Perkins News

AUTUMN EDITION 2025

You're helping create longer, healthier, better lives.

HARRY PERKINS INSTITUTE OF MEDICAL RESEARCH

Have you noticed the shift in the weather of late?

The heat of summer is fading—replaced by cooler nights and crisper mornings. And while I am relieved for the change in season, as a doctor, I cannot stress enough how important it is for you to consider getting your annual flu jab, sooner rather than later.

I am thrilled to share some of our incredible research stories in this issue. In the next few pages, you will be offered a snapshot of stories that cover the breadth of work we are doing on behalf of the community to deliver better health outcomes sooner.

You will read how, in some cases, smaller doses of cancer drugs could be more effective. You'll learn more about our incredible team of rare gene hunters and the breakthroughs they're making. You'll be introduced to our newest superstar researcher, Professor Alexey Terskikh, and farewell one of my mentors, the incredible Professor Peter Thompson AM, who passed away late last year.

And we will give you a glimpse into some of the other disease areas that you may not even know we are researching.

Thank you for all that you do to ensure our work can go on—no matter what.

I really enjoyed reading this issue and I hope you will too.

Professor Peter Leedman AO

CEO, Researcher, Doctor, Donor

You're part of a major milestone for cancer care in WA.

The Perkins is thrilled to share a significant step forward in the development of the **Perkins WA Comprehensive Cancer Centre**–a game-changing project that will bring world-class cancer care and research to Western Australia.

The WA Government has officially endorsed the Perkins Strategic Investment Plan, confirming its support for the preferred location and approach. This means we can now move forward with finalising the business case to unlock State funding to match the $375 million already committed by the Federal Government.

The Perkins WA Comprehensive Cancer Centre, to be built on the QEIIMC campus, will integrate cutting-edge research with exceptional clinical care. The facility will include:

- **Inpatient services** with 90 beds and space for expansion.
- **Outpatient services,** including chemotherapy, radiation, and imaging.
- **Research and education spaces** to drive breakthroughs in cancer treatment.
- **A Cancer Care Coordination Centre** to support patients across WA, including those in rural and remote areas.

Perkins CEO Professor Peter Leedman AO said, *"Everywhere I go, people ask about the progress of the centre. They understand how vital this is for our State."*

With this milestone, we can now engage partners, advance planning, and seek philanthropic support to ensure WA families have access to the best cancer care available.

Thank you for being part of this journey–we're getting closer to making world-class cancer treatment a reality for WA.

Visualisation of what the WACCC could look like like next to the Perkins building at QEII.

Vale Professor Peter Thompson AM.

At the end of last year, the Perkins and the WA medical community mourned the passing of a great man– Professor Peter Thompson AM.

Peter was remarkable in every way. He was a pioneering cardiologist and brilliant researcher. And he was a passionate mentor and true friend to the Perkins and to the many supporters who funded his work.

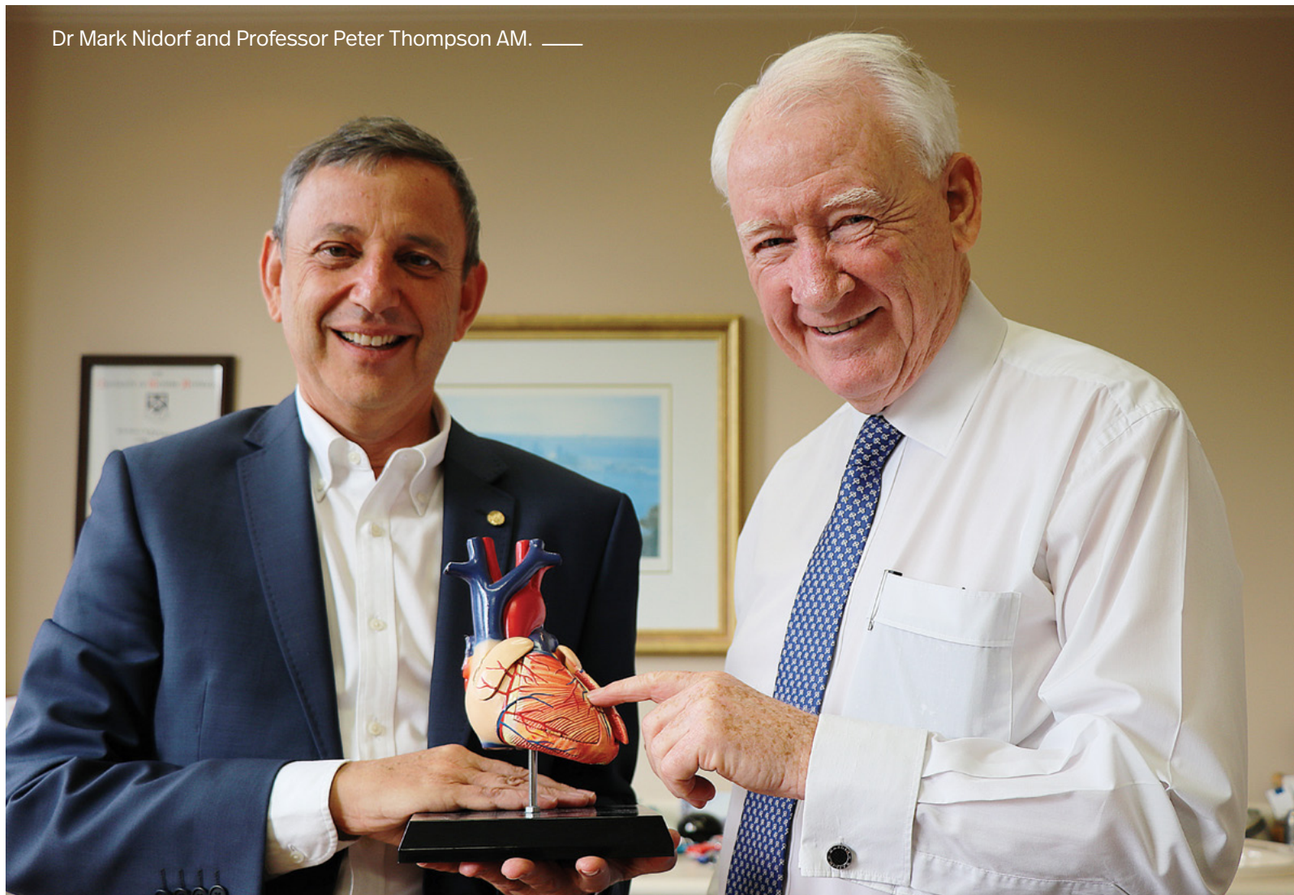
He achieved so much throughout his life. As one of Australia's leading cardiologists, he mentored hundreds of clinicians and researchers. And he pioneered wine-making in Margaret River. Peter truly embraced life, leadership and learning.

After graduating from the University of Western Australia, Peter honed his cardiology expertise at Royal Melbourne Hospital and then Harvard University. After returning to Australia, Peter held several long-standing roles at Sir Charles Gairdner Hospital and the Perkins. He was Director of the Coronary Care Unit, Head of Cardiovascular Medicine and Director of Research. His work as a Consultant Cardiologist, UWA Clinical Professor and Deputy Director of the Perkins highlighted not only his commitment and care for his patients, but also his profound passion for educating future generations in medicine.

Peter's research contributions through cardiovascular clinical trials continue to shape our medical understanding of the disease and have led to new treatments. His most recent contribution to cardio care, along with Dr Mark Nidorf, was the repurposing of the gout drug colchicine to help prevent heart attacks, which was globally recognised.

Honoured with numerous awards—including his appointment as a Member of the Order of Australia—his legacy is one defined by excellence in healthcare delivery and selfless service to others.

He is sorely missed by those who worked alongside him and those of you who funded his work.



Dr Mark Nidorf and Professor Peter Thompson AM.

Your support of rare disease recognised.

The Rare Disease program at the Perkins has long been recognised for its remarkable contribution to finding answers to diseases that sometimes were so rare that they did not even have names.

Well done Professor Ravenscroft.

It's estimated that 1 in 50 women have suffered a miscarriage. And every day more than 280 Australian women experience miscarriages.

For those women and couples, it's incredibly heartbreaking and frustrating not knowing the cause. It could well be genetic and that is what Professor Ravenscroft's team is hoping to discover. But they need help.

The team are currently looking for couples who are comfortable sharing their history of miscarriages. You can reach out to Gina at gina.ravenscroft@perkins.uwa.edu.au for more information on the study and your suitability to be included.

Each time Perkins researchers discover a disease gene, it unlocks answers for families who are suffering. And it leads to potential treatments for those in need.

It's been a momentous few months for this team—much of it thanks to the generosity of people like you who are committed to supporting their work. Here are some of the highlights.

Congratulations, Professor Gina Ravenscroft

Group Leader of Rare Disease Genetics and Functional Genomics at the Perkins, Gina Ravenscroft has recently been promoted to full Professor at UWA. This is in part due to her work which mainly focuses on rare genetic diseases in babies and children. Gina and her team have identified more than 20 novel human disease genes in recent years.

Gina is the recipient of the Patricia Kailis Fellowship in Rare Disease. Funds for this Fellowship were raised by the Kailis family and their friends and relatives in honour of the late Dr Patricia Kailis—a pioneering WA doctor, researcher and geneticist.

This year, we are pleased to announce that the Kailis Fellowship has now been fully funded, thanks to a significant gift from the Children's Health and Disability Foundation WA. This $1 million gift has also funded a very special machine that can create 3D muscle tissue.

Gina's expertise is recognised globally, particularly for her work in neuromuscular genetic disease. She is currently investigating potential genetic causes for couples experiencing multiple miscarriages.

Meet your newest Safe Harbour Fellow.

Now in its third year, the Safe Harbour Fellowship program stands as a beacon of hope, made possible by the heartfelt donations from compassionate individuals like you.

Dr Clayton with the Curi Bio Mantarray instrument.

This initiative offers young, emerging researchers three years of funding to help them establish themselves and their research. Dr Joshua Clayton is one of two Safe Harbour Fellows awarded at the end of 2024.

Josh's work focuses on congenital myopathies—a group of genetic diseases that cause muscle weakening and wasting. *"Congenital myopathies are a challenging set of diseases present at birth, leading to muscle weakening and stiffness,"* Dr Clayton explained.

With no current treatments for most patients, Josh aims to create 3D human muscle models using patient cells to better understand these diseases. By developing methods for drug delivery to these tissues, Josh hopes to contribute towards treatment solutions for muscle diseases that deeply affect patients and their families.

The Safe Harbour Fellowship offers more than just financial backing; it provides a stable foundation allowing early-to-mid-career researchers like Josh to take risks, forge collaborations and pursue discoveries that could ultimately keep families together longer.

This Fellowship is made possible through the generosity of Perkins donors and supporters committed to fostering WA talent while driving innovation in medical research. Thank you.

Introducing the MACA Cancer 200 Safe Harbour Fellow

Joining Josh as a Safe Harbour Fellow is Dr Qi Fang. Qi is a biomedical engineer and physicist. He is tackling a critical issue in breast cancer surgery.

Microscopic residual cancer is often missed during initial breast cancer removal surgery. This means around 1 in 4 patients needs to have repeat surgeries, which can be traumatic for families and an immense cost to the public health budget. Qi's research focuses on developing optical imaging tools to help surgeons detect cancer more accurately during surgery—reducing the need for subsequent surgeries."

Qi's Fellowship is fully funded by donations from MACA Cancer 200 Riders and their generous supporters.

Dr Qi Fang.

You're helping prevent heartbreak.

This year, Mackenzie Casella would have turned eight. Tragically, she passed away from spinal muscular atrophy (SMA) at just seven months old.

A few of the key members driving Mackenzies Mission. Martin Delatycki, Edwin Kirk, Rachael and Jonathan Casella with their children and Nigel Laing.

Her parents, Jonathan and Rachael, turned their grief into action, teaming up with Perkins Emeritus Professor Nigel Laing AO and a raft of experts across Australia to form Mackenzie's Mission. Their goal? To ensure no other family has to endure this kind of pain.

How did they do it? The team behind Mackenzie's Mission set out to determine the best way to set up reproductive genetic carrier screening at scale in Australia so that it can be offered free of charge to every couple who wants it.

Thanks to you, their mission is becoming a reality. Perkins researchers helped to screen more than 1300 couples in WA. There were over 9000 couples screened nationally, for over 750 severe genetic conditions—many of which could take a child's life before their fourth birthday.

You'll be shocked to know that one in fifty couples were found to be at risk of passing on a rare genetic condition to their children. Because of you, these families got the information they needed to make informed choices and avoid heartbreak.

This research is gaining global recognition, with findings recently published in the prestigious New England Journal of Medicine. And with your continued support, it could lead to a national publicly-funded genetic carrier screening program that is accessible to everyone who wants it.

In acknowledgment of Rare Disease Day, the Perkins hosted a Community Q&A in February with the team behind Mackenzie's Mission to share findings from their research. You can watch the Q&A event by scanning the QR Code.

You're helping transform cancer treatment.

Thanks to you, Professor Ruth Ganss and her team have made an exciting breakthrough that could transform how we treat some of the hardest-to-beat cancers like melanoma, brain cancer, and pancreatic cancer. And it might help you or someone you love.

The team have found that using anti-cancer drugs at 100 times lower than standard doses could make tumours more responsive to immunotherapy. Instead of attacking the tumour aggressively, this approach normalises the blood vessels around the tumour, making it easier for immunotherapy to get in there and do its job.

Since these drugs are already clinically approved, this discovery could fast-track better treatment options.

Clinical trials are the next step, and if successful, this research could prolong lives and improve outcomes for people facing the hardest to treat cancers.

Every donation you give fuels discoveries like this. Breakthroughs that give families more time together. Together, we're making a real difference.

Professor Ruth Ganss and her team have made an exciting discovery.

If you missed the chance to see Professor Ganss and her team talk about this discovery on 9NEWS, you can watch it now by scanning the QR code.

Memory, mesothelioma and ‘meth’ – did you know?

You’re already familiar with the main areas of research at the Perkins– cancer, heart disease, diabetes and rare genetic diseases. But there is so much more fascinating science being done at the Perkins and here’s a snapshot of just three of those areas we are investigating.

Memory

Professor Ryan Lister.

Imagine that every cell in your body has a tiny memory bank that helps it remember what it's supposed to do. This is the basis of a research area called epigenetics.

Professor Ryan Lister and the team in his lab are trying to figure out how these memory banks work. They want to learn how to erase parts of the memory that might cause problems, like diseases. If they understand how to change a cell's memory, they can make new tools to help treat illnesses better. They are also looking at how these memory banks change when a person has a brain disorder like dementia. These researchers are like detectives. They’re searching for clues about how to keep us healthy by studying our cells' memories.

Mesothelioma

Professor Alistair Forrest.

Mesothelioma is a cancer caused by asbestos exposure and affects the lining of the lungs. WA has the highest per capita incidence of this cancer in the world.

A ground-breaking collaborative study between Perkins researcher Professor Alistair Forrest and researchers from the National Centre for Asbestos Related Diseases (NCARD) and The Kids Institute has identified blood markers that could help predict how well mesothelioma patients might respond to treatment.

They discovered that patients who do well with the treatment have more of a certain type of immune cell, called CD8 T effector memory (TEM) cells, in their blood when they start treatment and as it continues.

This discovery could transform how treatment decisions are made, enabling doctors to personalise care and improve outcomes for patients facing this challenging disease.

Methamphetamines

Professor Daniel Fatovich, Head of CCREM.

Did you know the Perkins has an Emergency Medicine research lab at Royal Perth Hospital? It’s called the Centre for Clinical Research in Emergency Medicine (CCREM).

CCREM researchers work at the coalface of emergency medicine investigating urgent health issues. These include severe infections, brain injuries, allergic reactions and snake and spider bites.

Illegal drug use is a global issue, representing about 7% of visits to the emergency department at Royal Perth Hospital. The Emerging Drugs Network of Australia (EDNA) tackles this issue.

EDNA includes emergency doctors, poisons experts and researchers who study the effects of new and unknown drugs. They gather up-to-date information to help doctors better treat patients who present to the hospital because of a drug overdose.

Leading the team is Professor Daniel Fatovich, who has over 30 years’ experience in emergency medicine. His work is assisting doctors to more quickly figure out if a patient's symptoms are from drug use or something else. This means patients get the right treatment faster. EDNA also helps public health officials in Australia stay ahead of new drug trends and make informed decisions to protect people's health.

Professor Alexey Terskikh.

Meet the Professor helping you to live healthier for longer

You’ll be excited to hear that Professor Alexey V. Terskikh has joined the Perkins as Group Leader of the new Chromatin and Ageing Laboratory.

Professor Terskikh is a Future Health Research and Innovation Distinguished Fellow. He brings a wealth of expertise to the Perkins, along with his role as a Professor at UWA Medical School.

His unique research into aging aims to help you stay healthier for longer–as he says, *"It's about putting more life into your years, not more years into your life."*

With Alexey’s leadership, the Perkins is driving breakthroughs in ageing and health that could improve your future. We’re thrilled to have him on board and can’t wait to see the impact of his research!

Have you ever wondered what inspires a researcher?

Associate Professor Juliana Hamzah stepped away from her annual grant writing endeavours to answer some questions for you about her life and work.

Associate Professor Juilana Hamzah with the inspirational mug her husband bought her.

What made you want to become a researcher?

I can trace my love of science back to my early childhood. I was very close to my grandmother, who was likely in her 80s or 90s. We never knew her exact age, as birth certificates weren't issued during her time. Aging had taken a toll on her body. She had lost most of her muscle mass, so all that remained was fragile, paper-thin skin. I used to sit on her lap and pull at the loose folds of her skin, holding them up to the light. I would stare for what felt like forever, fixated by the translucent veins beneath, hoping to catch a glimpse of something moving, something alive, flowing through them. Little did I know then that this curiosity would shape my future career—the study of how particles and drugs move through our tissues and cells, uncovering how the body responds to what we call medicine.

You were a cancer researcher and now you're a cardiovascular researcher focused on PAD. How did that happen?

During my postdoc, I trained in both cancer research in Australia and cardiovascular research in the U.S. I've always been drawn to the overlap between these two areas. Both cancer and cardiovascular disease involve growing inflamed and often highly fibrotic tissues, which makes them surprisingly similar in some ways. As someone focused on developing new therapeutics, I found cancer models are often easier to work with. One agent we developed was able to soften solid tumours by reducing fibrosis. This improved drug delivery. What caught my attention, was the fact that this same kind of tissue stiffness and poor circulation happens in blocked arteries, particularly in atherosclerotic plaques, which are made up of dense, hardened fatty tissue. Around that time, in 2014, I was introduced to Professor Shirley Jansen, a vascular surgeon at SCGH and Joint Program Head of the Cardiovascular Research Program and the Perkins. We began collaborating closely, and started looking at whether this agent could also work in blood vessels, especially in conditions like peripheral artery disease, where arteries in the lower limbs are severely blocked.

Failure is a learning experience in research. Can you give an example of something that failed in your career and what you learnt from it?

Too many to count. For every success, there have been at least five failures, that's my track record. To keep my spirits up, my husband gifted a me mug that says, *"Proceed as if success is inevitable."* That's become my motto to live by.

What is your greatest challenge in research?

What we do as blue-sky scientists is not easy. Developing new therapeutics often starts with nothing more than a bold, high-risk idea —something unproven, uncertain, and easy to doubt. And because the failure rate is high, we are especially vulnerable to skepticism. Our research output is often delayed because progress takes time and moves slowly. Support from our industry and funding bodies doesn't always match the risk we take. These ideas open the door to essential questions: Is it safe? Is it effective? How does it work? And most importantly, how can it help patients? Every step brings new challenges, new doubts. But that's the nature of this kind of science, we're constantly pushing into the unknown.

What is your greatest achievement - so far?

I wouldn't call anything my greatest achievement just yet, it's still a long road to see if our treatment for blocked arteries can truly make it to patients. But we're making steady progress towards clinical trials, which is a big step for us. What I've really appreciated is we are getting genuine interest and support from different stakeholders to help us with our drug development pathway. I'm also learning to be more than just a scientist, and I'm enjoying that part of the journey.

What is your hope for your research in the next five years?

My hope is that we'll keep moving forward, making steady progress and facing challenges as they come. I'm working with a team of dedicated young scientists who are deeply committed to seeing their work make a real impact. We are focused on supporting and empowering each other every step of the way.

Royal Perth Golf Club swings big for life-saving melanoma research.

The Royal Perth Golf Club has made an incredible impact, raising over $87,000–far exceeding their $50,000 goal—to support groundbreaking melanoma research at the Perkins.

The Royal Perth Golf Club celebrating a successful day of golf and fundraising for Perkins research.

Their generosity is helping to advance Tumour Infiltrating Lymphocyte (TIL) therapy, an exciting new treatment that boosts the body's own immune system to fight melanoma–the "Australian cancer". With our high UV exposure, Australia has one of the highest melanoma rates in the world, making this research vital.

In recent years, immunotherapy has transformed melanoma treatment, helping many patients live longer. But it doesn't work for everyone—up to 50% of patients with advanced melanoma don't respond or develop resistance over time. That's where TIL therapy comes in.

TIL therapy isolates and strengthens the body's own cancer-fighting T-cells, then reinfuses them to attack the tumour with precision. It offers new hope for those who have run out of treatment options, turning non-responders into survivors.

Thanks to the Royal Perth Golf Club's incredible support, this life-changing research is moving forward—bringing real hope to melanoma patients in WA and beyond. To everyone who contributed—thank you. Your generosity is saving lives.

Scott and his brother Nick.

Honouring Scott Kirkbride

This milestone is especially meaningful because the TIL therapy project is led by the Kirkbride Chair in Melanoma. This vital research honours Scott Kirkbride, a talented young golfer who lost his life to melanoma at just 27 years old.

Cancer Shucks. You know it and we know it.

Now is your chance to help fund melanoma research at the Perkins whilst enjoying the ultimate Sunday session on Wadjemup / Rottnest Island.

Cancer Shucks brings together the best WA can offer in food and wine at one of Australia's most iconic ocean addresses, the Basin at Rottnest Island.

And you're invited.

On Sunday 2 November, you and your friends will be transported to the island via private ferry. You will then make your way to Havza at the Basin–Rottnest's latest restaurant serving incredible local produce and WA wines.

There, you will be greeted by **WA's Oyster King, Jerry Fraser.** He will be shucking delicious Albany Rock Oysters that you can purchase for $10 an oyster. Select oysters will unlock incredible prizes including pearl jewellery, luxury skin care, staycations and more.

And the best bit? You'll be supporting life-saving Melanoma Research at the Perkins.

Tickets are $250 per head and include the following:

- Bubbles and wine by **Lenton Brae.**
- Nibbles and canapés from **Havza's** Aegean-inspired menu.
- Private ferry transfers and free parking from **Rottnest Express.**
- **Leeuwin Oysters** freshly shucked by **Oyster King Jerry Fraser** (additional $10 per oyster).
- Prizes by **Willie Creek Pearls, Miles Henderson Fine Jewellery, The Westin Perth, MotherSPF** and more.
- Glorious sunset at The Basin by Wadjemup / Rottnest Island.

For more information and to purchase tickets visit **cancershucks.perkins.org.au** or scan the QR code. Tickets are strictly limited, so secure your place before they sell out.

Oyster King Jerry Fraser.

Dates for your calendar

Perkins Tough Trek Series
26 April, 5 July and 18-19 October 2025

You've seen the impact that disease can have on the people you love. Their path can be long, painful and pretty damn tough, but together we can change that. This year we're introducing our very own trek series–Tough, Tougher and Toughest–in support of medical research. Join us for one, two or all three treks this year. Visit **toughtreks.perkins.org.au** or scan the QR code to find out more.

New Town Toyota Walk for Women's Cancer
3 May 2025

We walk in unity to send a message to the cancers that rob us of our daughters, sisters, mothers, aunts and friends that we're coming for you and we're tougher together. Join us to walk 35kms in one day or choose to walk a few kilometres each day and end your Walk week at the official event. Visit **walkforwomenscancer.org.au** or scan the QR code to find out more.

MACA Cancer 200 Ride for the Perkins
4-5 October 2025

The Ride is a fully supported 200km journey from Perth to Mandurah and back, over one weekend, raising critical funds for cancer research in WA. Fuel the best and brightest minds as you help Perkins researchers find kinder treatments and better health outcomes for our loved ones. Visit **cancer200.org.au** or scan the QR code to find out more.

The Perkins Plunge - Powered by Mineral Resources
22-23 November 2025

The Perkins Plunge is returning for its second year. Save the date to participate in a 12-hour, overnight team relay swim to support medical research at the Perkins. Get ready for a night of laps to support the labs! More details to come soon. Visit **perkinsplunge.org.au** or scan the QR code for more information.

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