QIMR Berghofer
Medical Research Institute

Annual Review
2023/2024

Acknowledgement of Country

QIMR Berghofer acknowledges the Traditional and Cultural custodians of the lands, waters, and seas across Queensland, pay our respects to Elders past and present, and recognise the role of current and emerging leaders in shaping a better health system.

We recognise the First Nations peoples in Queensland are both Aboriginal peoples and Torres Strait Islander peoples and support the cultural knowledge, determination, and commitment of First Nations communities in caring for health and wellbeing for millennia.

Clinical Yarning Queensland by Kalkadoon artist Brooke Sutton. The painting symbolises QIMR Berghofer's role in supporting chronic pain patients. Health professionals are represented by larger U symbols, while patients can be seen in the smaller U symbols. Elements like the handprint, ear, yarning circle, and red circles represent communication, pain types (acute, chronic, breakthrough), and the balance of body and spirit.

About Us

QIMR Berghofer is one of Australia's most esteemed and long-standing medical research institutes, established in 1945 to improve the health and wellbeing of all Queenslanders.

With a proud history in Queensland, QIMR Berghofer started with a handful of scientists in a modest army hut in Herston, Brisbane. The Institute is now home to almost 1,000 researchers, support staff and students, working across more than 60 research groups and laboratories within three state-of-the-art buildings.

The Institute's researchers are at the forefront of medical innovation, making promising health discoveries that provide hope to patients with limited treatment options. Their relentless pursuit of scientific discovery helps advance the understanding, prevention, diagnosis and treatment of serious and debilitating diseases, so that people can live longer, healthier and happier lives.

QIMR Berghofer's collaborative research addresses some of the most pressing health challenges of our time across its four research programs of Cancer, Infection and Inflammation, Brain and Mental Health and Population Health. It is home to state-of-the-art facilities including Q-Gen Cell Therapeutics, which manufactures cell therapies to treat virus-associated diseases and cancers.

The Institute is internationally recognised for its work relating to immunotherapy, genomics, skin cancer, malaria and other mosquito-borne diseases, tropical diseases, genetic risk factors associated with cancers and mental health disorders.

QIMR Berghofer is collaborative in its approach, creating impactful research partnerships with rural and remote communities in Queensland, including First Nations peoples. The Institute engages health consumers, clinicians, and providers to understand their needs, partnering with other research institutes, government, industry and philanthropic supporters to advance medical science for everyone's benefit.

As the state's own medical research institute, QIMR Berghofer remains dedicated to working with the community to ensure the very best health outcomes for those it serves.

"Our greatest measure of success is seeing our research have real-world impact, and together we have achieved great outcomes for medical research and for the people of Queensland. There is much to be proud of and I want to extend my deepest thanks to all our researchers, professional staff, students, partners, collaborators and valued supporters."

Professor Fabienne Mackay
Director and CEO

At a Glance

QIMR Berghofer is committed to translating its ground-breaking discoveries to the clinic, for patients who need them most. This is accomplished by researchers working with frontline health services, clinicians and a range of strategic partners to accelerate the translation of research discoveries from bench to bedside. Through its advancement of medical science, QIMR Berghofer is leading the way to significant innovation in health – nationally and globally.

598 SCIENTIFIC PUBLICATIONS

53K CITATIONS

18 NHMRC GRANTS

19.1% SUCCESS RATE NHMRC GRANTS

Nature Index **#2 AUS #37 GLOBAL**

Our People

1000
scientists, staff, visiting scientists and students

110
PhD students from 12 countries

67
research laboratories

Funding and Income

QG Grant	18.9m
Research Grants	39.2m
Investment Income	24m
Commercial & Contract Research	17.2m
Donations & Bequests	13.8m

"At QIMR Berghofer we are on a mission to deliver new treatments and diagnostic tests that can allow personalised and more targeted interventions at the earliest opportunity – giving patients a better chance of fighting their cancer or chronic inflammation."

Professor Sudha Rao
Group Leader, Gene Regulation & Translational Medicine Laboratory

From the Council Chair

This past year has seen an exciting period of transformation and growth at QIMR Berghofer. Our world-leading medical research institute has proudly delivered a pipeline of life-changing health discoveries with the potential to improve patient outcomes and contribute to the broader scientific and economic landscape.

We have attracted exceptional scientists from around the world, created new opportunities for commercialisation and translation, and further strengthened the quality of our research. Now, as QIMR Berghofer prepares to celebrate its 80th anniversary in 2025, we are once again pioneering a new era for medical research institutes everywhere.

QIMR Berghofer has continued to save lives through its highly innovative cellular immunotherapy programs. These cellular therapies are manufactured in a dedicated cell therapy manufacturing facility, Q-Gen Cell Therapeutics. QIMR Berghofer scientists have developed novel treatments for conditions such as brain cancer and blood cancer. QIMR Berghofer also supplies virus-specific T cell immunotherapies for critically ill patients around the country under the Special Access Scheme. This work not only benefits patients but drives economic development in Queensland, and the Institute is now strategically positioned to drive the commercialisation of biomedical innovations from around the state. Our goal is to invigorate the biomedical industry sector, strengthen the Queensland economy and create new job opportunities.

Professor Arun Sharma

From the Director and CEO

For nearly eight decades, our world renowned institute has delivered ground-breaking medical research that is saving lives. In the past year, our scientists, professional staff and students have continued to build on this outstanding legacy through exciting research achievements with great potential to advance global health and wellbeing.

Our greatest measure of success is seeing our research have real-world impact. To fast-track research to clinical practice, we've founded two spinout companies. Cyteph is focused on developing cell therapies for brain cancer, while Fovero Therapeutics is pioneering a new class of immunotherapy for hard-to-treat cancers. Both achieved significant milestones in the last year, with Cyteph launching a new phase 1 clinical trial and Fovero Therapeutics securing US Department of Defense funding.

Credit for these achievements is shared with our wonderful donors. With their crucial support, we have achieved great outcomes for the people of Queensland. We also cannot talk about our success without acknowledging the important role of local, national and global partners such as The University of Queensland, Metro North Health, Queensland Health and CSIRO. Together we are greater than the sum of our parts, and by combining our expertise we give ourselves the best possible chance of translating great ideas into impactful discoveries that genuinely change lives.

Professor Fabienne Mackay

Our purpose

Better health and wellbeing through impactful medical research

Our vision

Lead the way to significant innovation in health – nationally and globally

Our values

Excellence, Integrity, Respect, Collaboration, Accountability

Our goals

Discovery, Sustainability, Impact

Through the advancement of medical science, we are leading the way to significant innovation in health – nationally and globally. Our three key areas of focus at QIMR Berghofer include:

Discovery

Support ground-breaking research discoveries

Sustainability

Promote a world-class, collaborative and sustainable research environment

Impact

Conduct impactful medical research

Cancer Research Program

QIMR Berghofer scientists are leaders in global cancer research, advancing prevention, treatment and understanding of this group of devastating diseases. In 2024, they made important strides in developing potential new immunotherapy drugs, precision medicine approaches and early detection for aggressive cancers. They drove new clinical trials and international collaborations, and progressed personalised treatment strategies that could more effectively target various forms of cancer in the clinic.

Discovery unlocks potential new arsenal to target leukaemia and other cancers

Patients with the blood cancer acute myeloid leukaemia (AML) now have access to a world-first phase II clinical trial offering a promising new treatment, following research by Dr Claudia Bruedigam and Professor Steven Lane. Their team found that a drug called imetelstat could offer a new way of killing blood cancer cells in AML patients, with the findings paving the way for a clinical trial of the drug at the Royal Brisbane and Women's Hospital, Royal Adelaide Hospital and sites in Germany and France.

Blood cancers are often diagnosed when they have spread through the body so treatments like surgery and radiation are far less effective. Traditional chemotherapies sometimes stop working and some patients don't respond at all. Novel treatments that target blood cancer throughout the body are urgently needed.

"This is very exciting because it essentially means we potentially have a new option to kill blood cancer cells. This could change the way we think about treating patients with blood cancers, especially those who have run out of options."

– Dr Claudia Bruedigam

New RNA targets identified for breast cancer therapy

Professors Juliet French and Stacey Edwards have developed an innovative method to identify RNA targets for cancer therapy, advancing the fight against breast cancer. Their approach uncovered two RNA molecules that play a critical role in breast cancer development. One of these RNAs has emerged as a promising candidate for RNA-based treatment specifically targeting estrogen receptor-positive breast cancer. This discovery opens new therapeutic pathways, offering hope for improved, targeted interventions for patients affected by this subtype of breast cancer.

"Although diagnosis of breast cancer is getting better, breast cancer is still the second leading cause of cancer death for women in Australia, so we need to keep improving our understanding of it and find better ways of treating and preventing it."

– Professor Juliet French
(pictured left)

CAR T cell therapy offers hope for blood cancer patients

Dr Siok Tey's promising new cancer treatment is already achieving success in the clinic. The cutting-edge CAR T cell therapy has achieved remission for some lymphoma patients during phase I clinical trials and holds great promise against the aggressive blood cancer, myeloma, and some solid cancers including those affecting children. Her research harnesses the power of genetic engineering to make CAR T cells, which are designed to find and destroy cancer cells.

CAR T cell therapy has a success rate of around 50 per cent for certain types of blood cancer. Dr Tey says in the patients who respond, the recovery can seem miraculous because these patients have not responded to all other treatment. Access to CAR T cell therapy is limited in Australia and patients seeking treatments overseas face prohibitive personal and financial costs. Dr Tey hopes to make CAR T cells for lymphoma even more effective, improve access and expand the technology to other types of cancer.

Mother-of-two Jane Campbell is now in remission for a rare form of lymphoma after participating in a phase 1 clinical trial led by Dr Tey.

"I went from having no options to being given the best option in my own hometown. It was like I'd drawn the golden ticket. I am so grateful to have been offered a treatment that so few people in the world with my condition have been able to access."

– Jane Campbell, Patient

Brain and Mental Health Program

The Brain and Mental Health research program is committed to addressing the urgent mental health needs of nearly half the population. The program's multidisciplinary team of experts focuses on mental health areas including anxiety, depression, ADHD, bipolar disorder, eating disorders, obsessive-compulsive disorder and schizophrenia, while also researching neurological conditions like Parkinson's disease, multiple sclerosis, epilepsy, and dementia to improve outcomes for all age groups.

Developing better tools and treatments for mental health conditions

Professor Sarah Medland is advancing understanding of the genetic and environmental factors that influence mental health conditions that affect millions of people globally.

Professor Medland leads several groundbreaking projects, supported by prestigious grants from the Medical Research Future Fund (MRFF) Genomics Health Futures Mission, and the National Health and Medical Research Council (NHMRC).
One project is developing new tools that provide clinicians with a patient's risk of developing a range of mental health disorders based on their genetic strengths and vulnerabilities. This information could be used to support treatment plans.

Professor Medland is also leading research on the effectiveness and side effects of medications used to treat anxiety, and affective disorders such as depression and bipolar disorder. Another project is using statistical genetic data to try to improve understanding of individual responses to drug treatments for mental health conditions.

The Psychiatric and Statistical Geneticist was also named Australia's top genetics and genomics researcher for 2024 in The Australian Research magazine.

Research reveals genetic code behind non-identical twins

An international team of researchers led by QIMR Berghofer Professor Nick Martin identified seven genes that influence a woman's chances of conceiving non-identical twins. A simple saliva genetic test based on this discovery could reveal a woman's likelihood of producing twins, and potentially predict which women are likely to have trouble conceiving. The research team studied thousands of DNA samples provided by mothers of non-identical twins in Australia and internationally over many years to identify what genes they have in common.

Trial clears the path for new OCD interventions

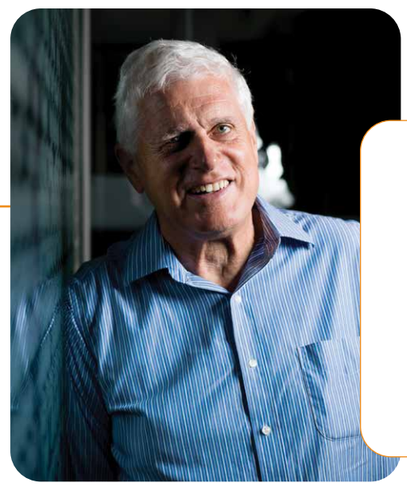
QIMR Berghofer researchers say their eight-year clinical trial of a brain stimulation treatment for obsessive-compulsive disorder (OCD) will help the development of effective interventions for the debilitating condition. Led by Associate Professor Luca Cocchi, the trial of a specific form of transcranial magnetic stimulation (TMS) treatment found it did not benefit people with OCD. The clear findings will help illuminate a path in his team's ongoing search for new brain stimulation treatments.

"This tells us the TMS didn't work within the specific parameters we used. But we're left with a very valuable set of findings that gives us clues on why the intervention didn't work, and how we should focus our research going forward," said A/Prof Luca Cocchi.

Peter Bell has lived with OCD his entire life and said any research that advances our understanding of the disorder is invaluable for developing new treatments and finding a cure. Growing up, Peter was consumed with constant, intrusive thoughts that led to a debilitating cycle of behaviours.

"For me, I would excessively clean and check things. There was no escape. I was in a constant state of anxiety. Like any mental illness, it has a huge impact on my life, it is a genuine disease of the brain."

– Peter Bell



"The findings are important when we consider women who struggle with fertility, as they are at the opposite end of the genetic spectrum from those women who have twins. These findings are just the start. We have isolated seven genes but we know there are more. As the number of mothers in our study increases, we will be able to identify more genes and predict which women may be super-fertile and prone to having twins."

– Professor Nick Martin

Infection and Inflammation Program

The Institute's world-leading infection and inflammation research has helped develop drugs and vaccines, as well as prevention and education strategies, to address systemic chronic inflammation and combat globally significant diseases caused by viruses, bacteria and parasites.

Research shows maternal diet could reduce childhood asthma risk

New research by Professor Simon Phipps shows that a high-fibre diet in breastfeeding mothers could potentially protect infants from serious respiratory conditions such as asthma. In a preclinical study, researchers demonstrated that a diet rich in fibre helped reduce the risk of babies developing severe lower respiratory infections, which can predispose the infant to chronic lung diseases.

The early results could lead to improved guidance for breastfeeding mothers, along with modifying baby formula to have a similar protective effect. The findings are significant because they suggest diet affects the health of a mother's breastmilk, which was key to triggering a baby's immune resistance to severe lower respiratory infections.

"When a breastfeeding mother eats a high-fibre diet, her healthy milk microbiota kicks off a process that promotes the development of an important population of immune cells. We have discovered that the microbes talk to the cells that line the gut, and these cells then produce a growth factor that supports the immune cells in the bone marrow. These immune cells then protect the infant against severe lower respiratory infections."

– Professor Simon Phipps

Study calls for new JEV vaccine

A study of a new and deadly Australian Japanese Encephalitis Virus strain by QIMR Berghofer researchers has prompted a push for a new vaccine. The study, which was conducted in the Institute's cutting-edge high biocontainment facility, showed the strain's potential to cause fatal brain infection and established technologies to test new vaccines to protect Australian populations.

Dr Daniel Rawle and Dr Wilson Nguyen found the virus strain's impact on the brain was consistent with the seven human fatalities during an unprecedented 2022 outbreak of JEV, which involved 44 confirmed human cases across Australia.

"We don't have targeted treatments for JEV, with brain infections particularly difficult to treat, so a vaccine would be a key defence against a disease with potentially fatal consequences. The more a virus mutates and the more it deviates from established vaccine targets, the less optimal the vaccine responses are likely to be. This is why COVID-19 and influenza vaccines are continuously updated, a process that may be needed for JEV."

– Dr Daniel Rawle

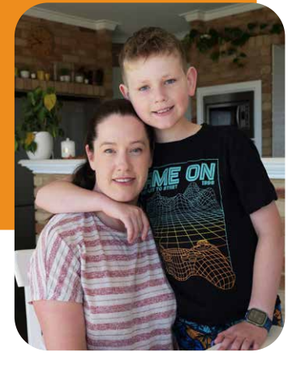
Cell therapy saving lives of immunocompromised patients

A powerful immunotherapy that targets out-of-control viral infections has saved the lives of dozens of critically ill immunocompromised Australians who received the treatment on compassionate grounds. The therapy, developed by Professor Rajiv Khanna and his team, is being supplied under the Therapeutic Goods Administration's (TGA) Special Access Scheme, which allows patients to access unapproved therapeutic goods as a last resort for treatment. The Queensland research team collaborates with leading clinicians around Australia to supply the cellular immunotherapy. Professor Khanna said a recent analysis, which detailed clinical improvement in 46 of 71 patients who received the therapy over 15 years, showed it could successfully treat complex viral infections in seriously ill patients.

"This clinical experience demonstrates our breakthrough cellular therapy to target viruses has minimal side effects and has been effective in saving the lives of many children and adults who had otherwise run out of options. Many patients are coming to us at a very late stage of the disease and have undergone multiple treatments, so the success rate is around 65 percent. We believe more lives could be saved if patients received the therapy earlier." Professor Rajiv Khanna.

"Koby breezed through his bone marrow transplant, but then he caught adenovirus. It just got worse and worse. He was riddled with it, and we couldn't get on top of it. He then had the first infusion of the therapy and in a week, he was a different child. In two weeks, they were talking about discharging him from hospital. The virus was just gone."

– Jodi, Mother of Koby



One recipient to benefit from the QIMR Berghofer therapy is Perth boy Koby who was just eight years old when his mum, Jodie learned he had less than 10 per cent chance of surviving a severe viral infection.

Population Health Program

QIMR Berghofer's Population Health Program aims to understand the health and wellbeing of our communities. With a focus on improving patient care, quality of life and survival rates, the program's researchers explore a wide range of areas including cancer, melanoma, endometriosis, glaucoma, epilepsy, mosquito-related diseases, gastro-oesophageal reflux disorder, hepatic fibrosis and cirrhosis. They are driven by a shared purpose and belief that every community deserves the chance to achieve better health through medical research.

Australian-first research reveals the high cost of vaping

Research by Professor Louisa Collins has found that the increase in vaping across Australia could cost the health system more than $180 million each year. It's estimated that 13 per cent of people who vape but have never smoked before, transition to cigarettes. To understand the financial impact of this transition, Professor Collins conducted the nation's first economic analysis of the cost of smoking vapes on the Australian healthcare system.

Professor Collins said there had been a huge increase in the number of people vaping in a short space of time. The effects can include addiction, poisoning, acute nicotine toxicity, seizures, burns and lung injury, as well as increased uptake on cigarette smoking. Her research was cited in the 2024 Australian Parliament Vaping Reforms Bill.

"There's a risk that the nation's already strained health system could weaken even further, with an increased number of people experiencing smoking-induced disease and addiction following a transition from vaping to cigarettes."

– Professor Louisa Collins

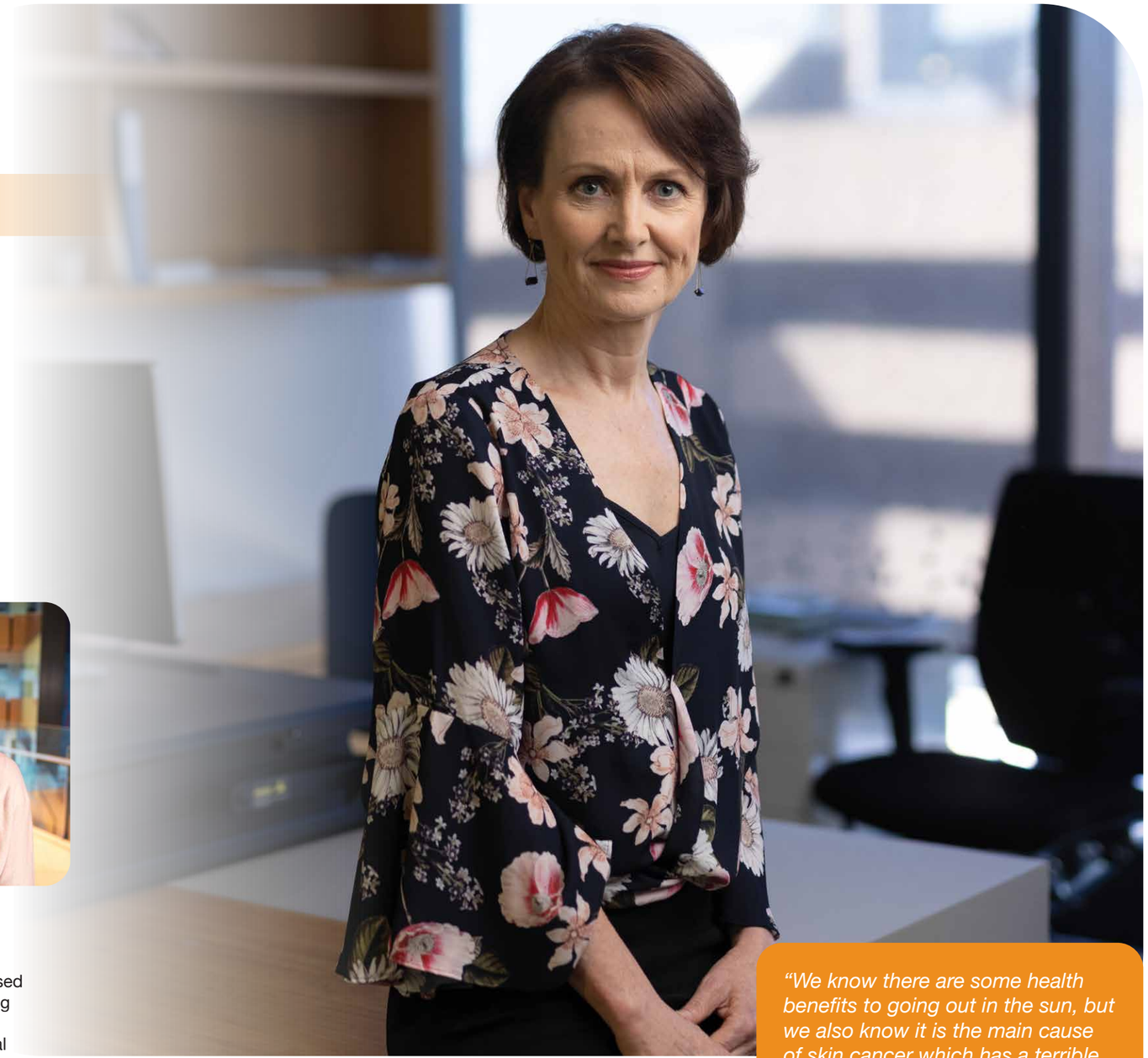
Genetic test to save sight for people with glaucoma

Professor Stuart MacGregor has developed and commercialised a saliva-based genetic test for glaucoma, a degenerative eye disease and the world's leading cause of irreversible blindness. Based on two decades of genetic research, the test could help detect who is at high risk of glaucoma before any physical signs develop. While there is no cure for glaucoma, treatments can slow disease progression, making early detection crucial. Half of all people with glaucoma are unaware they have it until it has already caused permanent loss of vision.

Sales of the saliva-based test commenced in Australia in 2023 and internationally in 2024. Clinical trials are underway to assess the impact the saliva test may have in preventing blindness from glaucoma.

"My own mother has glaucoma, her poor vision has caused her to trip and fall earlier this year and it took months for her injuries to heal. It is a horrible disease that robs people of their ability to work, drive, read and see the faces of their loved ones. This test would mean the right people can receive the right treatment at the right time. Our dream is that no one goes blind because of glaucoma. We want this test to be available to all."

– Professor Stuart MacGregor



"We know there are some health benefits to going out in the sun, but we also know it is the main cause of skin cancer which has a terrible impact on so many lives. We're really trying to get the balance right so we can reduce the risk of skin cancer but also enable people to get the benefits of sun exposure."

– Professor Rachel Neale

New sun-safety advice for Australia's diverse population

A new paper led by QIMR Berghofer Professor Rachel Neale paves the way for new national sun-safety advice tailored to Australia's diverse population. The sun safety position statement offers more specific public health information to create a better balance between the risks and benefits of sun exposure in Australia. The guidelines have been endorsed by Cancer Council Australia and the Australasian College of Dermatologists.

A number of factors led to the decision to update the position statement, including growing research about the benefits of sun exposure in addition to vitamin D production. New modelling also provided more clarity about the amount of time needed outdoors to maintain adequate vitamin D levels. There was also growing evidence of a knowledge gap among consumers and clinicians showing people were confused about what they should do to avoid vitamin D deficiency and still be sun safe. Australia has the highest skin cancer rates in the world, costing up to $2 billion a year.

Impact and Translation

QIMR Berghofer is committed to transforming promising research discoveries into life-saving health and wellbeing outcomes that directly benefit patients in the clinic. The Institute's scientists work closely with hospitals, clinicians, other frontline services and a range of strategic partners to accelerate the translation of their research from bench to bedside.

Q-Gen Cell Therapeutics

QIMR Berghofer is a leader and trusted partner for cell therapy innovation and manufacturing nationally and globally. The Institute is home to Q-Gen Cell Therapeutics, a leading cell manufacturing facility that produces treatments for conditions such as brain cancer and blood cancer. In one example of its impact, T cell immunotherapies developed by QIMR Berghofer scientists Professors Rajiv Khanna and Corey Smith and Dr Siok Tey, and manufactured in Q-Gen, have been offered to critically ill patients who have otherwise run out of options under the Therapeutic Goods Administration's Special Access Scheme. In 2023-24, QIMR Berghofer supplied therapies to 45 people across the country under the scheme, all manufactured at Q-Gen.

Biotech Innovation

To fast-track progression of research discoveries to the clinic, QIMR Berghofer has founded two spin-out companies. Cyteph is focused on developing off-the-shelf cell therapies to treat brain cancer, while Fovero Therapeutics is pioneering a new class of immunotherapy for difficult-to-treat cancers.

"Q-Gen stands at the forefront of quality and innovation, delivering world-class cell and gene therapy manufacturing. Q-Gen drives ground-breaking advancements that bring new hope to patients and push the boundaries of what's possible in medical science."

– Professor Fabienne Mackay
QIMR Berghofer CEO and Director

Clinical Trials

Clinical trials represent a crucial step in the translation of medical research into clinical practice. In 2023-2024, QIMR Berghofer sponsored 16 clinical trials.

Highlights

Using new technology to better detect seizures in newborn babies.

Conducting a world-first trial of psilocybin-assisted psychotherapy for people suffering prolonged and overwhelming grief.

Assessing the possibility of using low-intensity focused ultrasound on sections of the brain to reduce symptoms of obsessive-compulsive disorder, in a world-first clinical trial.

Assessing a potential new off-the-shelf immunotherapy for the deadly brain cancer glioblastoma in a Phase 1 clinical trial.

2 biotech spin-out companies

45 people received potentially life-saving treatment under the TGA's Special Access Scheme

381 active patents

330 global collaborations

Landmark trial of new psychedelic-assisted treatment for prolonged grief

Associate Professor Vanessa Beesley is leading a landmark trial of a new psychedelic-assisted treatment in combination with psychotherapy for people suffering prolonged and overwhelming grief after losing a loved one to cancer.

The trial aims to investigate whether the new treatment is acceptable, safe and potentially beneficial for people with prolonged grief. Up to 30 per cent of cancer carers are affected by prolonged grief versus about 10 per cent of the general population.

"Prolonged grief can cause really intense and overwhelming suffering, affecting a person's ability to function at home, work, and in their relationships. We want to investigate whether psilocybin-assisted psychotherapy can bring some relief and help them live with their loss."

– Associate Professor Vanessa Beasley

Commercialisation

In 2023-2024, QIMR Berghofer established 225 contracts and commercial agreements.

Highlights

Nine-year collaboration with US based Atara Biotherapeutics to develop and commercialise therapies for certain cancers and autoimmune disorders.

Commercial and Joint Development Agreement with Korean artificial intelligence drug discovery company SyntekaBio to co-develop treatments for chronic lung diseases.

Exclusive license agreement with Kazia Therapeutics to use intellectual property developed by Professor Sudha Rao to assess the effectiveness of the drug Paxalisib in breast cancer patients.

Collaboration with Dynavax Technologies to develop a breakthrough vaccine candidate against cytomegalovirus (CMV) using intellectual property developed at QIMR Berghofer.

Expanding a partnership with Societe des Produits Nestle SA (Nestle) for QIMR Berghofer scientists to provide key research on infant diet and microbiome analysis.

Preclinical trial for an immunotherapy drug targeting aggressive breast and bowel cancer, led by Associate Professor Michelle Wykes, under biotech spin-out, Fovero Therapeutics.

Global Impact

- **BIO2024, San Diego**: World's premier biotechnology event
- **Bio-Europe, Germany**: Europe's premier partnering event
- **AusBiotech 2023, Brisbane**: Australia's largest Life Sciences Conference
- **Association of Australian Medical Research Institutes, Canberra**
- **Federal Government Industry Roundtable**: discussions with the Federal Industry, Science and Resources Minister
- **Queensland Research Strategy 2023**: Unveiled by the Queensland Health Minister at QIMR Berghofer

"We are really uniquely positioned for investors ready to partner with us through our spin-out Cyteph because we offer a complete one-stop-shop. We own the intellectual property, we have developed this platform technology, and we make the cell therapies."

– Professor Rajiv Khanna, Cyteph Founder

Facilities

Delivering exceptional research output quickly and efficiently has never been more important. QIMR Berghofer's high quality integrated scientific support services underpin its world-class research programs. Designed to foster discovery and innovation, the Institute's facilities provide researchers and clients with the tools and expert support necessary to explore new frontiers in medical research.

QIMR Berghofer's Scientific Services team manages and operates research equipment valued at more than $50million. The Institute's facilities are designed to ensure that internal and external researchers have the resources they need to conduct impactful medical research.

The team is supported by 74 experts and laboratory staff across nine areas. Many of its services are underpinned by a Quality Management System implemented to AS/ISO 17025:2018 and GCLP requirements.

Sample Processing

The Sample Processing service provides expertise and support for the pre-analytical preparation of biological samples. The team works alongside researchers and clients to design bespoke solutions for a seamless product from sample collection to data.

Histology

The Histology Facility is a fully equipped service laboratory that provides expert support for conventional histology, including special stains as well as immunohistochemical.

Microscopy

The Microscopy Facility is equipped with a comprehensive range of instruments for imaging cells and tissues. Staff in the facility provide assistance and training on all instruments and software, and help with assay development and analysis.

Flow Cytometry

The Flow Cytometry Facility is equipped with world leading equipment for cytometry, immunophenotyping and cell sorting. Its internationally recognised cytometry experts provide world class flow cytometry services for scientists locally and internationally.

Sequencing and Analytical Services

The Sequencing and Analytical Facility employs next generation and Sanger sequencing to deliver reproducible, high quality genomics data catering to any number of sample types and research objectives.

Metabolomics

The Metabolomics Facility employs liquid chromatography-mass spectrometry platforms to enable quantitative metabolite analysis and metabolomic profiling analyses. Its instruments allow both targeted and discovery experiments on various sample types for the purpose of biomarker discovery and mechanistic investigation in a medical research setting.

Proteomics

The Proteomics Facility employs high sensitivity mass spectrometry to perform a range of protein-based analyses on various sample types. Its mass spectrometers are well suited to both qualitative and quantitative/discovery experiments to meet the proteomics-based analytical needs of medical researchers.

Q-Gen Cell Therapeutics

Q-Gen offers TGA-licenced T cell manufacturing supporting the development and implementation of immunotherapies. After more than 20 years of excellence, Q-Gen continues to be a trusted partner locally and internationally offering competitive pricing, timeliness, and capacity for clients.

$50M
core facilities and equipment

13
GMP cleanrooms

GMP
cell manufacture

100
faculty events held within professional lecture and conference style facilities on-site

Purpose built education lab had **1600** students visit

Flexible office and lab space

Awards

QIMR Berghofer is home to research leaders recognised nationally and internationally as experts in their fields. Their impact is evident in the number of citations garnered by their research publications, with data showing that the Institute's scientists were cited 53,134 times in the 2023 calendar year. Citation counts measure how often researchers are referred to in other papers, indicating the influence and relevance of a scientific outcome.

In 2023-2024, the following researchers achieved notable and prestigious recognition.

RECIPIENT/S	AWARD TITLE
Institute Clinical Director and hepatologist Professor Elizabeth Powell	Queensland Health Genomics Clinical Research Fellowship Grant
Professor Nick Martin	Best Genetics Scientist in Australia | Research.com
Professor Nick Hayward, Professor Amanda Spurdle, Associate Professor David Duffy, Dr Scott Gordon and John Pearson	Best Genetics Scientists in the World 2024 | Research.com
Professor Sarah Medland	Australia's top genetics and genomics researcher 2024 | The Australian Research magazine
Associate Professor Michelle Wykes	United States Department of Defense 2023 Breast Cancer Research Program Breakthrough Award Best Pitch, Early Stage Innovation Forum at AusBiotech 2023
Dr Mathias Seviiri *Dr Jasmin Straube*	Cancer Council Queensland's Next Generation Cancer Research Fellowship Grant
Dr Brittany Mitchell	The Society for Mental Health Research 2023 Early Career Scholar Award
Dr Lotta Oikari *Dr Joanna Wasielewska*	The Weekend Australian's 50 Australian Inventions Changing the World
Dr Paniz Tavakoli	Cancer Australia's Priority-driven Collaborative Cancer Research Scheme grant recipient
Dr Kyohei Nakamura *Dr Matthew Law* *Dr Mathias Seviiri*	Australian Cancer Research Foundation Prize for Cancer Research Excellence
Dr Jason Madore	2023 Royal Brisbane Women's Hospital Translational Research Project Grant.

"The Institute's spin-out company Fovero Therapeutics is focused on leveraging my medical research to develop novel immunotherapies for hard-to-treat cancers. In pre-clinical models, Fovero's novel immunotherapy completely clears MSS colon cancer and triple negative breast cancer and the cancer does not reoccur for 300 days."

– Associate Professor Michelle Wykes, Fovero Therapeutics founder

Community

At QIMR Berghofer, our commitment to advancing medical research is deeply connected to the communities we serve. This past year, we have hosted a variety of events aimed at fostering understanding of medical research and its impact on public health. From open days, community group tours and public lectures, to school education programs in the lab and in the regions, we have actively engaged with people of all ages to demystify the research process and highlight its important role in improving health outcomes.

QIMR Berghofer team take science to remote QLD communities

QIMR Berghofer's researchers, staff and students strongly believe that science is a universal language with the power to inspire future generations. This year, they proudly embarked on an initiative to connect our dedicated scientists with remote Queensland communities, fostering a love for science among school students.

The Regional Education Program is designed to bridge the gap between cutting-edge research and local education. By bringing the Institute's scientists into classrooms, the program sparks curiosity, enhances scientific literacy and empowers young minds with knowledge.

Throughout the year, QIMR Berghofer teams travelled to Thursday Island, Bamaga, Cape York and Cairns in far north Queensland as well as Central Queensland. Scientists engaged students with hands-on learning experiences and interactive workshops.

The Institute hosts regular tours of its state-of-the-art facilities, including this community group from Probus Club of Ipswich.

Queensland high school students interested in science and medical research can explore careers through programs in QIMR Berghofer's purpose built education labs.

Fundraising and Philanthropy

QIMR Berghofer relies on the generosity of donors to deliver impactful medical research. Gifts from individuals and families, community groups, foundations, and corporate partners funded critical research projects, supported talented scientists, and accelerated the translation of discoveries into tangible health solutions. The Institute's incredible donor community is helping to make a difference to the health and wellbeing of people around the world.

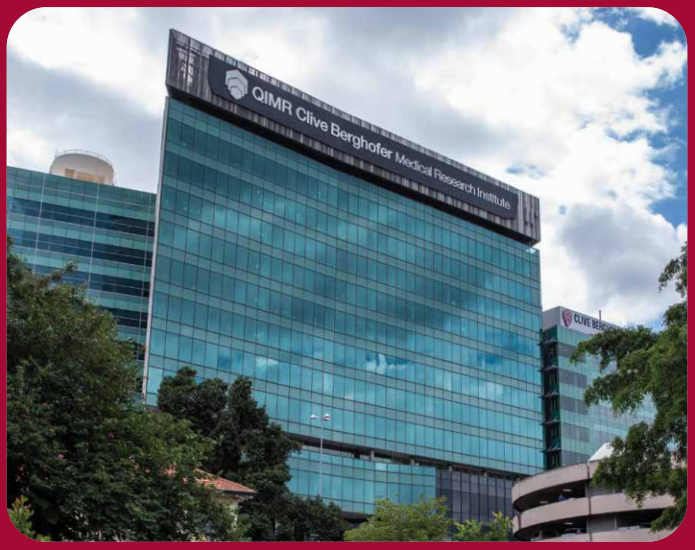
The Forest Lakes Knitters Club place their plaque on the Donor Wall of Appreciation.

Government House honours for QIMR Berghofer donors

QIMR Berghofer supporters were honoured with a special reception at Government House, hosted by Her Excellency the Honourable Dr Jeannette Young AC PSM, Governor of Queensland.

Advancing long COVID research through transformational gifts

Stephen Bradshaw, founder of Simpro Software and VentureOn Partners, and his wife Jane are generous supporters and advocates of QIMR Berghofer.



QIMR Berghofer
Medical Research Institute

Thank you for your support in helping to deliver better health and wellbeing through impactful medical research.

QIMR Berghofer gratefully acknowledges the generosity of donors who support the Institute's purpose: better health and wellbeing through impactful medical research. These gifts allow researchers to focus on health and medical research priorities, transforming great ideas into bold discoveries.

The Institute expresses its continued gratitude to Clive Berghofer AM for his generous, ongoing support and leadership in philanthropy in Queensland.

From everyone at QIMR Berghofer, thank you to each and every donor who helps make the Institute's lifesaving health and medical discoveries possible.