



 **mater**
research

The Heart to Heal, The Strength to Grow.

Our spirit is strong, it thrives as we embrace those whom we must always care for.

Our journey has been long and we will continue to flourish as we open our hearts to those who walk with us. Always.

This artwork concept and narrative was developed by David Williams. David is a proud Wakka Wakka artist at Gilimbaa.

Acknowledgement of Country

Mater acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the lands and waters where we live and work. We respect their historical and continuing spiritual connections to country and community and pay our respects to their Elders past, present and emerging. As health, education and research ministries, we commit ourselves to the ongoing journey of reconciliation.



A Message from the Executive Director

At Mater Research, our Mission is grounded in compassion, integrity, and a deep commitment to improving lives.

While the pace and complexity of medical advancement continues to accelerate dramatically, our focus remains steadfast: to ensure that every breakthrough discovery serves the people and communities who need it most.

Mater Research has grown from eight pioneering scientists in 1999 to a vibrant community of more than 300 researchers, professional staff, and students.

Our work spans rare and common diseases, personalised medicine, and health systems innovation, but at its heart is a dedication to translating knowledge into care.

This commitment echoes the vision of the Sisters of Mercy, who began Mater's research journey over a century ago. They believed in the power of science guided by compassion, and today we honour that legacy by ensuring our research is not only rigorous and innovative, but also ethical, inclusive, and responsive to unmet needs.

As we continue to grow and collaborate across disciplines and borders, we invite you to join us.

*Together, we can
shape a future where
discovery is made in
service of humanity.*

Professor Allison Pettit



Discover, translate, integrate

Mater Research is a hospital-embedded medical research institute with a track record of transforming healthcare.

Working hand-in-hand with clinicians across Mater's statewide hospital network, we focus on improving treatments, models of care and patient outcomes – from the laboratory bench to the bedside.

As a founding partner of the cutting-edge Translational Research Institute, we're at the forefront of medical innovation to uncover new diagnoses, shape clinical practices and inform health policies.

Dedicated to life-changing and life-saving healthcare discoveries, from pregnancy to palliative care, Mater Research pioneers new therapies, runs clinical trials and translates research into real-world treatments.



\$29.9 million
in grant and philanthropic
funding



423
publications



200+
clinical trials and
cohort studies

*Translating discoveries into
better outcomes for patients*







Changing cancer care

Our researchers are waking up the immune system with precision approaches to diagnosis and innovative therapies for cancer.

From gynaecological malignancies to blood cancer and melanoma, Mater Research is breaking new ground and increasing survival rates.

Our strong interface with clinicians enables clinical trials to be part of the patient's journey.

By working closely with our oncologists and specialist surgeons, Mater's cancer researchers are working to bring novel precision diagnostic and treatment options to the clinic.

Mater Private Hospital Brisbane is internationally accredited as a Centre of Excellence in breast cancer care and treats one in every four Queensland women diagnosed with the disease.

Research highlights



Innovating cancer vaccines to fight ovarian cancer.



Offering clinical trials for adaptive hormone therapy and immunotherapy.



Discovering bone marrow niche macrophages, specialised immune cells that can help to improve safety and mitigate toxicity of cancer treatments.

Advancing pregnancy and perinatal care

By understanding pregnancy complications, our researchers are creating more effective diagnostics and reducing risks during pregnancy and childbirth to help ensure lifelong health.

Mater Mothers' is Australia's largest maternity services provider, delivering one in every five Queensland babies.

Leading clinicians and researchers collaborate across Mater's Pregnancy Assessment Centre for emergency care, Mater's nation-leading Neonatal Critical Care Unit for premature and critically ill newborns and the pioneering Maternal Fetal Medicine Centre which performed Australia's first in-utero spina bifida surgery.

Research highlights



Discovering a link between the placenta and higher rates of adverse outcomes in male babies.



Supporting bereaved families with an online program developed by Mater's Centre of Research Excellence in Stillbirth.



Demonstrating that birth at 39 weeks' gestation is safest for mothers and babies in both low and high-risk pregnancies.



Innovating care for life-long conditions



At Mater Research, we believe that a future with fewer chronic diseases is within our reach.

Collaboration with national and international researchers delivers world-leading expertise in diabetes, inflammatory bowel disease, immune conditions and respiratory and infectious diseases.

Our researchers are focused on why chronic diseases are becoming more common and how we can prevent, treat and create a healthier future.

Research highlights



Identifying key cause of severe COVID-19 infections.



Developing a small molecule treatment to improve immune response for people with inflammatory bowel disease.



Discovering a protein that could prevent the onset of Type 1 diabetes.

Understanding the brain

Our biomedical and clinical researchers are improving the diagnostic, surgical, medical and psychological management of people with neurological diseases and intellectual disability.

Mater researchers work alongside leading clinicians and surgeons to improve outcomes across the life cycle, from neonatal critical care to dementia support.

Mater Private Hospital Brisbane is internationally accredited as a Centre of Excellence in Neurosciences, linking our internationally recognised researchers with world-leading clinicians.

Also home to the Queensland Centre of Excellence in Intellectual Disability and Autism Health, Mater Research collaborates with clinicians to improve outcomes for people on the autism spectrum and those with intellectual or developmental disability.

Research highlights



Discovering that sulphate holds the key to preventing cerebral palsy in pre-term infants.



Investigating new ways to treat epilepsy as the Queensland lead for the nation's largest epilepsy study.



Debunking the theory that the microbiome causes autism, finding instead that food choices affect the microbiome.





Reimagining healthcare

Our multi-disciplinary teams are addressing health-related research questions that impact all health disciplines.

Multi-disciplinary teams collaborate to create new diagnostic tools, innovative models of care and clinical trials of cutting-edge treatments.

Our collaborative approach aims to improve and enhance the patient experience and outcome at each clinical touch point and throughout every stage of life.

Research highlights



Developing transdisciplinary stroke assessment, enabling patients to start treatment sooner and recover faster.



Trialling light therapy, also known as photobiomodulation, for patients before and after knee replacement surgery to reduce pain and accelerate recovery.



Equipping primary care providers with frailty screening tools and access to online specialist advice to reduce the need for referral to hospital.

Making generational impact

Mater Research teams are walking hand in hand with Aboriginal and Torres Strait Islander communities to improve both immediate and long-term health outcomes.

Mater's Indigenous Health Research Group partners with Aboriginal and Torres Strait Islander communities to ensure their voices shape the research that leads to improved treatments and healthcare outcomes.

By providing culturally appropriate care for families during pregnancy, birth and the first 1,000 days of life, we aim to create a better today, a brighter tomorrow and a stronger future for Aboriginal and Torres Strait Islander families.

Research highlights



Following Aboriginal and Torres Strait Islander families for the first 1,000 days of their baby's life in an Australian-first study.



Creating the Birthing in Our Community (BiOC) program to provide Aboriginal and Torres Strait Islander-led care and to support families until the child is three years of age.



Supporting safer pregnancies for Aboriginal and Torres Strait Islander families through the Healthy Yarning Guide to embed culturally-safe care into national maternity settings.





Testing new discoveries

Clinical trials are essential to turning scientific discoveries into exceptional patient care.

Providing evidence on the safety and effectiveness of new treatments and diagnostics, clinical trials also offer alternative treatment options for patients with unmet medical needs.

Mater Clinical Trials is leading the way with more than 200 active clinical trials across nine key focus areas.

These include commercial pharmaceutical and medical device studies, collaborative group trials, and investigator-initiated research led by Mater's experts in partnership with The University of Queensland and other leading Australian and international research institutions.

"Many of our patients who participate in clinical trials do it not only for themselves... but also to give something back to the next generation of people with those particular conditions."

Paying it forward

Mater Research's biobanks are enabled by generous donations from our hospital patients who recognise the importance of enhancing knowledge and treatments for themselves as well as future generations.

Three major biobanks underpin our commitment to improving health outcomes:

- **Mater Research Biobank**

The Mater Research Biobank collects patient samples to be used towards research undertaken at Mater, enabling breakthroughs in diagnosis and treatment. This includes long-term sample storage and immediate access to live tissue for functional studies, including therapeutic research. These samples are available for ethically approved projects.

- **Mater Inflammatory Bowel Disease Biobank**

Collects biospecimens from patients and healthy controls undergoing endoscopy to investigate the complex relationship between the immune system and gut health.

- **Queensland Family Cohort**

Aims to uncover the factors influencing healthy growth, wellbeing, and ageing—supporting children and families across their life course.



Continuing the legacy



Mater's founders, the Sisters of Mercy, brought a passion for science and discovery to their hospitals and healthcare services.

Research began at Mater in the 1920s when an enterprising young Sister purchased a second-hand microscope – the beginning of the next 100 years of scientific discovery.

The Sisters of Mercy established a pathology laboratory at Mater Hospital Brisbane in 1919 and became recognised for their pioneering work in cytogenetics and bioethics.

Driven by a Mission to address unmet healthcare needs in the community, they developed models of care that emphasised prevention and chronic disease management, particularly amongst marginalised populations.

The Sisters of Mercy were also known for their commitment to empowering women in Science, Technology, Engineering and Mathematics (STEM) fields.

In 1998, their commitment to transforming scientific discoveries into the best clinical care led to the opening of Mater's own research institute.

Today, the legacy of the Sisters of Mercy lives on through Mater Research.

Driven by the same Mission and dedicated to the core Mercy value of compassionate care, Mater Research is fostering the next generation of scientists and partnering with the community to ensure unmet needs are addressed.

Now a world-leading institution, Mater Research is carrying on the legacy of discovering, driving and delivering improved healthcare for Queenslanders.

Mission, Vision and Values



Our Mission

To discover new knowledge central to the Mater Mission, translating this knowledge into practice and integrating these research outcomes into improved healthcare and educational practices across Mater.



Our Values

Mater Research wholeheartedly commits to the Mater Values:

- We honour and promote the dignity of human life and of all creation
- We act with compassion and integrity
- We strive for excellence.



Our Vision

To translate our research discoveries and integrate them into improved healthcare.

Our Mission, Vision and Values guide everything we do at Mater.

They are foundational to our work to transform healthcare, and are reflected in strategic priorities as well as the behaviours that guide our interactions with each other, in our ministries and throughout our communities.



Partnerships

Research

Mater Research is committed to growing its network of partners to turn scientific discovery into the best possible treatment, care, and outcomes for patients and the broader community.

The University of Queensland

Since 2013, Mater Research has partnered with The University of Queensland (UQ), merging Mater's clinical expertise and high-quality healthcare with UQ's research, education and training expertise.

A proud founding partner of the

Translational Research Institute (TRI),

Mater Research collaborates with UQ, Queensland University of Technology and Queensland Health at TRI's world-class facility to translate discoveries into clinical practice. Through the TRI, Mater also collaborates with the Children's Centre for Health Research (CCHR), co-located with the Queensland Children's Hospital in South Brisbane.

Health Translation Queensland

A collaboration amongst 12 world-class hospitals, healthcare services, research institutes and universities in Queensland—including Mater—works to address barriers in translating research outcomes into clinical practice.

UniQuest

UniQuest is UQ's commercialisation company. Through our close ties with UQ, Mater Researchers partner with UniQuest to commercialise their discoveries to create societal and economic outcomes. UniQuest's proven track record in research commercialisation positions UQ and Mater Research as the leaders in research commercialisation in Australasia.

Community

Mater Research receives generous philanthropic support from the community through Mater Foundation.

Donations to Mater Foundation help to support Mater Research's activity, allowing our world-renowned research team to continue to improve patient care and quality of life by finding better ways to diagnose, treat and ultimately cure life-threatening diseases.

Our history of successful grant funding and fellowship awards could not have been achieved without the support of Mater Foundation. It funds clinical trials, research projects, vital infrastructure and resources, student scholarships and the backfilling of clinical time, enabling more clinician-led research and fellowships for our senior researchers. Mater Foundation's support allows the flexibility to sustain research beyond short-term grants.

Funding from Mater Foundation supports:



Projects with the potential to deliver real-world outcomes for the community.



The careers of our talented researchers and students, through salary, grants and awards.



Scan to learn more about Mater Foundation



Students

We are committed to nurturing the next generation of researchers to create a community of practice.

Since 1999, Mater Research has provided an excellent training environment for biomedical, clinical and health services research.

We have world-class facilities, internationally-recognised researchers and outstanding professional staff who are committed to the future of research by helping students to reach their full potential.

We provide university students at various stages of study—including Undergraduate, Honours, Postgraduate, Masters by research, PhD and MPhil students—with excellent project opportunities.

Many of our past students have gone on to lead their own research groups in labs across the globe, making a real-world difference to healthcare outcomes.

We are committed to fostering a love of science in high school students and have close partnerships with schools and TRI's SPARQed program to give students hands on experience in the lab.

Our early-career researchers also play a vital role in outreach, representing Mater Research at community STEM initiatives in rural and regional Queensland to share the joy of science with students who lack everyday exposure to STEM.







To learn more about Mater Research and how its discoveries translate into better outcomes for patients in Queensland and around the world, go to:

[**materresearch.org.au**](https://materresearch.org.au)