

2021  
Impact  
Report

It's  
*Personal*



# Our work is *personal*

**'Personalised medicine promises to revolutionise the prevention of heart disease and diabetes. Our vision is to be a global leader in personalised medicine, and we're excited to be making this quantum leap in healthcare.'**

*Alex*

The Baker Heart and Diabetes Institute has been at the centre of some of the world's greatest scientific discoveries and medical advances since it was established in Melbourne in 1926.

Despite improvements in life expectancy, heart disease is still a leading killer of Australians, and diabetes is the fastest growing chronic condition in the country. We believe everyone should have access to the best preventive, diagnostic and treatment options for heart disease, diabetes, and their complications.

By harnessing big data and technological advances we are transforming how healthcare is delivered, allowing it to be better targeted to the individual.

Our vision is to help people to live healthier for longer in the community, and to stop heart disease and diabetes in their tracks.

This very personal mission is what drives our scientists, clinicians, public health experts, diabetes educators, and dietitians every day.

**Alex Faulkner is a Research Assistant in the Metabolomics lab.**



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We acknowledge the Traditional Owners of the land on which our offices reside. In Naarm/Melbourne, the Boon Wurrung people of the Yaluk-ut Weelam clan and the Bunurong and Wadawurrung peoples. In Mparntwe/Alice Springs, the Arrernte people.



# Helping Australians live *healthier* for longer

At the Baker Institute the work we do is personal.

Our research is informed by the people who benefit from it, with researchers working in healthcare settings to take science from the laboratory into the community.

Nance Gooderham is a fantastic example of someone whose life has been changed through the power of medical research.

Nance is a participant in the CAPLA trial, headed by Professor Peter Kistler, testing a new cardiac ablation technique to improve outcomes for people with persistent atrial fibrillation, a common heart rhythm disorder.

Since undergoing the procedure, Nance says she has a new lease on life and can get back to the active lifestyle she enjoys – including regular bodyboarding and bushwalking.

Our mission is to help all Australians live healthier for longer in the community. That goal is only possible thanks to our supporters who make advancing medical research their own personal mission as well.

In 2021, we saw significant support from gifts included in wills, and we publicly launched our YOU campaign, which has so far raised \$95 million of its \$100 million goal to fund accelerated research into personalised medicine for heart disease and diabetes.

We also received some very significant gifts from our supporters. This includes a generous gift from the Casella family – long-term supporters of the Institute – to establish the Filippo and Maria Casella Cardiology Centre of Excellence, which will support the continued development of some of our most exciting research teams.

The relationships we have with our supporters, stakeholders, patients and community – an important foundation during our 95-year history – are what drives our research every day.

Together, we are committed to beating Australia's biggest killers.

**Mr Peter Scott AM**  
Chair, Baker Heart  
and Diabetes Institute



*Nance*



*Peter*

“ We’re proud to be taking this incredible scientific journey of discovery with our supporters as we stand on the edge of something truly exciting.”



# Charting new territory

Science is making a profound difference to our health and it's an incredible time to be involved in medical research.

During the pandemic we have seen science supercharged, with the creation of vaccines in record time.

We also stand on the threshold of exciting developments to beat heart disease and diabetes. We don't want to just treat people once they have disease. Instead, we are developing tools to identify and treat people before disease develops.

Thanks to powerful new technology, vital global networks and highly skilled researchers, our bioinformaticians are analysing large human datasets to gain important insights into disease development.

Our laboratory scientists are using these insights to develop simple tests, such as a blood test that can determine individual genetic and lipidomic profiles to provide a more precise picture of disease risk.

From there, our clinical researchers are testing community interventions and novel medications that can be

targeted at those who are most at risk and tailored to those who will receive the greatest benefit.

Researchers like Associate Professor Anna Calkin are at the forefront of this work. Anna is leading a study to identify genes and their importance in the risk of coronary artery disease, the leading cause of death in Australia.

Studies like these are so important in helping us intervene before disease strikes.

We have also established an Australian-first sudden cardiac death registry to better understand why sudden cardiovascular events occur so we can prevent them, with heart health brought to the fore this year following the untimely passing of several high-profile Australians.

I want to thank our donors for their vital support as we look to a future where we can radically transform disease prediction, prevention and treatment.

**Professor Tom Marwick**  
Director, Baker Heart and Diabetes Institute

## KEY FACTS



100+

human research studies conducted



424+

scientific papers published



\$21.2m

received via competitive grants, international funding bodies and collaborative agreements



*Tom*

“ Through investment in brainpower, technology and networks, we are accelerating the development of personalised medicine to better predict, prevent and treat heart disease and diabetes.”



*Anna*

# We are making it *personal*

Personalised medicine promises to revolutionise the way we treat heart disease and diabetes forever. At the Baker Institute, we are challenging the 'one size fits all' approach and accelerating our personalised approach to deliver precise preventive strategies and treatments at an individual level.



## Analysis and identification of biomarkers

Our bioinformaticians are analysing huge human data sets, accessed through important international collaborations, to gain new insights into the development of disease.



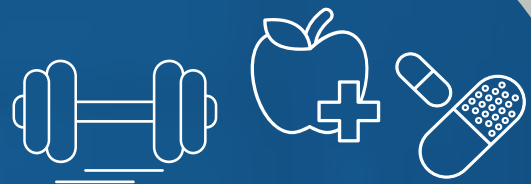
## A simple test to create a personalised health profile

Our laboratory scientists are using these insights to develop simple tests, with a single blood draw to determine individual genetic and lipidomic profiles and provide a more precise picture of disease risk.

Mitcham resident and Emergency Department nurse, Irene Tey, is taking part in one of our long COVID studies.



*Irene*



**Tailored interventions to better predict, prevent and treat disease**

As this knowledge network grows, the latest research advances can be integrated into personalised prediction, prevention and treatment tools for cardiovascular disease, diabetes, and related conditions.



# Personalised prediction for our biggest killer

Hundreds of people have been tested with new personalised predictive tools developed by our researchers to better detect heart disease risk and take action before a serious event occurs.

Associate Professor Melinda Carrington, Head of our Preclinical Disease and Prevention unit and Fellow of the Filippo and Maria Casella Cardiology Centre of Excellence, is leading the EDCAD-PMS study, which in 2021 became one of our most popular clinical trials.

The study examines participants' genetic makeup and individual biomarkers, pairing this information with powerful imaging to detect disease more accurately in its early stages and determine if intervention is required to prevent a deadly heart attack or stroke.

"Not only does this directly benefit the individual involved in our trial, but this strategy also leads to new health approaches that can be scaled up to better serve everyone," Melinda says.

"Modern technology is bringing us closer to more accurate predictive disease modelling and precision targeting of therapies. This includes the analysis of massive datasets, which will help define personal health profiles for millions of people. And, with emerging technologies, we are closer to being able to apply these techniques and models in the community."

For Brian Langskaill, 66, participating in the trial, funded with support from the Ernest Heine Family Foundation, was truly a lifesaver.

After attending our clinical trials centre at Heartwest in Hoppers Crossing, Brian's imaging showed a large amount of coronary plaque build-up, which without intervention put him at an extremely high risk of a potentially fatal heart attack.

Following a referral, Brian went to hospital where two stents were inserted into his left artery, which had a 95 per cent blockage.

## KEY FACTS



No 1.

Heart disease is Australia's number 1 killer



\$5B

It's our most costly disease, \$5 billion per year



3/4

3 out of 4 Australians are at risk

Take part in our early detection study





A close-up portrait of a middle-aged man with short, graying hair and a light beard. He is wearing blue-rimmed glasses and a blue and white checkered button-down shirt. He is smiling slightly and looking directly at the camera. The background is a blurred office setting with a window and a door handle.

## *Brian*

“ I’d had no symptoms, so I consider myself very lucky that this issue was spotted when it was. The experience has been life-changing.”





*Christine*

*Simon*

*Brian*

“ One in four Australians have fatty liver disease but many don't know it. Evidence is key, we desperately need more awareness and research to improve prevention, diagnosis and treatment.”

# Regulating storage of dangerous fat to *prevent* disease

Our scientists have discovered a gene that is important in regulating the storage of dangerous fat to prevent it becoming toxic and increasing cases of diabetes and heart disease.

A study in mice showed that removal of this gene meant that dietary fats were more readily stored in their rightful place, adipose tissue. This would help to protect other tissues from fats that might otherwise lead to diabetes, heart disease and fatty liver disease.

They also found that this gene changed the levels of a 'master regulator' in our fat tissue that dictates differences in weight gain between men and women. This suggests that it could be manipulated to alter a person's predisposition to obesity.

Scientists found that females were more prone to the changes in adiposity when this gene was removed, shedding new light on the triggers that drive obesity in men and women.

Researchers hope that these important insights will be a stepping-stone to developing much-needed prevention and treatment strategies to combat obesity and metabolic syndrome.

Head of Molecular Metabolism and Ageing, Associate Professor Brian Drew says the study shows that by altering the levels of this gene it's possible to safely increase fat storage while maintaining metabolic health.

Serious emerging health issues like rising cases of metabolic associated fatty liver disease are a key area of focus for Brian and his team. This is the most common liver disease and a leading cause of liver cancer.

"It is not just a lifestyle disease and there are few effective tools for treatment — many people have it and don't even know about it, and unfortunately once it progresses to a point where symptoms start developing, it is often irreversible," Brian says.

Researchers from our Molecular Metabolism and Ageing lab:  
Christine Yang, Associate Professor  
Brian Drew and Dr Simon Bond.



# Building better *understanding* to treat long COVID

Several of our clinical trials are examining the most common persistent effects of the COVID-19 infection, including its impact on the cardiovascular system, to prevent ongoing health issues in the millions affected by the virus.

Head of the Institute's Human Integrative Physiology laboratory, Dr Erin Howden is leading a long COVID study focused on understanding why some people experience ongoing fatigue, one frequently reported symptom.

"Because fatigue is a complex condition, we are using different tests to understand if there is possible heart, lung, musculoskeletal or nervous system impairment," Erin says.

The assessments — conducted at our specialist clinics in Melbourne — have included nerve recording, exercise testing, a heart ultrasound and MRI.

Related trials include the PERCEIVE (COVID Heart) intervention study, which aims to determine if COVID-19 causes damage to the heart and impacts functional capacity, then

tests medication or an exercise training program to help the participant recover.

This multimillion-dollar study is supported by competitive grant funding from the Medical Research Future Fund and the Heart Foundation.

Melbourne nurse Irene Tey was infected with COVID-19 in 2020 and experienced persistent breathlessness and fatigue.

"I was fit and healthy before, so I didn't expect for it to go on and on and on. At one point I couldn't even walk 100m without stopping, I was tired all the time," Irene says.

She has since had COVID-19 a second time.

Struggling to find information, even as a healthcare worker, Irene took part in the Institute's long COVID study.

"It was really good to be involved in the study because it covered so many tests that I'd never had access to before. Over time, I'm feeling better and slowly building back."

Sign up for our COVID-19  
Heart study





## *Irene*

“ It is so important to have research like this to help identify exactly what’s happening with these developing health issues, and gain access to resources that can help people like me.”

# Roadmap to *transform* healthcare

**Our science strategy, supported by generous donors including the Helen Amelia Hains Foundation, is critical in leading a global effort to stop heart disease, diabetes, and related conditions. Our world-renowned researchers are embarking on a new era of detection, prevention, and early intervention of cardiometabolic disease.**

**Our goals and outcomes are based around four impact themes: Save young hearts, Beat diabetes, Keep hearts healthy and Prevent failing hearts.**

**Our strategy reflects the breadth of the areas that we work across and harnesses our research strengths so that our scientists can focus on answering big-picture questions and delivering breakthroughs that will transform healthcare at a population and individual level.**

## **ABORIGINAL HEALTH**

Our work in Aboriginal health encompasses research and education that aims to address the profound health disadvantage experienced by Aboriginal people. Our researchers are bringing their skills and resources to address these challenges.

## **ATHEROTHROMBOSIS**

We aim to find out who is at risk of developing blocked arteries, allowing us to predict heart attack and stroke, and develop and test new and improved drug treatments. We conduct trials with anti-inflammatory, anti-diabetic and lipid-lowering drugs in patients who have experienced a heart attack with the aim of reducing the 'size' of the attack and preventing further attacks.

## **BIOINFORMATICS DISCOVERY AND TRANSLATION**

Incorporating the Cambridge Baker Systems Genomics Initiative, this program uses big data approaches to inform our science. Access to major international registries informs our investigators of the associations between genes, proteins and fats, and various diseases. We use this information to identify whether these links

are truly causative, and this information can inform pathways to new treatments.

## **DIABETES COMPLICATIONS**

We aim to reduce the burden of diabetes complications (heart attack, heart failure, kidney dialysis, amputation, dementia, cancer, liver disease) by establishing clinical trials of new treatments. We seek to develop sophisticated diagnostics for early identification and prevention of symptoms.

## **CARDIAC BIOLOGY AND DISEASE**

Our researchers aim to reverse chronic heart disease, and to prevent and repair structural damage to the heart from hypertension, heart disease and associated rhythm disorders.

## **INFLAMMATION AND IMMUNOMETABOLISM**

Cardiovascular disease is an inflammatory disease. This program aims to identify the unique metabolic signatures of specific cells and will allow for cell-specific targeting to either neutralise or alter the function of immune cells that cause disease. Alternatively, manipulating metabolism could boost the function of anti-inflammatory or



“ We are harnessing our resources to deliver new ways to detect, prevent and intervene earlier before disease strikes.”

regulatory immune cells. We are developing a world-first lipid atlas of immune cells to understand in great detail the lipid composition of specific immune cell subtypes.

#### OBESITY AND LIPIDS

Obesity today stands at the intersection between inflammation and metabolic disorders, causing an aberration of immune activity, and resulting in increased risk for diabetes, atherosclerosis, fatty liver disease and pulmonary inflammation. This program explores the connection that lipids play in obesity, as well as how obesity affects metabolism.

#### PHYSICAL ACTIVITY

We want to know how people's bodies adapt to exercise and how we could use that information to predict heart failure, as well as how exercise changes our cellular makeup. We aim to reduce the burden of disease by encouraging Australians to move more.

*Alin*

Dr Alin Rae is co-chair of our Early Career Scientist Committee and a Postdoctoral Fellow in the Molecular Proteomics lab.



# Unlocking lipids for personalised disease prevention

Metabolism is the complex chemical processes our body uses for normal functioning and sustaining life. How our body metabolises the food we eat, burns it to produce energy, changes it into other compounds for growth, or stores it as fat can affect our risk of developing metabolic diseases.

Abnormal changes in our lipid metabolism have been linked with the onset of metabolic diseases such as heart disease, diabetes, and even Alzheimer's disease.

Understanding more about the lipids or fats circulating in our blood has long been an area of focus but major technological advances are now allowing scientists to take this to a whole new level.

Professor Peter Meikle's Metabolomics lab is analysing hundreds of lipid species in our bodies to better understand lipid metabolism. We know poorly controlled lipid metabolism underpins many diseases, however, we are yet to understand the

environmental and genetic influences. But we are getting closer.

Peter's team has utilised state-of-the-art tandem mass spectrometry to develop the only high throughput lipidomic platform in Australia, enabling our scientists to perform some of the largest lipidomic studies yet reported.

This work has enabled the characterisation of metabolic pathways and identified lipidomic biomarker profiles that are able to better predict individual disease risk and effective treatments.

As this pioneering work continues harnessing the latest technologies, it is hoped patients and doctors will have access to clinical tests and improved risk assessment. This might include a personalised risk score to identify heart disease early and deliver more targeted preventative treatment thanks to a Heart Foundation Strategic Grant of nearly \$1 million dollars.

See how our work is showing promise for diagnosing and understanding Alzheimer's disease.



**Researchers from the Metabolomics lab:  
Dr Habtamu Beyene, Natalie Mellett and  
Professor Peter Meikle.**

“Your metabolic system has thousands of different lipids, but we’ve found a way to closely examine which ones are associated with a lower risk of disease, and which indicate a higher risk.”

*Habtamu*

*Peter*

*Natalie*



# Time to listen to *your heart*

We are helping Australians better understand their risk of heart valve disease and get treated before serious complications occur.

The number of people with heart valve problems that could lead the heart to malfunction is rising rapidly, particularly as the population ages.

An in-depth report written by Baker Institute experts and funded by Edwards Lifesciences, shows more than half a million Australians have heart valve disease. This involves a malfunctioning of one or more heart valves that disrupts blood flow through the heart.

Perhaps more concerning, is that more than a quarter of a million Australians have faulty heart valves putting them at risk of serious complications and don't know it. These complications include heart failure, stroke, blood clots, heart rhythm abnormalities, and even death.

Although serious, heart valve disease is increasingly treatable. With early

detection and intervention, those affected can return to their everyday lives, and continue to contribute to their families, communities and the economy.

"Common symptoms of heart valve disease — especially exercise intolerance — are often misattributed to old age," Baker Institute Director and cardiologist, Professor Tom Marwick says.

"For those over 65 years of age, we want them to ask their GP for a simple heart check-up. The doctor may detect a heart murmur — often the first symptom of heart valve disease."

When Melbourne grandmother Gerlinde Binning was diagnosed with heart valve disease, it came as a shock as she had few warning signs.

Consulting with specialists, Gerlinde underwent treatment to have an artificial aortic valve placed in her heart, helping her return to an active lifestyle of walking and bike riding and hobbies she loves, like weaving.

## KEY FACTS



254,000

Australians have undiagnosed heart valve disease



435,000

Undiagnosed cases will increase to 435,000 by 2051



\$117m

annual productivity losses can be prevented

Read our full report on heart valve disease



“ A thorough clinical exam is critical to detecting heart valve disease – if you’re over 65, ask your doctor to listen to your heart.”

*Gerlinde*



# A little-known virus that needs *our attention*

It is likely that you have never heard of the HTLV-1 virus until now.

But the Human T-lymphotropic virus type 1 (HTLV-1) has been present at high levels for a very long time in Central Australia and currently, there is no cure, no treatment, and no vaccine to prevent it.

It is estimated that nearly 1 in 20 people globally who contract this viral infection will develop complications including a form of leukaemia which can be fatal within 12 months.

The management of this virus presents enormous and unique challenges to remote Australia, which require an integrated response that is controlled by affected communities.

Baker Institute Director, Professor Tom Marwick says: "After a decade of preliminary work, we now have the tools, clinical and research expertise, and Aboriginal governance frameworks in place to make real advances in improving outcomes for communities affected by this potentially devastating infection".

The Baker Institute is leading a consortium of research partners in a unique research program that is designed to determine the impact of HTLV-1 on the health outcomes of Aboriginal Australians living in remote communities, and the geographic extent of HTLV-1 in remote Australia.

The Institute is working closely with the Kirby Institute, the Menzies School of Health Research and the Doherty Institute on this critical work. At the Baker Institute, this has involved the recruitment of adult residents of Aboriginal communities in and around Alice Springs to a large-scale study.

This work forms an important part of our broader program focused on health disadvantage in First Nations communities across the country, and globally.

Against this backdrop, we have also been looking closely at how we support reconciliation. We're proud to have developed a Reconciliation Action Plan to foster reconciliation both within our organisation and our local communities in Melbourne and Central Australia.

[Read our Reconciliation Action Plan](#) → ≡

**Some of our HTLV-1 Research team including Margaret Smith, Team Leader; Amy Lankin, Aboriginal Research Assistant; and Aboriginal Research Officer, Yasmin Watts.**



“ We are committed to understanding the impact of this potentially devastating virus in Central Australia and helping to reduce health disadvantage in First Nations communities more broadly.”

*Amy*

*Margaret*

*Yasmin*



# Family *vision* for better health

We recently established the Filippo and Maria Casella Cardiology Centre of Excellence, thanks to a generous \$5 million gift from the Casella family.

This is a transformational gift to the Baker Institute's YOU campaign, which has raised \$95 million of its \$100 million goal to fund accelerated research into personalised medicine for heart disease and diabetes.

Joe and John Casella made the gift in honour of their parents Filippo and Maria, who arrived in Australia with a dream of a better life and a vision to build a brighter future for generations to come.

Their family has its own personal connections with heart disease, including Joe who lives with atrial fibrillation (AF), a common yet serious heart rhythm disorder.


“Our support of the Baker Institute is an investment in the future health of our family and of all Australians. We are committed to beating Australia’s biggest killers, together,” Joe says.

The Filippo and Maria Casella Cardiology Centre of Excellence is based upon three pillars of research: Keep hearts healthy, Prevent failing hearts and Save young hearts.

Its inaugural Chair, Associate Professor Andre La Gerche, is a cardiologist who leads research examining the impact of exercise on the heart.

This knowledge drives targeted programs to prevent cardiac dysfunction, including fatal complications like sudden cardiac arrest and heart failure. It also connects with work being done across the Institute – including with our bioinformatics and clinical electrophysiology teams – to develop a personalised medicine approach to AF.

“We are starting to understand the genetic and environmental drivers of AF, identify who is at risk, and better treat the estimated half a million Australians affected,” Andre says.

A peek behind the scenes of our exercise heart trial → 

A photograph of two men standing side-by-side in a gallery. The man on the left is older, with dark hair, wearing a dark pinstriped suit, white shirt, and patterned tie. The man on the right is younger, with grey hair, wearing a dark suit jacket over a light-colored striped shirt. The background is a gallery wall with various framed artworks and documents.

*Joe*

*Andre*

“ Thanks to generous supporters, my team aims to better understand why people’s hearts stop working, so we can better protect future generations.”



# Identifying global diabetes trends

A global study led by the Baker Institute has revealed that annual rates of new cases of adults diagnosed with type 2 diabetes are stable or falling in many high-income countries.

The same study — one of the largest ever conducted — showed death rates among people with type 2 diabetes are also declining in many countries, including Australia.

These findings, which aim to inform healthcare planning, suggest that health management strategies developed in recent decades may be working.

Increased promotion of healthy lifestyle changes has led to reductions in levels of some risk factors, including smoking, high blood pressure and cholesterol. In addition, the use of blood pressure and cholesterol lowering medications for the prevention of cardiovascular disease in people with diabetes has grown in recent decades.

These studies, co-led by epidemiologist Professor Dianna Magliano OAM and researcher and clinician, Professor Jonathan Shaw, provide rich data and powerful insights to inform government planning and investment. They also exemplify the leading role that the Institute plays in predicting global diabetes trends and identifying strategic interventions — a hallmark of its work for many decades.

Both Dianna and Jonathan play a pivotal role in international diabetes advocacy and awareness, with Dianna recently co-leading the generation of new global data for the International Diabetes Federation.

In recognition of her research excellence and leadership, Dianna was recently awarded a five-year senior female fellowship. The prestigious Alice Baker and Eleanor Shaw Gender Equity Fellowship is partly funded by our long-time supporters, the Baker Foundation, and the Baker Institute.

## KEY FACTS



1 in 10

537 million adults globally are living with diabetes



Over 3 in 4

adults with diabetes live in low- and middle-income countries



6.7m

deaths were due to diabetes in 2021

**Baker Foundation Trustee and Baker Institute Board Member, Kate Metcalf, and Head of the Diabetes and Population Health unit, Professor Dianna Magliano OAM.**

## *Dianna*

“ We desperately need more senior women in Australian science, and I’m pleased to be part of some great initiatives at the Institute but there is still much more work to be done.”

## *Kate*





# Supporting the medical innovators of *tomorrow*

Norman and Meryll Wodetzki have a very special connection to our Bright Sparks program, which nurtures the next generation of heart disease and diabetes researchers with the help of our generous supporters.

The couple have supported our PhD scholarship program for more than 10 years, and in a touching coincidence, when Norman had a heart attack in 2015, he was treated by a previous Bright Sparks beneficiary who is now a leading cardiologist.

Recently, Norman and Meryll decided they wanted to increase their annual gift to help support a special project led by one of the Institute's up and coming scientific leaders.

Their \$10,000 gift has been matched by the Institute to create a new Early Career Scientist project grant. The inaugural recipient is Dr Alexandra George, who is examining how

human milk helps protect us from cardiometabolic disease.

"Breastfeeding is a protective factor for cardiovascular disease and diabetes but it's still unclear exactly why or how," Alexandra says.

Alexandra uses the Institute's state-of-the-art mass spectrometry equipment to examine the fat profile of human milk in different population groups and at different stages of lactation.

"We're finding things in milk we didn't even know about. Differences in people's blood fat profile and fat metabolism are seeded in early life, and these go on to influence future risk of obesity and related conditions," she says.

"Our first 1000 days are so important in establishing good health, and we want to build a clearer picture of how human milk plays a role in that."

## KEY FACTS



25

honours and masters students



73

PhD candidates



53

early career researchers



25

student supervisors

Find out more about our Bright Sparks program →



“ We are thankful that we were introduced to the Baker Institute many years ago and are so grateful for the incredible young people who devote themselves to saving lives, including mine. That’s why we support the lifesaving work of the Baker Institute.”



*Norman*

*Meryll*

*Alexandra*



# Supporters and acknowledgements

All those who support us have their own reasons for wanting to do so. We thank you for being the driving force behind our mission to beat heart disease and diabetes together.

## Major gifts (\$10k+)

Anonymous  
Olive Bethell  
Casella Family  
Mr Stephen Cook  
Ruth Crutch  
Clyde and Debbie Davenport  
Prof Lorraine Dennerstein AO\*  
Francesca & Paul Di Natale & Family  
EndUCD Foundation  
Claire Falconer  
Helen Amelia Hains Foundation  
Mrs Anne King & Mr Beresford King OAM  
Mr Lindsay Maxsted  
Mrs Y Mee  
Susan Morgan OAM  
Mr Philip Munz AM & Mrs Sylvia Munz  
Mr Robert & Mrs Sue Nicholson  
Loris N Peggie  
Betsy Polasek  
The Ronald Alan Curry Trust  
Mrs Margaret S Ross AM  
Gerry Ryan OAM\*  
Peter & Anna Scott  
VPGH Ltd  
Mr Norman & Mrs Meryll Wodetzki

## Trust and Foundations (\$20k) / Private Trusts (\$10K)

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The Shine On Foundation  
Sylvia & Charles Viertel Charitable Foundation  
Rob and Hope Stewart

**Bequests (\$20k+)**

Estate Akos &amp; Marjorie Talan

Estate Gus Zeilinger

Estate Ivan Edgar Tepper

Estate John Madden

Estate Julienne Campbell

Clowes

Estate June Lawrence

Estate June Lois Thompson

Estate Marie Rose Turner

Estate Michael Francois Boyt

**Bequests in  
Perpetuity (\$20k+)**

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**Ambassadors**

Matthew Keenan

Mike McKay OAM

*Thank you*

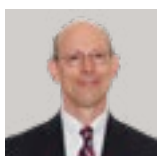


# Board of Directors



**Mr Peter Scott AM**  
**Non Executive Chair**

Peter Scott is Vice Chairman of Credit Suisse Australia. Peter was a member of the Australian Takeovers Panel from 2002 to 2014 and the New Zealand Takeovers Panel from 2008 to 2014. He served as a director of the Association of Australian Medical Research Institutes (AAMRI) from 2013 to 2018 and as Chairman of the Medical Research Future Fund Action Group in 2014 and 2015.



**Professor Thomas Marwick**  
**Executive Director**

Tom Marwick is the Director and Chief Executive Officer of the Institute. He is a practising cardiologist and prior to the Baker Institute was the Director at Menzies Institute for Medical Research, University of Tasmania and continues to hold an Adjunct Professorship there, as well as University of Melbourne, Monash University and Swinburne University. Tom has also worked as the Head of Cardiovascular Imaging at Cleveland Clinic, is a director of AMREP AS Pty Ltd and was a director of Nucleus Network Limited until 31 January 2018.



**Ms Christine O'Reilly**  
**Non Executive Director**

Christine O'Reilly is a director of BHP Limited, ANZ and Stockland. She was Co-head of Unlisted Infrastructure at Colonial First State Global Asset Management from 2007 to 2012, and prior to that Chief Executive Officer of the GasNet Australia Group.



**Mr Lindsay Maxsted**  
**Non Executive Director –**  
**Retired 31 December 2021**

Lindsay Maxsted is Chairman, Transurban Group (Director 2008 – and Chairman 2010 –), immediate past Chairman, Westpac Banking Corporation (Director 2008 – 2020 and Chairman (2011–2020) and a former Director of BHP Group Limited and BHP Group plc (2011–2020). He is Managing Director of Align Capital Pty Ltd, Chairman of the Advisory Board of Coolmore Australia and a Senior Advisor to Tanarra Capital. He is a Fellow of the Australian Institute of Company Directors and a Fellow of the Institute of Chartered Accountants in Australia. Lindsay was formerly a Partner at KPMG (1984–2008) and was the CEO and National Managing Partner of that firm from 1 January 2001 to 31 December 2007.



**Ms Kate Metcalf**  
**Non Executive Director**

Kate Metcalf is a senior solicitor operating her own legal practice and is also a sessional Member at the Victorian Civil and Administrative Tribunal. She is a Trustee of the Baker Foundation and a Director of Boroondara Aged Services Society, BASS Care. She has previously held positions as the Legal Director Asia, General Counsel Australia and New Zealand, Director and Company Secretary with Carestream Health Australia Pty Ltd and Senior Counsel and Company Secretary of Kodak (Australasia) Pty Ltd.



**Mr Robert Nicholson**  
**Non Executive Director**

Robert Nicholson is a director of Port of Melbourne, owned by Future Fund, Queensland Investment Corporation; Global Infrastructure Partners and Ontario Municipal Retirement Scheme; Alinta Energy; and Landcare Australia Limited. He is a senior advisor with Herbert Smith Freehills, having served as a member of the Freehills board between 2000 and 2011 and Chairman between 2008–2011. Robert is a former director of Nucleus Network.



**Professor Simon Foote**  
**Non Executive Director**

Simon Foote is ex-Director of The John Curtin School of Medical Research at The Australian National University. He has been Dean of the School of Medicine at Macquarie University, Director of the Menzies Research Institute at the University of Tasmania and Divisional Head at the Walter and Eliza Hall Institute, Melbourne. He was a postdoctoral fellow at the Whitehead Institute at the Massachusetts Institute of Technology. He is chair of the Australian Genome Research Facility and board member and honorary treasurer of the Australian Academy of Health and Medical Sciences. He is an emeritus professor at the Australian National University. He is a Fellow of the Academy of Science, the Academy of Health and Medical Sciences and the Academy of Technological Sciences and Engineering.



**Dr Andrea Douglas**  
**Non Executive Director**

Andrea Douglas is the Senior Vice President, Organisation Transformation and External Affairs at CSL Limited, located at CSL's headquarters in Parkville, Australia. Before joining CSL Andrea was the CEO of the Gene CRC and previously a senior researcher at the Walter and Eliza Hall Institute. Andrea has a PhD degree in Forensic Medicine from Monash University, holds a Master's degree in Health Administration, and is a Graduate of the Australian Institute of Company Directors. She is a Director of BioCurate and the WILD Advisory Board, and was a Director of AusBiotech from 2013 to 2019.



**Ms Marina Kelman**  
**Non Executive Director**

Marina Kelman is an Executive Director at Goldman Sachs, in the corporate advisory division. She was formerly CFO of MLC Life Insurance. Prior to joining MLC, she worked in senior roles at NAB and UBS Investment Bank. She is a member of the Finance Committee of the State Library of Victoria. Marina is a CPA. She is a member of the Australian Takeovers Panel.



**Mr Ben Mitchell**  
**Non Executive Director –**  
**Joined 16 February 2022**

Ben Mitchell owns and operates the successful corporate affairs consultancy Stinton Advisory. Ben is a leading corporate affairs executive with more than 25 years' experience in media, communications, and government relations. Ben has worked with some of Australia's largest companies and advises CEOs, non-executive directors and significant public figures on media, government, reputation, and stakeholder engagement.



# Financial highlights

A \$5 million pledge to establish the Filippo and Maria Casella Cardiology Centre of Excellence was a highlight of 2021, a very special gift during our 95th year. Joe and John Casella made the gift in honour of their parents Filippo and Maria (pictured right), who arrived in Australia with a vision to build a brighter future for generations to come. The Centre is based upon three pillars of research: Keep hearts healthy, Prevent failing hearts and Save young hearts – a fitting focus given the family’s personal connections with heart disease.



The Ian Potter Foundation’s gift of \$150,000 provides vital support for our world-leading lipidomic profiling technology. It will facilitate faster, more cost-effective sample analysis to support major studies to improve risk assessment, monitoring and therapeutic efficacy for treatments for heart disease, diabetes, Alzheimer’s disease and some cancers.

Thanks to the Ernest Heine Family Foundation, a major study commenced recruitment calling for participants with a family history of heart disease. There was unheralded public interest, with some 2,500 people signing up. This project aims to reduce the number of people who develop, live with and die from coronary artery disease. It will not only seek to develop the tools to achieve this but will establish the framework to implement it by incorporating polygenic risk scores into standard health checks in primary care.

We’re also very grateful to the Bertalli Family Foundation for \$150,000 for Bright Sparks scholarships to support our early career researchers.

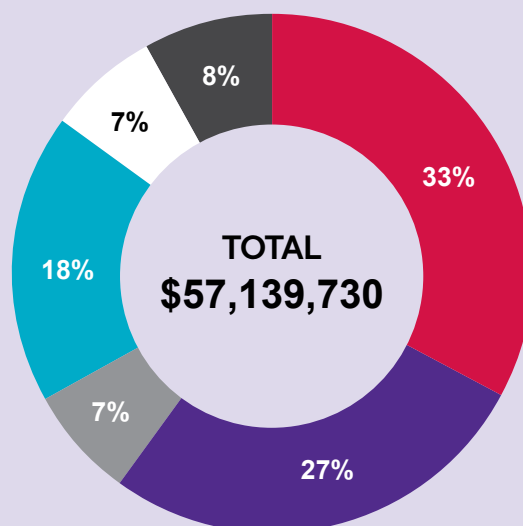
In 2021, we received \$2.3 million for Operational Infrastructure Support funding from the Victorian Government. This is essential funding towards indirect costs that are not provided by competitive grants.

The Institute was awarded \$1.5 million through the Federal Government’s Independent Research Institute Infrastructure Support Scheme. In competitive scientific funding, the Institute secured \$11 million from National Health and Medical Research Council grants.

Our researchers also secured \$3.5 million from the Medical Research Future Fund.

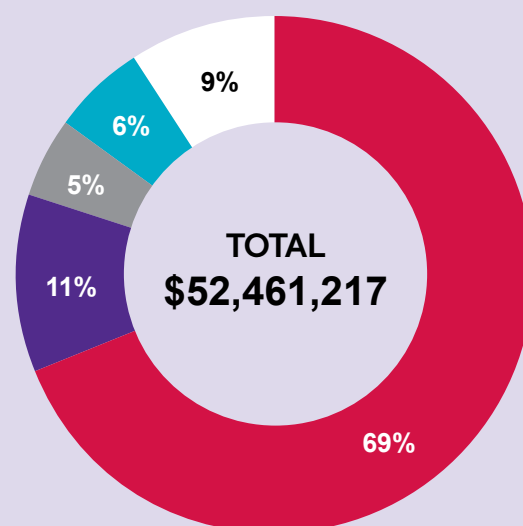
### REVENUE

Fundraising, including bequests	\$19,104,933
Competitive grants	\$15,290,980
Government support	\$3,894,258
Investment income	\$10,364,684
Service & clinical income	\$4,150,758
Other income	\$4,334,117
<b>Total</b>	<b>\$57,139,730</b>



### EXPENDITURE

Research and laboratory expenditure	\$36,288,183
Administration	\$5,526,458
Building & infrastructure costs	\$2,535,038
Business development	\$3,117,136
Depreciation	\$4,994,402
<b>Total</b>	<b>\$52,461,217</b>





## Statement of Financial Position as at 31 December 2021

	Consolidated		Parent	
	2021 \$	2020 \$	2021 \$	2020 \$
<b>ASSETS</b>				
<b>Current assets</b>				
Cash and short term deposits	29,784,884	14,752,786	29,068,791	14,708,046
Trade and other receivables	3,853,276	2,775,634	3,846,349	2,770,594
Right to use	1,034,587	1,193,722	1,034,587	1,193,722
Property held for sale	1,047,142	-	1,047,142	-
Prepayments	604,422	500,346	604,422	500,346
<b>Total current assets</b>	<b>36,324,311</b>	<b>19,222,488</b>	<b>35,601,291</b>	<b>19,172,708</b>
<b>Non-current assets</b>				
Property, plant and equipment	38,294,131	40,737,046	38,294,131	40,737,046
Right to use	5,241,439	6,587,001	5,241,439	6,587,001
Intangible assets	842,836	1,323,528	842,836	1,323,528
Investment in an associate	2,786,137	2,801,449	2,015,001	2,015,001
Investment in subsidiaries	-	-	308,300	237,050
<b>Non-current financial assets</b>	<b>224,192,336</b>	<b>136,767,953</b>	<b>224,192,336</b>	<b>136,767,953</b>
<b>Total non-current assets</b>	<b>271,356,879</b>	<b>188,216,977</b>	<b>270,894,043</b>	<b>187,667,579</b>
<b>TOTAL ASSETS</b>	<b>307,681,190</b>	<b>207,439,465</b>	<b>306,495,334</b>	<b>206,840,287</b>
<b>LIABILITIES</b>				
<b>Current liabilities</b>				
Trade and other payables	4,956,816	3,459,247	4,888,764	3,450,667
Unearned income	1,273,535	1,036,366	1,273,535	1,036,366
Financial liability	17,390,702	10,522,856	16,580,702	10,522,856
Interest-bearing loans and borrowings	398,067	499,174	398,067	499,174
Provisions	6,463,067	5,983,006	6,463,067	5,983,006
<b>Total current liabilities</b>	<b>30,482,187</b>	<b>21,500,649</b>	<b>29,604,135</b>	<b>21,492,069</b>
<b>Non-current liabilities</b>				
Interest-bearing loans and borrowings	454,502	1,280,432	454,502	1,280,432
Provisions	673,369	540,362	673,369	540,362
<b>Total non-current liabilities</b>	<b>1,127,871</b>	<b>1,820,794</b>	<b>1,127,871</b>	<b>1,820,794</b>
<b>TOTAL LIABILITIES</b>	<b>31,610,058</b>	<b>23,321,443</b>	<b>30,732,006</b>	<b>23,312,863</b>
<b>NET ASSETS</b>	<b>276,071,132</b>	<b>184,118,022</b>	<b>275,763,328</b>	<b>183,527,424</b>
<b>EQUITY</b>				
Retained earnings	178,525,283	174,055,307	178,151,136	173,472,623
Other reserves	97,612,192	10,054,801	97,612,192	10,054,801
<b>Equity attributable to members of the parent</b>	<b>276,137,475</b>	<b>184,110,108</b>	<b>275,763,328</b>	<b>183,527,424</b>
Non-controlling interests	(66,343)	7,914	-	-
<b>TOTAL EQUITY</b>	<b>276,071,132</b>	<b>184,118,022</b>	<b>275,763,328</b>	<b>183,527,424</b>

## Consolidated Income Statement for the year ended 31 December 2021

	Consolidated		Parent	
	2021 \$	2020 \$	2021 \$	2020 \$
<b>Continuing operations</b>				
Grants supporting research activities	15,349,710	14,009,976	15,290,980	14,009,976
Infrastructure funding	3,831,490	4,051,349	3,831,490	4,051,349
Fundraising, corporate and private support	19,104,933	14,417,246	19,104,933	14,417,246
Service and clinical income	4,150,758	4,221,697	4,150,758	4,221,697
Investment income	10,364,760	4,402,406	10,364,684	4,402,406
JobKeeper and Cash Flow Boost	62,768	6,387,332	62,768	6,387,332
Other revenue	4,331,417	4,465,817	4,334,117	4,465,817
<b>Revenue</b>	<b>57,195,836</b>	<b>51,955,823</b>	<b>57,139,730</b>	<b>51,955,823</b>
Employee benefits expense	30,355,995	29,207,191	30,064,159	29,207,191
Research, service and clinical expense	8,449,222	9,150,565	8,433,972	9,150,565
Depreciation and amortisation expense	5,431,530	5,373,001	5,431,530	5,373,001
Share of (surplus) / deficit of associate	15,312	(122,403)	-	-
Building overheads	1,446,840	1,473,270	1,446,840	1,473,270
Borrowing costs expense	52,306	78,812	52,306	78,812
Laboratory support expense	2,368,668	2,474,449	2,348,416	2,449,449
Donor acquisition expense	2,502,370	1,700,812	2,502,370	1,700,812
Other expenses from ordinary activities	2,181,624	2,328,443	2,181,624	2,055,272
<b>Expenditure</b>	<b>52,803,867</b>	<b>51,664,140</b>	<b>52,461,217</b>	<b>51,488,372</b>
<b>Surplus before tax</b>	<b>4,391,969</b>	<b>291,683</b>	<b>4,678,513</b>	<b>467,451</b>
Income tax expense	-	-	-	-
<b>Surplus for the year</b>	<b>4,391,969</b>	<b>291,683</b>	<b>4,678,513</b>	<b>467,451</b>
Surplus / (deficit) attributable to:				
Members of the parent	4,469,976	386,090	4,678,513	467,451
Non-controlling interest	(78,007)	(94,407)	-	-
	<b>4,391,969</b>	<b>291,683</b>	<b>4,678,513</b>	<b>467,451</b>

The Statement of Financial Position and Consolidated Income Statement provided above have been extracted from the audited general purpose financial statements of Baker Heart and Diabetes Institute and its controlled entities. The summary financial information does not include all the information and notes normally included in a statutory financial report.

The statutory financial report (from which the summary financial information has been extracted) has been prepared in accordance with the Australian Charities and Not-for-profits Commission Act 2012 and Regulations 2013, Australian Accounting Standards and other authoritative pronouncements of the Australian Accounting Standards Board.



# *A personal* gift with a rich reward

Ingeborg McCullough and her late husband Denys have had a long personal connection with the Baker Institute, lasting more than 40 years.

After Denys was diagnosed with high cholesterol, he and Ingeborg saw specialists at the Institute's clinic who helped them make changes to enjoy a wonderful extended life full of their favourite active pursuits like travelling, skiing and bushwalking.

"I give an annual donation to the Institute to say thank you for the educational work they've done for us and for the wider community," Ingeborg says.

"That's also why Denys and I decided to make a gift in our Will. You've got such bright people working here, and it's wonderful to help develop that talent. If you can give back it makes you feel good. There are so many benefits back to you."

## Join us in beating Australia's biggest killers, together

- Make a financial gift and directly support our lifesaving work
- Become a corporate partner
- Leave a gift in your Will to create a lasting legacy
- Attend an event or host your own to support the Baker Institute

Visit: [baker.edu.au/support-us](https://baker.edu.au/support-us)

Email: [fundraising@baker.edu.au](mailto:fundraising@baker.edu.au)

Free call 1800 827 040

IT'S PERSONAL



*Ingeborg*



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Head of the Cardiac Cellular Systems lab



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