over

Beryl Raymer (deceased)
Ian Bersten
Jessica Hore
Patricia McAlary
The Hon George S. Sharpe
Yvonne & John Almgren AM

Significant Benefactors $5,000 and over

Anonymous
Richard Small
Shirley J Wicks
Tony McCormick

Significant Benefactors $1,000 and over

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Chris Russell
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Australian Rugby Union (ARU)
Bold & Beautiful Swim Squad Manly
Community Heart Health Care
Red & White Committee:
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- Jenny Carr
- Jenny Goldring
- Lori Farrar
- Lynn Varvel
- Lynne Ravenhall

Northern Suburbs Rugby Club
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Janette Elizabeth Hamilton
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