

RESEARCH

More new funding

FUNDRAISING

REDFEB fun

INTERVIEW

Meet our chairman
Tony Crawford

We Life

NEWSLETTER – ISSUE 1, 2022



New research and scholarship grants...



...awarded thanks to you.

Giving **heart** to the future.

Looking to the future



Hello – I trust you are well!

Looking back, if the past few years have taught us anything, it is the crucial role of research in the fight to keep us all safe. We feel particularly grateful because, despite the hard conditions, due to the ongoing support of many of you, we have been able to continue to fund new researchers and research projects.

Some of our new funding supports some exciting young PhD researchers. These are the people who could change the future of medicine. You can read about their projects in Research on page 4 and 5.

I am also happy to be able to introduce you to our Chairman Tony Crawford. It is key that as a charity we have strong organisational governance, especially as we confront challenging times. I believe at HROz we are so lucky to have that with our Board, led by Tony Crawford. Tony has been on our Board for 11 years, 9 as Chairman. After reading his interview I'm sure you'll agree, we are very lucky to have someone of his calibre and with his passion.

We are also very excited to congratulate Professor Helge Rasmussen on his recent OAM for his service to medicine as a cardiologist. HROz has been funding Professor Rasmussen for many years and many of you may have the good fortune to have been treated by him. Well deserved!

And finally, it's REDFEB time of the year where we come together as a community to commemorate those we have lost to this horrible disease and to raise funds and awareness of heart disease - see page 6. This year we focused on raising awareness of the differences in men and women's heart attack symptoms by giving out a free wallet card to illustrate these. This awareness is particularly relevant in light of the tragic loss of Australian legends Shane Warne and Rob Marsh to heart attacks. Our condolences go out to their families. If you'd like a free wallet card to help you recognise the signs, please visit www.heartresearch.com.au and we will send you one.

Enjoy the read and here's to a more positive year – and again, I am deeply grateful for your continuing support in such challenging times.

Warm Regards,

Nicci Dent - CEO, Heart Research Australia

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Meet the team

Tony Crawford, Chairman Heart Research Australia



Hi I'm Tony Crawford, and I am really proud to have been on the Board of Heart Research Australia for the past 11 years and Chairman for 9 years. I'm sure like most of you, I am continually inspired by the wonderful research that our organisation funds, and the real power it has to change lives. But most importantly for me it's about helping our wider community.

I passionately believe in the power of community. I believe when we reach out, come together and engage with each other - especially around a cause which inspires us – we become stronger.

By sustaining and supporting each other, we are building community. Which is why, when I retired from my law career in 2010, I was keen to use my skills to help build and support not-for-profit communities.

My starting point was sport. To me, sport has such an important part to play in our societal mix. We all know the importance of good health and physical fitness and it's wonderful to help encourage young people to get involved with sport and to watch them develop life-long healthy habits.

For me, my sport is rugby. My grandfather, father and son have been involved in rugby and I have seen how it holds communities together.

I was on the Board of North's Rugby, when a fellow member suggested that Heart Research Australia was looking for a board member. I was keen on the opportunity as it encompassed those essential pillars which were important to me, those of community, health and giving back. Also, I liked the idea of being able to help get this early-stage research off the ground.

During my time as Chairman, our focus has been on maximising our research funding through robust governance, adhering to best practices and attracting more people to be part of our cause. We have also brought together a great little team who are hardworking and dedicated – whom I'm sure many of you will have spoken to.

Like most businesses, we have faced challenges along the way (not least of which is our current COVID environment), but we have continued to evolve and adjust our

strategy to make the most of the opportunities and threats we have encountered.

I am positive for the future, especially once we can return to some semblance of normality. Even in these hard times we are facing, it is great that due to the continued support of the Heart Research Australia community, we are able to keep our much-needed research projects going. I find it a privilege to be part of such a wonderful community and thank you all for the part you play.

Tony Crawford was a partner at leading Australian commercial law firm DLA Phillips Fox for over 30 years, with the last 10 years of his career at that firm as CEO and Managing Partner. Since his retirement in 2010, he has undertaken an active role on a number of boards, including the not-for-profit Boards of Norths Rugby and HBF Health. In 2021 he was appointed Chairman of NSW Rugby Union.

FREE Heart Attack Wallet Card

If you would like to order our FREE Heart Attack Wallet Card, please visit:

go.heartresearch.com.au/redfeb22

It may just save your life or the life of someone you love.

Heart Attack Action Plan

If you or someone else experience any combination of the overleaf symptoms:

Dial 000 - ask for ambulance

Report possible heart attack

Give aspirin unless advised otherwise

Rest patient quietly until ambulance arrives

For more detailed information visit heartresearch.com.au/heartattack

Heart Attack Symptoms

Chest Pain is the most common symptom of a heart attack, however women may experience less obvious warning signs. If in doubt dial 000.

Women vs Men

Dizziness, lightheadedness or fainting

Chest discomfort or burning like heartburn

Nausea or vomiting

Fatigue

Wheezing and shortness of breath

Pain in neck and jaw or heaviness in chest

Squeezing chest pressure or pain

Jaw, neck or back pain or tightness

Nausea or vomiting

Shortness of breath

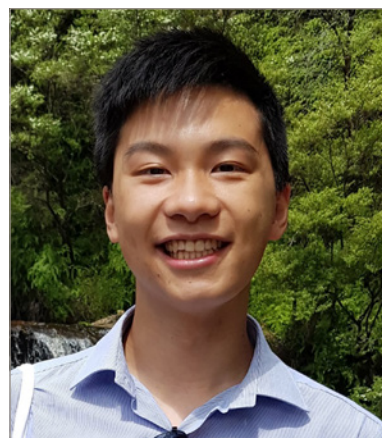
Heart Research Australia

“For me research presents a privileged position where you are standing on the brink of human understanding, and you are enabled to contribute your little part to the sea of human knowledge. It excites me to do research where you are one of the first people in human history to see new trends or understand new ideas and I love that in medical research the work you do so often translates to clinical applications and improved care for patients.”

– Angus Fung

This wonderful description of what inspires and motivates him is from Angus Fung. Angus is one of the three PhD students we have funded in the latest HROz funding round - thanks to donations from people like you. Read on to be inspired by their projects.

ANGUS FUNG
Using the world's largest Echo database to establish normal ranges for cardiac output.



Cardiac output (CO) is used as a measure for detecting cardiovascular disease in patients. CO is a measurement of the volume of blood the heart pumps in one minute. And, because every tissue in the body relies on the heart pumping blood for nourishment, any cardiovascular dysfunction has the potential to result in disease, adverse medical conditions or death. In addition, many medical conditions can alter cardiac output. Therefore, it is essential that there is an accurate assessment and optimisation of a patient's cardiac output to ensure they get the best care, healthy outcomes and to minimise the risk of death.

Currently the measure of cardiac output is indexed to a person's body surface area.

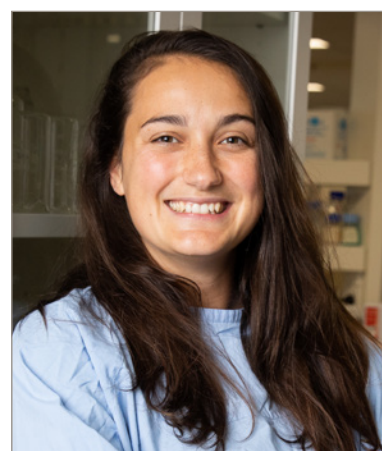
Generally speaking, a larger person may require a large cardiac output to meet their physiological demands, while a smaller person may have a lower cardiac output. But this relationship with body size is poorly understood and can present problems if a patient's body size is at the extreme ends of the range eg underweight or obese.

The main issue with this measurement is that there are currently no definitive guidelines about how CO cut-off points should be indexed for body size, and normal ranges have yet to be verified by research.

Which is why Angus Fung's is undertaking a study which aims to evaluate and compare existing body size metrics to establish a definitive metric for the indexation of cardiac output, heart rate and stroke volumes, and empirically determining a cut-off value for these measures. Angus is using The National Echo Database Australia (NEDA). This database is the largest of its type in the world with over 500,000 consenting patients' echocardiogram (heart ultrasound) results, collected from participating hospitals throughout Australia. By reviewing echocardiography results, Angus Fung and his team will compare underweight, normal weight and obese patients, to try to determine a normal range for cardiac output values and the cut-off point associated to increased death rates. They will also provide recommendations on how this indexation should be conducted, which has major clinical implications in the monitoring and treatment of cardiac patients.

Dr Marie Besnier
Developing a new technique to analyse EV's and their role in predicting coronary artery disease.

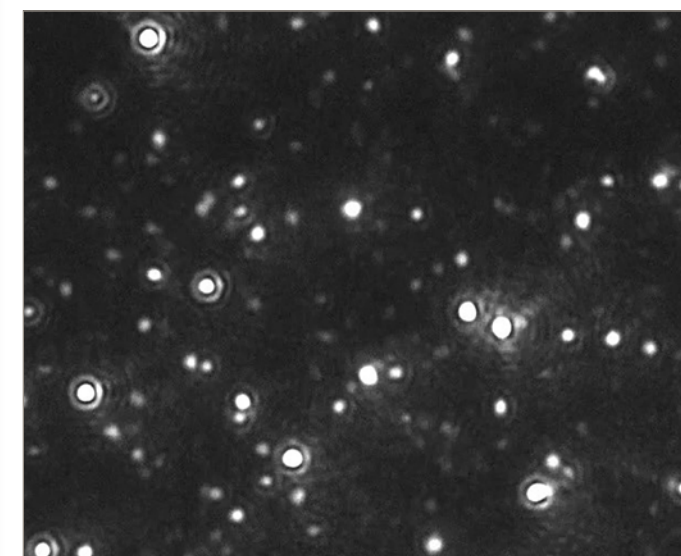
Dr Marie Besnier is working with Prof Gemma Figtree on the BioHEART project which aims to better understand



how heart attacks are happening and who are the people at risk of having them.

The BioHEART team are driven to find new tests and “bio markers” in a patient's blood which can pick up ‘hidden’ coronary artery disease (CAD) so they can accurately predict a person's risk of a heart attack.

A new discovery in this area is Extracellular Vesicles (EVs). These are essentially “signals” sent out from our cells to communicate within our body that there is injury or danger. It is now known that EVs are actively secreted by CAD lesions and that their content, number, and cell-origin is correlated to the severity of the disease. Dr Marie Besnier and the team are investigating whether these blood circulating EVs, considered by many scientists as a “liquid biopsy”, can be used to differentially diagnose the presence and severity of CAD.



Extracellular Vesicles (EVs)

The problem is that because of their small size and complexity, most of the current techniques used to analyse EVs are incompatible with the rapid screening needed in a clinical setting.

Ultimately, the aim of Dr Besnier's research is to try to develop a new technique to analyse the chemical and physical properties of the EV and to develop a very practical, user-friendly tool to study them. This will aid clinicians' treatment decisions and avoid debilitation for many patients, while at the same time give a better understanding of the contribution that EVs have in disease.

Dr Avedis Ekmejian
Helping understanding what limits blood flow to the heart.



When a patient presents to hospital or their cardiologist with a suspected blockage or lesion in their coronary artery, which is causing, or which could lead to chest pain or a heart attack, they will usually undergo a coronary angiogram. This determines whether they need a stent implanted to keep the artery open and maintain blood flow to the heart.

While implant surgery such as stenting is a common procedure – like all invasive procedures it can have side effects and dangers, including damaging the artery wall.

Therefore, the clinical cardiologist needs to evaluate whether the narrowing is limiting blood flow to the heart before a stent is inserted. Sometimes the narrowing is so bad it is obvious, but at other times, further assessments are required. Two common methods to evaluate whether the narrowing is limiting blood flow are, instantaneous wave-free ratio (iFR) and fractional flow reserve FFR. However, there can be differences between the iFR and FFR results, which may lead to uncertainty.

Dr Avedis Ekmejian's research is looking at the mechanisms which could cause varying results between FFR and iFR, and how these differences can be interpreted. He will also look at the makeup and geometry of the plaque itself using intra-vascular imaging (OCT). He will look at whether increased irregularity and surface roughness within the lesion or plaque itself is accounting for these differences.

The findings from this research should allow clinical cardiologists to more easily interpret FFR and iFR findings in their patients and guide their treatment more accurately, further refining the accuracy and safety of these tests and procedures.

REDFEB fun!

This year's REDFEB campaign focused on communicating the early warning signs of a heart attack and how they can differ between men and women. We promoted this message by offering a free heart attack wallet card highlighting the difference in symptoms between men and women, along with an action plan. We are so grateful to everyone who took the time to order one of these lifesaving cards, as well as participating in REDFEB and sharing this vital message.



3 X SCAD survivor and REDFEB ambassador Jen O'Neill



The HROz Team in action from Left: Diane; Jenny; Mira; Miriam and Kristina (at front).

Sun Run

REDFEB 22 brought a bright and fun start to the year after the turmoil of lockdowns and chaos from 2021. Kicking off with a team of 24 participating in the Northern Beaches Council Sun Run, running 7km from Dee Why to Manly in Sydney with our youngest team member not yet being 1!



5EF Gyms

For the second year in a row 5EF has been working with Heart Research Australia's REDFEB campaign to share the important message of heart health to their studio members. With their main message being "Where's your heart at?". Members monitored their heart rates focusing on a Heart Rate Zone they needed to hit for each exercise. 5EF trainers put their hand up to do 1 burpee for every \$ donated by their studio members. We thank them for their ongoing support for REDFEB.

Media Coverage – helps to spread vital message

The media was so helpful in sharing our life-saving REDFEB message. It has been truly wonderful. From world renowned authors like Sally Hepworth, media gurus like Mia Freedman, to the wonderful podcast FORTY with Those Two Girls sharing our campaign along with TV channels Sunrise, The Morning Show, Studio 10, Channel 10 News and so many more. We are so truly thankful for each and every media outlet for getting behind this campaign and sharing this vital message to the community. If you'd like to view the coverage visit:

www.heartresearch.com.au/redfeb-2022-media/



Our social media was also flooded with images of people and organisations in RED and we could not be prouder of the community getting behind this great

campaign, wearing red and donating on behalf of someone who has been affected by heart disease.

Here are some examples of a small number of our wonderful supporters



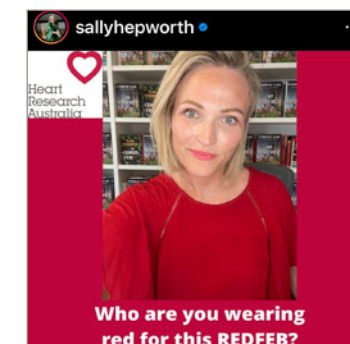
Orange Theory Gym Brookvale.



Kiama and the Williams brothers continue their generous support.



NSW Rugby Union Waratahs



Bestselling author Sally Hepworth.



Guardian Pharmacy - joining in.

Again, we were grateful to **ZOLL**, who this time donated two defibrillators to the organisation and individual who raised the most money for REDFEB. Thank you for your generous donation!

Finally, **REDFEB** would not be able to run without the wonderful support of **Abbott Vascular** who have been supporting us for 3 years now. Their support helps us share our life saving message to so many people and helps raise funds for much needed research into the prevention diagnosis and treatment of heart disease. We could not be more grateful to them for enabling us to run this great campaign.



Giving in memory - a very special way to honour a life.

The family of Hamish Wilkinson was left devastated and in shock when Hamish sadly passed away very suddenly. He was only 27 years old and seemed healthy and fit, enjoying boxercise twice a week and walking the family dog. There were no traditional warning signs as he didn't smoke and there was no family history of heart disease. Just before Christmas he suffered a rare aortic dissection (a tear in the aorta) for which survival rate is only 10% and he couldn't be revived.

During the emotional and stressful time that followed, the family gave those who wanted to the option to give a donation towards heart research and in that way help others in the future. We are so very grateful to the family and everyone who donated in Hamish's memory. An incredible \$1,880 was donated in his honour.

The death of a family member or friend is one of the most difficult experiences to go through. For some people making a donation in their memory can be a positive and special way of honouring their life.



Animal lover Hamish with his beloved dogs and horse.

If this is ever something you may have to consider then there are a few options like setting up a tribute page, donating online or via special in-memory donation envelopes.

For more information go to: www.heartresearch.com.au/gifts-in-memory

Or contact: Diane van de Merwe on (02) 9436 0056 or diane@heartresearch.com.au

Thank you so much! ***Any gift, whether small or large will have a positive impact on generations to come.***