

Health Consumer Network

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 **mater**
research



Partnering with you to create better healthcare



Pictured: Professor Peter Nestor





Professor Peter Nestor Advancing the future of cognitive neurology

Mater Research has created a unique environment where translational research and clinical care work together to improve outcomes for people living with neurological conditions. This collaborative ecosystem has enabled Professor Peter Nestor, one of Australia's leading cognitive neurologists, to make significant contributions across dementia, movement disorders and emerging neurological therapies.

As Director of the Memory and Cognitive Disorders Clinic at Mater Hospital Brisbane, Professor Nestor specialises in challenging conditions that are often difficult to accurately diagnose, including frontotemporal dementia (FTD), Alzheimer's disease, dementia with Lewy bodies, progressive supranuclear palsy (PSP) and other young-onset and atypical dementias. The Memory and Cognitive Disorders Clinic allows people to access advanced cognitive assessments, neuroimaging, eye-movement analysis and participation in cutting-edge research studies.

A major focus of Professor Nestor's work has been improving diagnostic accuracy in dementia. His team recently demonstrated that almost 70% of patients suspected to have behavioural variant FTD had been misdiagnosed. The study identified common causes of error, including over-reliance on neuroimaging and neuropsychological testing, providing valuable guidance for clinicians assessing complex behavioural presentations. Building on this work, Professor Nestor's group developed new cognitive assessment approaches to better distinguish frontotemporal lobar degeneration from Alzheimer's disease. The team identified a novel diagnostic approach that achieved strong accuracy in differentiating the two disorders, helping address one of the most common challenges faced in memory clinics.

The program has also advanced the assessment of psychiatric symptoms in dementia. Through research conducted at Mater's Memory and Cognitive Disorders Clinic, Professor Nestor and colleagues developed the GDS-D, a dementia-specific depression screening tool that removes questions likely to be influenced by changes in thinking and memory, helping clinicians better distinguish symptoms of depression from those of dementia. The tool demonstrated superior accuracy compared with existing depression scales and offers a practical new resource for clinicians worldwide.

Beyond diagnostics, Professor Nestor is helping to pioneer new therapies for Alzheimer's disease. In a first-in-human pilot study, he collaborated on the development of ultrasound-based brain modulation, demonstrating that the treatment was safe and well-tolerated while also showing promising improvements in behavioural and psychological symptoms. The work provides an important foundation for future therapeutic trials.

Together, these achievements highlight how Mater Research's strong culture of collaboration, innovation and patient-focused investigation is enabling clinicians like Professor Nestor and his team to deliver advances in care across a broad spectrum of conditions.



Q & A

with Professor Peter Nestor

Brain health is a major focus for Mater Research. Why is research into dementia and other neurological conditions so important for our community?

Increases in life expectancy mean that degenerative brain diseases, such as Alzheimer's and Parkinson's disease, have become more common. These diseases are chronic, progressive and, presently, incurable. They are the leading cause of disability in our ageing population.

How is Mater Research helping to improve the diagnosis of conditions such as Alzheimer's disease and frontotemporal dementia?

We focus on all of the major categories of disease that cause dementia, because this is the reality for the patients visiting our clinic. We have three major aims in our work:

1. to understand better how these diseases lead to degeneration of brain cells
2. improving the accuracy of diagnoses, and
3. creating better methods to track change so that therapeutic effects can be identified faster and with greater accuracy.

What are some of the most promising advances in brain health research that are giving hope to patients and families?

While healthy lifestyle factors may reduce dementia risk for some people, they do not explain all cases at the Memory and Cognitive Disorders Clinic. Many people with young-onset dementia have led healthy, active lives. Promising advances rely on earlier diagnosis, understanding the biological causes of disease, and developing targeted treatments. This is why the ongoing research in this area is so important.

How does bringing together clinicians, researchers, patients and carers at Mater accelerate progress in brain health research?

We need patients who choose to participate in research because the only way to understand the disease is to study the disease. We need carers because people with dementia often are unable to explain what they are experiencing (because they have dementia), so the close observations of carers are vital; we need clinicians identifying patients and defining what the unknowns are; and we need researchers making those unknowns, known.

Why is it important for people living with neurological conditions and their carers to be involved in research?

It is the only way we can improve care. These are uniquely human diseases and the only way to improve understanding of them and, hopefully, develop better treatments, is by studying the actual diseases, and that means the involvement of people with the diseases.

Looking ahead, what do you hope brain health research at Mater will achieve for patients and families over the next decade?

I hope we can discover new insights that ultimately lead to therapies in the future. By understanding precisely how the brain is affected by these diseases, we can then hopefully develop targeted interventions. Until now, dementia research has focused on abnormal protein deposits, such as removing amyloid from the brain in Alzheimer's disease. This can now be done successfully: there are medications that do remove amyloid, but this has not stopped the dementia, with patients continuing to deteriorate. I hope over the next decade we can continue to gain a more holistic understanding of the diseases, and that this approach can lead to better treatments.



Meet the Mater Research Executive team



Professor Allison Pettit

Executive Director

Professor Allison Pettit is a recognised leader in bone biology, immunology and cancer research, with over 20 years of experience advancing translational health research. As Executive Director of Mater Research, she provides strategic leadership for embedding consumer involvement across the research ecosystem, ensuring lived experience perspectives help inform research priorities, culture, and impact. She is deeply committed to advancing a research culture that values partnership, inclusivity, and community voice, recognising consumer involvement as essential to achieving meaningful and sustainable health outcomes.



Professor Marc Ruitenberg

Director of Biomedical Research

Professor Marc Ruitenberg is an internationally recognised neuroscientist with expertise in neuroinflammation, brain and spinal cord injury, and stroke research. As Director of Biomedical Research at Mater Research, he is passionate about translating discoveries into tangible benefits for people affected by a wide range of conditions. He sees consumer involvement as essential to challenge assumptions, refine research questions, and keep research connected to community needs.



Associate Professor Lucy Burr

Director of Clinical Research

Associate Professor Lucy Burr is a respiratory physician and clinical researcher with expertise in respiratory infections, cystic fibrosis, bronchiectasis, and chronic lung disease. As Director of Clinical Research at Mater Research, she works closely with patients and families affected by complex respiratory conditions. She values consumer involvement for the practical insights it brings to clinical research, helping ensure studies address patient priorities and improve care, treatment, and quality of life.



Ms Emily Bailey

Director of Operations

Ms Emily Bailey is an experienced healthcare leader whose career has evolved from frontline nursing into health and research leadership. This experience has shaped her understanding of the importance of keeping patients, families, and communities at the centre of health research. In her current role, she leads the operational functions, systems, and partnerships that enable research excellence at Mater, and oversees the organisational foundations that support meaningful consumer involvement across Mater Research.



Dr Kylie Alexander

Head of Education

Dr Kylie Alexander is a Senior Research Officer and Head of Education at Mater Research whose research focuses on improving outcomes for people living with spinal cord injuries. She is passionate about increasing consumer involvement in research and ensuring higher degree research students understand the value of partnering with consumers early in their research journey. Kylie believes that incorporating lived experience into research helps build researchers who are better equipped to address issues that matter to patients and the community.



Connect, learn and contribute

Help us reach 100 members

With 94 members and growing, our network is helping shape the future of health research. Share your lived experience, ensure consumer voices are heard, connect with others, develop new skills, and be remunerated for your time and expertise. Join our network [here](#).

Already a member? Spread the word!



"As a Consumer Advisor/Advocate, I have found that Mater Research has a genuine commitment to welcoming and involving consumer partners as an integral part of their research. I am able to contribute my broad range of experiences, perspectives, and expertise across ethical and valuable projects that have the potential to deliver life-changing outcomes for patients, families, and communities."

– **Gaylene Smith**

Consumer Advocate



Mater Research Consumer Training Modules now available

Build your skills in consumer involvement, research team participation and leadership and advocacy in research collaboration. More than a quarter of Health Consumer Network members have already commenced training, strengthening their confidence and capability as consumer partners in research.

To request access to the training modules, email consumer.training@mater.uq.edu.au.



Contact us



Dr Farhana Matin

Consumer Engagement Manager

Dr Farhana Matin is the Consumer Engagement Manager at Mater Research, bringing a background in cancer research and a passion for strengthening partnerships between researchers and consumers. She leads the Mater Research Health Consumer Network, fostering connections that integrate lived experience into research. Through her work across research and clinical trials, Farhana advances meaningful consumer involvement to help ensure research delivers outcomes that matter most to patients and communities.



0422 429 049



consumer.engagement@mater.uq.edu.au