

Annual Report 2023

Perkins

HARRY PERKINS INSTITUTE
OF MEDICAL RESEARCH





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**ROYAL
PERTH
HOSPITAL**

PERKINS NORTH

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PERKINS SOUTH

The Harry Perkins Institute of Medical Research is co-located with three major teaching hospitals to ensure researchers are working closely with doctors and clinicians at the forefront of patient care. This means that the projects you're supporting are aligned with the health issues most impacting West Australians.

Our vision

A pioneering Western Australian medical research institute improving health outcomes globally

Our purpose

Helping people live healthier, longer lives

We will achieve this by:

- Bringing together and supporting the brightest brains to work on the biggest problems
- Discovering and trialling innovative treatments for the diseases that most affect our families
- Using precision medicine to bring the right treatment to the right patient
- Innovating through collaboration
- Engaging and partnering with donors and supporters to prevent disease and keep families together longer
- Focusing locally, impacting globally

Our values

Respect

Respect is at the core of our organisation. We treat everyone in our diverse community with honesty, integrity and respect.

Innovation

We are a talented group of like-minded individuals at the forefront of modern medical research, using our creativity and the latest technology in our relentless quest for medical breakthroughs.

Passion

We bring a passion and commitment to every aspect of our work.

Collaboration

We recognise the power of working closely with each other and our collaborators to achieve the outstanding results for which we strive.

Giving yourself and those you love the opportunity to live longer, healthier and better lives by helping WA's best medical researchers beat the world's toughest diseases.



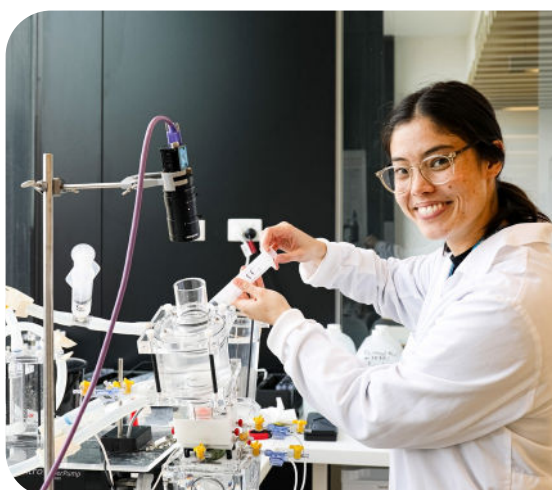
Our Research programs

The Harry Perkins Institute of Medical Research investigates some of the toughest diseases impacting our community. Our dedicated scientists are finding new treatments for a large range of diseases, these are grouped into the following research programs.



Cancer Program

Every day, an estimated 450 Australians are diagnosed with cancer. Cancer is a complex disease that can affect any part of the body. Our research teams are investigating the genetic causes of cancer, developing medical technology to improve outcomes, and finding new, kinder treatments for a range of cancers.



Cardiovascular Science and Diabetes Program

Combining cutting-edge technologies and clinical expertise, the Cardiovascular Science and Diabetes Program aims to advance understanding, prevention, and treatment of cardiovascular diseases and diabetes. Research includes heart attack prediction, treatments for vascular diseases and designing improved heart valves.



Genome Biology and Genetic Diseases Program

Employing state-of-the-art genomic technologies, the Genome Biology and Genetic Diseases Program explores the intricacies of human genetics to unravel the mysteries of health, ageing and genetic disease. By investigating how our genes function, the program aims to uncover a new understanding of human health and develop targeted treatments for disease.

A female scientist with dark hair, wearing a white lab coat over a red sweater, is smiling and holding a large white board. The board displays four statistics in a 2x2 grid. The background is a laboratory with various equipment and a red wall.

The Perkins at a Glance

312
staff

113
students

25
Laboratories

160
Research
publications

Chair's report

It is with immense pride that I present to you the Annual Report for 2023, a year filled with remarkable achievements and groundbreaking advancements in medical research. As I reflect on the past year's successes, I am reminded of the unwavering dedication and support from individuals like you who continue to drive our mission forward.

Firstly, I would like to acknowledge and thank all current Board Members and express my gratitude to former Board Members, Steve Wesselingh and Belinda Murray, who retired in June and August respectively. Under the Board's guidance, the Perkins experienced significant growth and transformation, setting the stage for the remarkable accomplishments of 2023.

During the year, the independent Scientific Advisory Committee provided the Board with recommendations set to be implemented by the Perkins Executive in 2024. Additionally, the Board undertook a strategic priorities review to focus the Institute's initiatives on key areas and completed a forward-looking performance review to optimise the Board's role in the strategic governance of the Institute.

We celebrated a significant milestone with the announcement of research funding to support the development of a new blood test for detecting the spread of liver cancer. This promising breakthrough has the potential to save countless lives by enabling early intervention and treatment.

This year brought further progress as our researchers embarked on a quest to identify inherited disease genes, offering hope to individuals and families affected by a range of genetic conditions. Through the use of cutting-edge technologies, we are uncovering vital insights into rare diseases, paving the way for targeted treatments and interventions.

The official opening of the Australian Cancer Research Foundation Centre for Advanced Cancer Genomics in March marked a pivotal

moment in our fight against cancer. This state-of-the-art facility is accelerating our ability to analyse cancer cell data, leading to groundbreaking discoveries in cancer evolution and treatment.

We also initiated the Health Translation Group trial to drive commercialisation of research in conjunction with the Perron and Lions Eye Institutes

Throughout the year, our researchers made significant strides in combating antibiotic resistance, developing new treatments for disease and unravelling the mysteries of aging and memory loss. These breakthroughs hold the promise of transforming healthcare and saving lives around the world.

I am particularly proud of our commitment to community initiatives, such as the New Town Toyota Walk for Women's Cancer and the MACA Cancer 200 Ride for Research as well as other fundraising initiatives. Thanks to the generosity of supporters, in 2023, we raised millions of dollars to support vital research efforts and provide opportunities for promising young scientists.

In closing, I extend my heartfelt appreciation to our dedicated team of researchers, staff, volunteers, donors and supporters who continue to inspire and drive our mission forward. Together, we are making a profound impact on medical research and advancing the frontiers of science.



John Barrington AM





CEO's report

What were the most memorable moments for you in 2023?

For scientists there is no higher recognition of their research than being published in the world's leading multidisciplinary science journal, *Nature*. That acknowledgement went to Professor Ryan Lister in 2023 for leading a team that discovered a way to wipe a cell's memory to better reprogram it as a stem cell. The ability to artificially reprogram cells has widespread applications in disease modelling, drug screening and cell-based therapies. This was a truly ground-breaking discovery.

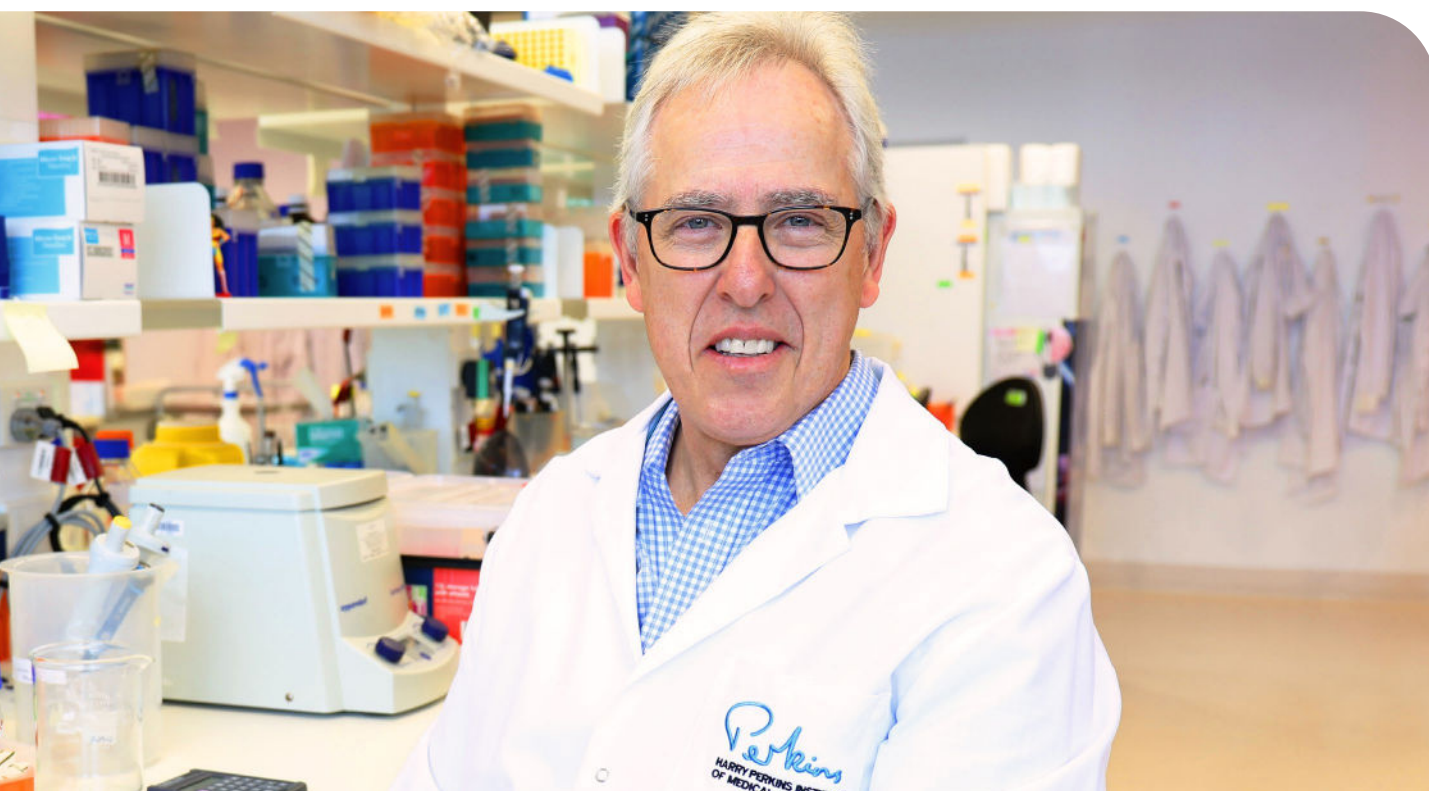
Similarly, having national recognition for your research is also a great achievement and the announcement that the Australian Government's Medical Research Future Fund will support Assoc Professor Gina Ravenscroft to lead teams from nine universities across the country to hunt for the genetic causes of some heartbreaking conditions was a very memorable moment.

We punched above our weight in 2023 in receiving eight federal government grants including two of Australia's most significant

research grants, given only to the nation's highest performing researchers. These went to Professor Alistair Forrest, to explore new directions in tackling some of the most challenging cancers using innovative approaches and new technologies to map cancer cells and their micro-environments, and to Professor Oliver Rackham, to develop next-generation technologies for treating diseases that are resistant to current treatments.

Equally exciting was the formation of WA companies to commercialise our research. Dr Elena Juan de Pardo and her team are on the journey to commercialise a 3D printed heart valve. Dr Kieran Mulroney is commercialising an innovative technique that finds the right antibiotic to treat infection in a matter of hours instead of days. This is a major breakthrough to counter antibiotic resistance in patients. Assoc Professor Juliana Hamzah's discovery of a drug that dissolves plaque has also started on the commercialisation pathway. These are just three examples of outstanding research moving toward becoming treatments for patients.

It was also memorable and rewarding to present the 2023 'Safe Harbour' fellowships, an award-winning



initiative for early- to mid-career researchers. This innovative fund is helping us retain outstanding young scientists in WA, offering a more sustainable career path for some of Perth's brightest minds. In 2023, Safe Harbour was awarded to Dr Rhonda Taylor, a molecular geneticist developing treatments for children suffering devastating muscle weakening conditions, and to Dr Chuck Herring, who investigates human brain development and neurodevelopment disease origins. Telling these remarkable scientists that they were funded for three years was an incredibly special moment for me this year.

And finally thousands of marvellous supporters took part in the annual New Town Toyota Walk for Women's Cancer and MACA Cancer 200 Ride for Research raising \$10.5m for cancer research at the Perkins. Their support gives us all the biggest boost each year.

What are you most looking forward to in 2024?

I am really looking forward to seeing an Australian first new treatment for the potentially deadly skin cancer, melanoma, being given to a patient for the

first time. Professor Jonas Nilsson, the Chair of Melanoma Discovery here at the Perkins, started work on this treatment in Sweden. It involves exponentially multiplying a patient's immune cells outside of the body and reintroducing them to the patient, providing a supercharged immune response to fight the cancer. Called TIL therapy, Prof Nilsson is hoping to offer it to the first patient sometime in 2024.

I am very excited about a new event for the community being offered in 2024. It's called the Perkins Plunge and it will be held in September. Like our Walk and Ride, the Plunge requires some commitment. Swimmers will be in the water at the HBF Stadium pool in relay teams for a massive 12-hour overnight swim!

I can't wait to see what we achieve together in 2024.

Peter Leedman AO

Breakthrough discoveries in 2023

Thanks to you, every day researchers at the Perkins are making progress towards a healthier future for our loved ones. Below are some of the breakthrough discoveries you have helped make possible in 2023.

New liver cancer blood test gets research funding boost

Perkins researchers are working on a new blood test to detect the spread of liver cancer before it's too late.

ACRF Centre for Advanced Cancer Genomics Opens



Next generation DNA sequencing centre is officially opened. The cutting-edge technology makes it quicker and less costly to generate large amounts of cancer cell data, meaning more patient tumours can be analysed and offering new insights into how cancer cells evolve and interact with normal cells.

Tool in the fight against antibiotic resistance

Perth-designed breakthrough diagnostic technology to help in race to save millions globally from antibiotic resistant sepsis moves towards commercialisation.



3D printed heart valves

Cutting-edge biopolymer 3D printed heart valve technology to help millions globally suffering from aortic stenosis.

January



March



February



April



May



June



Researchers on the hunt for inherited disease gene

Blood cancers, intellectual disability, cerebral palsy, repeated miscarriages and neuromuscular diseases can all be inherited conditions caused by the presence of specific genes, now Perkins scientists are using new technologies to identify the missing heritability of some rare diseases.

Perkins spinout progresses cannula innovation

Failed cannulation attempts can add up to a serious cost, infection risk and stress for patients and healthcare providers. Now a new company is progressing a high-tech method to improve the experience for patients and clinicians using a portable AI-driven vein imaging device.

New findings on heart disease causing plaque

Researchers from the Perkins published new findings that turn the scientific understanding of heart attack causing plaque on its head.



Researchers find link to anti-ageing element

Perkins researchers help uncover that a naturally occurring chemical slows the ageing process.

Perth led clinical trial results in FDA approval

Low dose colchicine gets FDA approval for secondary prevention of heart disease following mammoth studies and clinical trials led by Perth researchers.



Muscular dystrophy discovery

Perkins discovery changes the way geneticists analyse debilitating muscle diseases, increasing likelihood more families experiencing muscle weakening diseases can receive a diagnosis.

Scientists find way to wipe a cell's memory

A groundbreaking research advancement was made here in Perth, when Australian scientists made a breakthrough in regenerative medicine by wiping the epigenetic memory of a stem cell.

Melanoma cell therapy for solid cancers in WA

A cancer research collaborative implements a specialised immune cell therapy for cancer patients in WA. Cell therapy using tumour-infiltrating lymphocytes is a personalised immunotherapy for advanced solid cancers like metastatic melanoma and is not currently available in Australia.

Looking for ways to cure memory loss

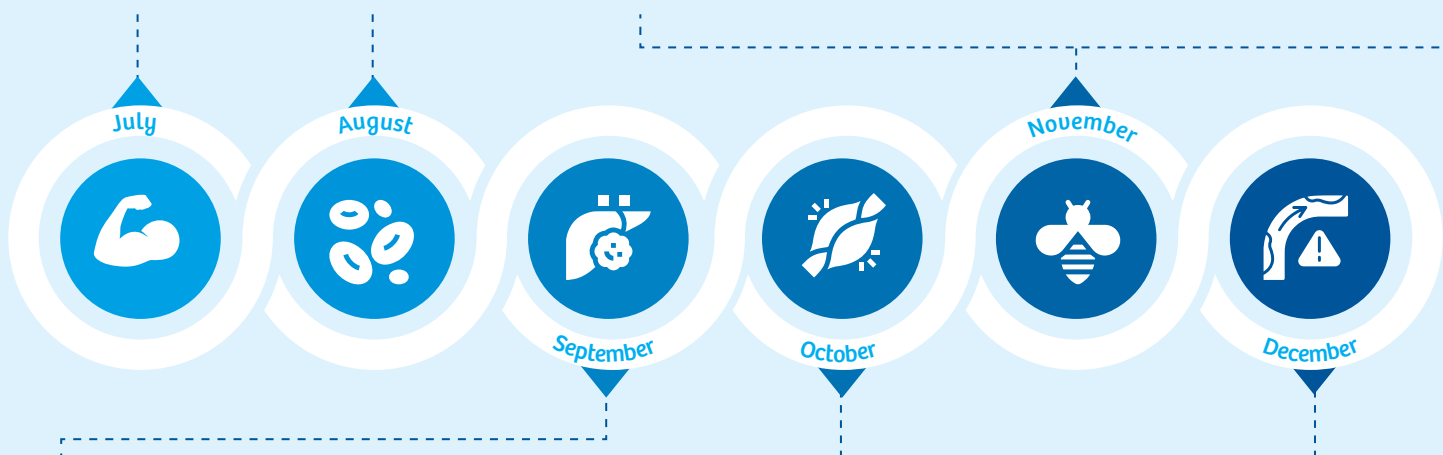
Unravelling the molecular mechanisms that control memory formation, storage and recollection to explore ways to mitigate cognitive decline in aging.

Using bee venom to treat breast cancer

Research into using synthesised bee venom as a powerful anti-cancer treatment continues with Perkins researchers improving the drug to make it deadly to cancer cells and protective for healthy tissue.

Discovering why cancer cells spread and become treatment resistant

Some cancer cells use a mechanism to switch from a localised and treatment sensitive state to an aggressive and treatment resistant state, Perkins researchers are now investigating new targeted treatments to switch off the major drivers causing this mechanism.



AI stethoscope to help detect early signs of heart disease

A digital stethoscope to help detect early signs of heart valve disease through the use of sophisticated artificial intelligence algorithms could revolutionise medicine and is in development here in Perth.

New discovery for treatment of primary liver cancer

Perkins study uncovers a drug combination with the potential to treat one of the most fatal and globally widespread cancers, a type of primary liver cancer called hepatocellular carcinoma (HCC).

New RNA based cancer therapy

Project to develop a new RNA-based treatment for liver cancer gets underway.

Hunt for new treatments for debilitating muscle weakening diseases

New treatments for early onset neuromuscular disorders, particularly a severe and debilitating genetic disease that usually results in death before the age of one, are being investigated.

New treatment to clear blocked arteries

A Perkins team is developing a first-ever drug to clear blocked arteries that can lead to cardiovascular disease.



Board



Mr John Barrington AM

30/05/2019 - Present



Professor Peter Leedman AO

11/03/2014 - Present



Mr Roger Port

29/04/2015 - Present



Ms Jennifer Lawrence

20/06/2022- Present



Mr Yannick Spencer

30/08/2022 - Present



Professor Steve Wesselingh

28/08/2018 - 06/2023

Patrons



Perkins Patron

The Honourable Chris Dawson APM

Governor of Western Australia



Perkins Patron

Mrs Darrilyn Dawson



Mrs Jan Stewart PSM
17/02/2015 - Present



Mrs Val Raubenheimer
22/01/2020 - Present



Mr Tim Colmer
22/02/2022 - Present



Ms Belinda Murray
01/06/2022 - 08/2023

Perkins Partners

Powering Perth's pioneering research.

It takes collaboration with the WA community and corporate partners to turn eureka moments into new treatments for the diseases that impact us all. Our partners offer manpower, funds and resources, including equipment and facilities, to support our researchers so they can focus on what they do best. The Perkins is grateful for every contribution that moves us closer to our shared goal of helping people live longer, healthier lives.

Corporate Partners



Event Partners & Sponsors



THIESS



New Town Toyota



Perkins Alliance



Key Supporters

The Kailis Family

Kirkbride Family and Friends



Impact at a glance

Linear Clinical Research

Australia's most advanced early-phase clinical trials centre

The logo for Linear Clinical Research, featuring the word "linear" in a lowercase, sans-serif font. The letters are a vibrant pink color.

Linear is the Perkins' wholly owned and purpose built, state-of-the-art clinical trials facility. Linear operates a 24-bed facility at the QEII Medical Centre and a 24-bed facility at Joondalup Hospital Campus.

In 2023

100+ trials (including new and ongoing trials)

- 15 Phase 1 trials on 436 healthy volunteers
- 76 oncology trials and 12 non-oncology trials on 157 patients

Types of diseases researched:

Haematology, Oncology, Lipidology, Autoimmune & Inflammatory diseases, Hypertension, Vasomotor symptoms (VMS), Asthma

Winner of the WA Export Awards 2023 - International Health category

Lotterywest BioDiscovery Centre



Our dedicated teaching laboratory in a working research centre.

The Lotterywest BioDiscovery Centre is a specialised teaching laboratory open to Western Australian school groups, businesses and the broader community. At the centre, you can get hands-on experience in a PC2-certified medical laboratory, alongside real scientists.

In 2023

- 913 different schools came into Perkins.
- 3,897 students attended.
- Off-site, we visited 20 regional and remote community schools. This was achieved through the School of Isolated and Distance Education.
- Breakdown by Year Group: Yr 12 = 56%, Year 11 = 26%, Year 10 = 6%, Year 9 = 2%, Year 8 = 7%, Year 6/7 = 4%.
- Location stats across all schools: 68% Metro, 9% Inner Regional, 11% Outer Regional, 3% Remote, 9% Very Remote.
- Sector stats across all schools: 61% Government, 21% Independent, 18% Catholic.



MACA Cancer 200 Ride for Research

The MACA Cancer 200 Ride for Research is Australia's biggest fundraising charity ride. It's a 200km two-day cycling event that raises vital funds for cancer research at the Perkins.

- 1550 riders raised \$8.6M for local researchers
- 68,444 items packed in 1700 bags for riders and 700 campers
- 323,507km travelled over two days
- 294 volunteers gave 1911 hours over the event prep and weekend



New Town Toyota Walk for Women's Cancer

The New Town Toyota Walk for Women's Cancer is a 35km or 42km walk around our beautiful city, raising funds for women's cancer research at the Perkins.

- 1153 walkers raised \$1.52M for groundbreaking WA research
- 27,847km walked on the day
- 34,403 items packed in to 1009 bags
- 275 wonderful volunteers donated 1049 hours



Our Community. Your Impact.

The Perkins serves the people of Western Australia, and it's all thanks to the incredible kindness and generosity of individuals like you that we're advancing every day in the fight against disease. Our Nedlands headquarters welcomes visitors on tours, allowing you to witness firsthand the groundbreaking work of Perth's brightest minds leveraging cutting-edge technology to drive medical progress. These advancements are not just for today but for the future, ensuring better health outcomes for you and your loved ones.

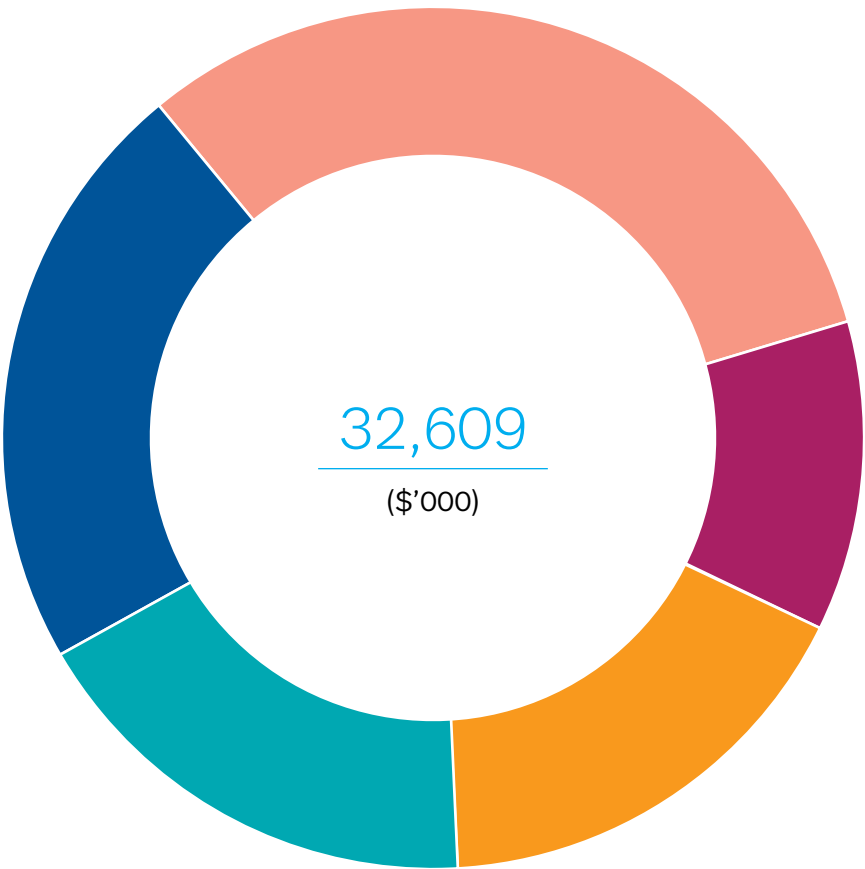
- 69,188 supporters donated to Perkins research in 2023
- 132 supporters joined us for a Tour & Tea
- 672 phone calls to donors, including our thank-a-thon event
- 88 notes written to researchers by our wonderful donors
- 63 Lab Coats purchased with a loved one's name embroidered on them
- 2023 Fundraising Institute of Australia National Award winners
 - Impact through Events Award for the MACA Cancer 200 10th Birthday
 - Best Pivot Campaign Award for the Safe Harbour Initiative
 - Fundraising Team of the Year for the Perkins Community Engagement Team



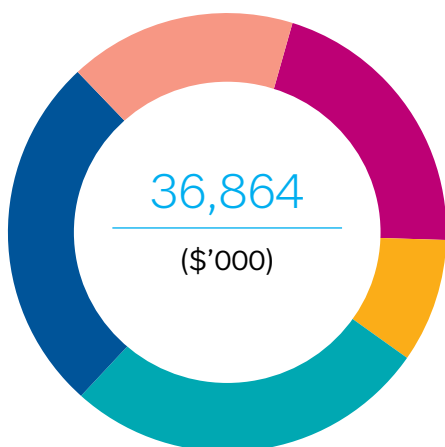
Financial Statements

As at 31 December 2023

For a copy of our audited financial statements, please contact info@perkins.org.au



What we earned	(\$'000)
Event income	10,343
Donations	3,795
Facilities income	5,389
Operating grants and subsidies	5,644
Sale of consumables, and other operating income	7,439
Total	32,609



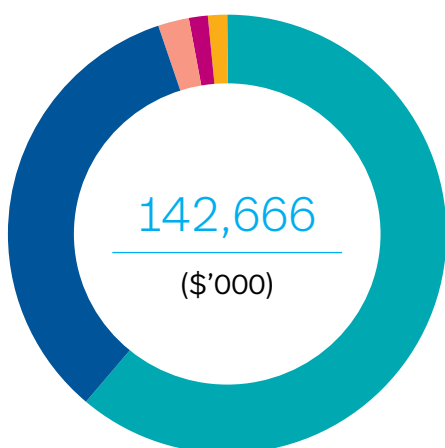
What we spent

(\$'000)

Admin salaries	6,235
Operating, admin and event expenses	7,605
Utilities and maintenance	3,427
Research supplies and lab services	9,875
Depreciation, plant and equipment written off	9,722

Total

36,864



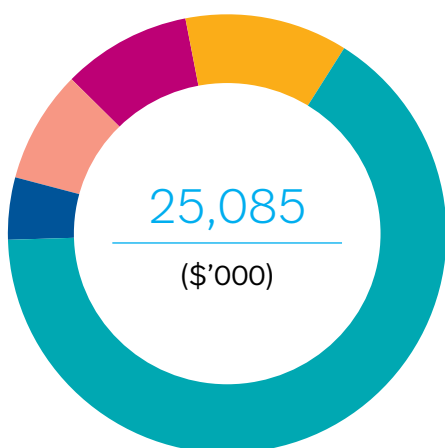
What we own

(\$'000)

Property, plant and equipment	87,520
Cash, deposits and investments	48,091
Receivables and prepayments	3,122
Contract assets	1,628
Other assets	2,304

Total

142,666



What we owe

(\$'000)

Trade and other payables	3,123
Grants held in trust	16,305
Provisions	1,179
Sinking fund liabilities	2,102
Other liabilities	2,374

Total

25,085

Thank you for your support in 2023.

You are giving yourself and those you love the opportunity to live longer, healthier and better lives by helping WA's best medical researchers beat the world's toughest diseases.

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