

RESEARCH

Mini-hearts to be used
to study heart attacks

FUNDRAISING

Meet your fundraising
heroes

OPINION

Bushfires, Coronavirus
and your heart

We Life

NEWSLETTER – ISSUE 1, 2020



Heart Research Ambassador on the front line

Greg Mullins, Heart Research Australia Ambassador and Former NSW Fire Commissioner working as a volunteer, fighting fires in Blackheath.

Giving **heart** to the future.

Challenging times

Welcome to Heart Research Australia's Autumn newsletter and I hope you were safe from the terrible fires that raged over the Christmas period. It was a devastating situation and our hearts go out to all the people and animals that have been affected. We were humbled by the bravery of our firefighters, who included Former NSW Fire Commissioner, Greg Mullins – who is a Heart Research Australia Ambassador. Greg can be seen on the front cover of this newsletter and you can read more about his story on page 3.

Many people were also concerned about the impact of smoke, especially for those with existing heart and other conditions. We have asked our Chair of Preventative Cardiology, Professor Geoffrey Tofler, for his opinion and you can read about this on page 5. The topic of smoke and the impact on the heart is also something that our researchers are considering for a future research project

As we know, our troubles aren't over yet - as I write our community is preparing for the Covid19 virus, that could affect a large number of people – especially in the older age bracket and/or for those whose immune system has been lowered. Again, you can read Professor Geoffrey Tofler's advise on this, particularly for those with a heart condition.

In other sad news, one of our founders, Professor Stephen Hunyor recently passed away.

In the early 1980s, together with fellow Royal North Shore Hospital cardiologists Dr Gaston Bauer AM and Dr John Gunning AM, Professor Hunyor recognised the growing need for a Foundation to be established that would support the first-stages of research to help reduce the alarmingly high death rates due to heart disease.

Since then Heart Research Australia has funded a range of breakthroughs in heart disease – some of which have gone on to save and improve the lives of many. We are incredibly grateful to the work of Professor Hunyor for helping us to keep families together for longer.

I hope you find the following stories and research featured in this newsletter as inspiring as we do. We are so grateful to have had the privilege of working with so many passionate researchers, donors and communities and look forward to creating more breakthroughs with you.

- **Nicci Dent**, CEO



Your impact on society

What do a Wiggle the ex-Fire Commissioner of NSW and a prominent media personality all have in common?

They are still with us today because of heart research funded by people like you.

When you give money to heart research, it can often be a long-term investment. You are generously committing to a creating better future. It's easy to overlook the impact that past research has had on our society today. We still have wonderful people around contributing to society – many who may not have survived if it wasn't for advances in research. Research funded by people like you.

It's hard to imagine a life without the joy brought by the original yellow Wiggle – Greg. But equally there are many other amazing heart attack survivors making a difference in our world.

People like Greg Mullins, the former Commissioner of Fire & Rescue NSW for over 13 years. Greg has had a high profile recently as he was actively involved in fighting the catastrophic bushfires while also highlighting impacts of climate change. His insights, gleaned from his extensive career experience on the job, was helpful to so many. But what you may not know is, just over halfway through his time as Fire Commissioner, when he was only 52 years old, he had a heart attack.

Greg's life was saved by early diagnosis through the use of ECG in the responding ambulance and by receiving a stent. Early trials of both of these procedures in Australia were funded by Heart Research Australia donors – people like you. Greg continued to head up Fire & Rescue NSW for another 5 years after his heart attack and competed internationally in Karate. During his career he oversaw an annual budget of more than \$A700 million, 7,000 employees, 6,000 volunteers and 339 fire stations throughout New South Wales.

Then there's Chris Russell, the prominent international Agricultural Scientist and media personality, who survived a heart attack at only 53 years of age. Fifteen years on and Chris, a former National President of The Australian Institute of Agricultural Science and



Former NSW Fire Commissioner Greg Mullins AO AFSM and Chris Russell AM on AgriMinders PodcastOne

Technology and Judge of the popular weekly ABC television series 'The New Inventors', is now the host of AgriMinders, a podcast which explores the critical issues of food and fibre production in Australia over the next 50 years. Chris is also still here today because of early diagnosis through ECG's in ambulances and through the use of stents.

You can listen to more from these inspiring men on the AgriMinders podcast, where Chris hosts Greg Mullins in a discussion about the environmental impact of the bushfires. Called "Rebuilding Australia – our Animals and Land".

A link to the podcast can be found on our website at www.heartresearch.com.au/news/

So, thank you all for your support, it makes a real difference every day in our community.

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Media excitement builds over our latest research

Did you see us on TV? CEO Nicci Dent and some of the research you have helped fund being featured on national news!

Testing heart attacks in test tubes

Dr Carmine Gentile and his team have found another use for the bioprinted 'mini hearts'. In a world first, Dr Gentile's team are studying how to use their 'mini hearts', derived from patients own stem cells, to study heart attacks in test tubes. By mimicking the conditions that the human heart is exposed to during a heart attack, researchers will be better able to foresee the effects of medications on a patient's own 3D bioprinted heart tissue. This may pave the way to potentially develop personalised and targeted treatments for those 1 in 10 Australians who suffer from sudden heart attacks every day.

To see Dr Carmine Gentile talk with Helen Wellings from Channel 7 news about his project studying heart attacks in a test tube visit: www.heartresearch.com.au/research/developing-better-treatments-for-heart-attack-patients-using-3d-bioprinting-and-stem-cells/



Healthy delivery of babies: The link between pre-eclampsia and pregnancy-induced heart failure

If you saw us on Channel 10 this February, you may know that pre-eclampsia affects 1 out of every 20 pregnancies in Australia and is the biggest cause of death in new mothers. Unfortunately, there are currently 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, (PPCM) 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 Anthony Ashton and his team have now identified a change in the DNA of the placenta which triggers pre-eclampsia. This change causes the placenta to release

factors that negatively affect the mother. This critical insight has allowed them to create a first-of-its-kind test which can be used to develop new drugs to combat both pre-eclampsia and peri-partum cardiomyopathy.

To see Anthony Ashton and Nicci Dent talk to Sydney Pead from Channel 10 News about this research visit: <https://www.heartresearch.com.au/research/pre-eclampsia/>

Cardiovascular risk reduction in bereavement

Can you die from a broken heart? There have always been the stories of someone dying of a broken heart after someone they loved had died, and actually that is correct – there is an increased risk.

A research study led by Professor Geoffrey Tofler, funded by Heart Research Australia, has recently been published in the American Heart Journal. The article highlights the risk of suffering a heart attack and death among bereaved people and how this risk can be reduced. Professor Tofler's world-first research highlights that "the peak risk of heart attack is in the first few days after bereavement and remains at four times the risk between seven days to one month after the loss."

To see Professor Tofler discussing his world-first research with Michele Harris from ABC News visit: <https://www.heartresearch.com.au/research/cardiovascular-risk-reduction-in-bereavement/>



Professor Tofler and his team wanted to express their appreciation to Heart Research Australia and their donors for their support. They are quick to point out that funding was a crucial factor for this world first breakthrough research. Without the financial support from Heart Research Australia and its generous donors these studies may not have happened.

Professor Geoffrey Tofler addresses Bushfires and Coronavirus



Professor Geoffrey Tofler, Professor of Preventative Cardiology, University of Sydney; Staff Specialist in Cardiology at Royal North Shore Hospital; Chair of Preventative Cardiology for Heart Research Australia and lecturer on the topic of "The cardiac effects of Pollution, including due to fires".

With the help of Professor Geoffrey Tofler we have brought together some information we thought may be helpful for you in this time of uncertainty.

What does Coronavirus mean for someone affected by heart disease?

Patients that have underlying cardiovascular disease may have a potential increased risk if they contract coronavirus.

The American College of Cardiology (ACC) released a clinical bulletin on the 20th Feb 2020 addressing cardiac implications of the novel coronavirus (COVID-19, 2019-nCoV and Wuhan Coronavirus).

The bulletin highlights the importance for cardiac patients to "remain current with vaccinations, including the pneumococcal vaccine given the increased risk of secondary bacterial infection". The bulletin suggests patients have the "influenza vaccination to prevent another source of fever which could be initially confused with coronavirus infection." The ACC also confirmed that 40% of hospitalised patients with confirmed COVID-19 have cardiovascular or cerebrovascular disease.

For anyone who needs another reason to stop smoking, research suggests that people who smoke are more susceptible to developing COVID-19 because they have higher levels of ACE2 receptors in the lung to which the virus binds.

It is essential for someone with heart problems to be mindful of personal hygiene and washing hands regularly especially before all meals and to regularly use alcohol-based hand sanitiser. Stay away from anyone potentially impacted or who has recently travelled to affected areas and ensure all vaccines are up to date. If in doubt, get checked out.

Heart Research Australia stresses the importance of continually checking in with the Australian Government Department of Health website for updated information as it becomes available as this may cause guidance to shift.

<https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert>

The affect Bushfires can have on your heart.

"We are all appalled at the extent and severity of the bushfires this year – and feel for those who have experienced the stress and trauma of battling the fires and having their homes and lives under threat. Those of us who have not been directly exposed, have experienced the smoke, haze and air pollution caused by the fires.

While people are aware of the negative effects of the smoke and pollution on lung function, the dangers to the heart are not as well appreciated. There is an increased risk of a wide range of heart problems at this time including heart attack, angina, heart rhythm problems and worsening heart failure. Smoke and pollution can directly cause inflammation and damage to blood vessels and increase the clotting tendency of blood, as well as increasing heart rate, blood pressure and reducing oxygen levels.

While there are no specific treatments, people with heart disease should avoid outside activity during days of increased smoke and pollution, and limit exercise to air- conditioned environments such as malls. High quality masks can be helpful, although data is less clear there. It is doubly important to continue taking regular recommendation and see your doctor if there are any new or worsening symptoms."

Triggers of heart attack, including pollution is a specific area of interest for Professor Tofler and he is planning a research trial to include pollution related to fires and other causes, with the support of Heart Research Australia. So we will let you more in the future!



Greg Mullins Heart Research Australia Ambassador and Former NSW Fire Commissioner on left - working as an RFS volunteer to fight fires at Batemans Bay on New Years Eve.

Wear RED Day

Wear Red Day is such an exciting event for us! It's a day we encourage people to wear something red in support of/or in memory of someone they care about and donate to life-saving heart research. We love working with our supporters, hearing their incredible stories and seeing all the amazing events that you all put on around the country and we cannot thank you enough for your wonderful support. The time and effort that was put into these events was spectacular and we feel so privileged to have had the opportunity

to work with you. Thank you so much to each and everyone of you who organised an event or just wore red and donated to help support us.

We are incredibly grateful for the generous support of Abbott Vascular this Wear Red Day. We were fortunate enough this year to have them on board as a supporting partner helping us raise awareness and funds for Heart Research Australia.



Annual Heart Health Luncheon

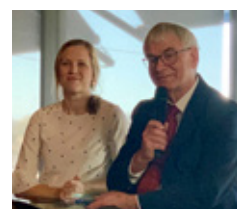
Towards the end of 2019 the Red and White committee, again, generously volunteered their time to host their 20th incredible 'Spring has Sprung' luncheon at The Deckhouse, Woolwich in support of Heart Research Australia.

The Red and White Committee, comprising Jenny Carr, Lori Farrar, Jenny Goldring, Lynne Ravenhall, Fiona Taylor and Lynn Varvel worked hard to ensure the success of the event, procuring many wonderful Raffle and Silent Auction items.

Our sincere thanks go out to all members of the Committee as well as the generous sponsors who helped support the event, The Deckhouse/Dede's Group, Savills and Inglewood Wines, as well as everyone who turned up on the day to support Heart Research Australia.

The day was an outstanding success raising \$26,679 for Heart Research Australia. The funds raised from the day have been allotted to Dr. Chris Roach (supervised by Dr. Carmine Gentile) supporting his work producing heart patches made of special "bio-ink", which aims to regenerate parts of the heart that have died following a severe heart attack and prevent heart failure.

Heart Research Australia are so grateful to the Red and White Committee for their hard work and commitment year after year organising their wonderful Annual Heart Health Lunch and raising much needed funds for life-saving heart research.



Gregory Joseph Hagarty – a heart hero



Greg Hagarty

In our midst are often unsung heroes and we discovered one of those recently when we received a substantial gift from the estate of the late Gregory Hagarty.

We spoke to his friend Ken Bergin to get an insight into this generous man. Ken told us that Greg had an active interest in the Royal North Shore Hospital and its community, as he was born there and it was there that he was treated for heart disease, which resulted in him receiving a pacemaker over 20 years ago. Being generous with his time as well, Greg gave back to the hospital spending over 20 years as a volunteer driver for those patients who needed to get to appointments. He was also a volunteer at his local outreach centre providing food and support to those in need in his local community.

Like many cardiac patients, Greg also became an active member of the Cardiac rehab exercise group – the Pulsers – with whom he formed a strong and close friendship. A group who joined him in his passion for wining and dining!

Ken describes Greg as a very warm person, who loved other people and who was great company. We at Heart Research Australia are grateful for the kind gift he left in his will, which will ensure Greg's legacy of helping others continues.

The Sun Run 2020

To kick off RED FEB this year we had a team brave 38°C heat to complete the Sun Run race from Dee Why to Manly in Sydney to raise money for Heart Research Australia. The team even included some of our lovely donors who flew all the way from Brisbane to complete the race!

A huge thank you to everyone who ran, walked (or a bit of both), fundraised or donated to the Heart Research Australia Crew. So much fun was had by all and there are already plans in place for next year's event!



Anyone who wants to join us email media@heartresearchaustralia.com.au or keep an eye on our social media pages!

To see some pictures from the event visit: www.heartresearch.com.au/sun-run-2020





I have, *Will* you?

"I have been a regular donor to Heart Research Australia for several years. My father and several grandparents died early due to Cardiovascular Disease (CVD) so I have a special interest in the causes, lifestyle factors, treatment and prevention.

As a high school PDHPE teacher, I am aware that CVD is still the major cause of death in Australia and as such affects a majority of the population, either directly or indirectly. I believe that research into prevention and early intervention is vital so after reading and hearing more about the research, focus and clinical stories from Heart Research Australia, I decided that I needed to take my commitment to another level and include a bequest in my will.

It is a real privilege to be able to provide financial support to such an invaluable organisation, which is devoted to ensuring a better quality of life for Australians of all ages, now and into the future."

Catherine Gray



If you would like to make provision for Heart Research Australia in your Will please **click here** or print out and return the form below to Heart Research Australia, Reply Paid 543, St Leonards NSW 1590, or contact Diane van de Merwe on (02) 9436 0056 or **diane@heartresearch.com.au**

☐ Please send me more information about leaving a gift in my Will to Heart Research Australia

☐ I have already left a gift in my Will to Heart Research Australia

☐ I will update my Will to include Heart Research Australia

Title: _____ First Name: _____ Last Name: _____

Address: _____

Suburb: _____ State: _____ Postcode: _____

Email: _____ Phone: _____

Thank you so much!

Your legacy, large or small, will have a positive impact on generations to come.