



THE UNIVERSITY OF
SYDNEY

Brain and Mind Centre

Strategic Plan
2018 – 2020



Foreword



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Brain and Mind Centre

The University of Sydney

Disorders of the brain and mind are the greatest health challenges we face in the 21st century. These diseases are devastating for those affected, their families and society, and threaten the social and economic participation of people of all ages across the globe.

With strategic activity and investment, the University of Sydney's Brain and Mind Centre is in a unique position to directly address and reduce these impacts. Our teams partner across borders and disciplines in pursuit of a common goal: to develop better treatments for conditions of the brain and mind and to improve health outcomes now and for future generations.

The Brain and Mind Centre takes a patient-centred approach to understand and treat these conditions, integrating clinical practice and research to pioneer new systems of care. In particular, we focus on conditions that affect child development and behaviour, youth mental health and ageing and neurodegeneration.

Our work spans pre-clinical, clinical and translational research. It extends beyond laboratories and clinics to our strong partnerships with industry, government, Local Health Districts, and other research institutes. In addition, the community will play an important role in the design and delivery of research, ensuring impact and sustainability by responding to real-world, real-time issues. The results of our efforts will influence public debate and shape public policy to ensure global societal benefits.

Significantly, we will integrate this research into an interdisciplinary education program that will nurture tomorrow's researchers and clinicians so they have the skills and capabilities to continue to make an impact in the future. The next two years represent an exciting chapter for the University of Sydney's Brain and Mind Centre. Our strategic objectives are focused on creating an enduring program of research that directly responds to the major health challenges of our time.

Professor Matthew Kiernan

Co-Director-Translation and Discovery

Professor Ian Hickie

Co-Director-Health and Policy

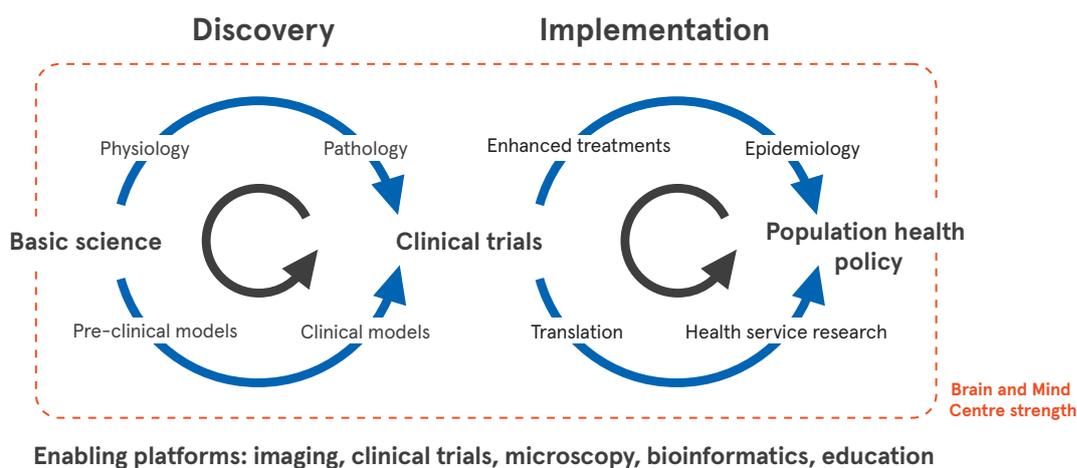
Our vision

Transforming brain and mind health with world-leading research.

A society enriched by citizens who achieve their maximal cognitive and behavioural capacities, individually and collectively.

Our research

The co-location of dedicated research laboratories and clinical services provides the ideal environment for the integration of cutting-edge research with safe and effective clinical care. Using knowledge gained through basic science, the Brain and Mind Centre is able to drive clinical trials in mental health and neuroscience. With additional skills and capacity in implementation science, the Centre is positioned to maximise the potential for transformative translational research. Our disciplinary strengths are backed by supporting infrastructure and services that provide the enabling platforms to conduct the centre's activities.



Our visionary research teams are at the forefront of brain and mind sciences. Bringing together capabilities in neurology, psychiatry, psychology, health policy research, drug discovery, neuroimaging, neuropathology, neuroimmunology, cognition and decision-making, the Brain and Mind Centre is positioned to find answers to some of the world's greatest health challenges.

Our objectives

Impact and excellence

1. Be a global leader in brain and mind research and treatment. In particular, focusing on conditions that affect child development, youth mental health and brain ageing

- 1.1 In partnership with faculties, strategically recruit, develop and retain world-leading research teams and individuals
- 1.2 Increase participant members across the University. Develop and implement affiliation agreement with members
- 1.3 Develop and invest in globally relevant, cutting edge, focused areas of research that leverage our collective expertise and capitalise on current and emerging trends
- 1.4 Lead national and global brain and mind science research projects
- 1.5 Promote a culture, based on accountability, that aligns with the University of Sydney's core values





Hayden's story

Hayden was diagnosed with Autism Spectrum Disorder when he was two years old. His mother Christine spent years trying various therapies and medications, but nothing made a difference. Hayden was trapped in his own world, unable to communicate.

"He didn't want to be in a group or participate," Christine explains. "He wouldn't even sit down in a circle. A small transition or change in activity would result in a tantrum. He didn't trust me or anyone trying to help him."

After contacting multiple paediatricians, Christine was directed to the Brain and Mind Centre where she learned of a new trial for autistic children involving oxytocin. This was a turning point in Hayden's life.

"It was the first time he was really able to engage and become aware he was not the only person in the room," says Christine. "I had no idea Hayden was aware of his surroundings until he started saying things like, 'Oh, I like that car'."

The Brain and Mind Centre treatment enabled Hayden to make friends, sit quietly and learn new things at school. Recently, he even attended school camp for three nights.

"The changes I saw from the trial completely changed the way Hayden engaged," says Christine. "He wanted to be part of a group, he didn't fight and his language and social skills improved."



Lauren's story

It's a shock to learn you have a chronic condition. When Lauren was diagnosed with multiple sclerosis at 25, gaining control of her health and pursuing a career were her priorities.

Lauren had just landed a prestigious job with a top-tier law firm in Sydney. Soon after arriving, this journey came to a standstill after she paid a visit to her GP.

"He said I was showing signs of multiple sclerosis," Lauren says. "To be honest, I thought he was crazy. I was doing triathlons, working more than full time and I'd just moved to Sydney for a great career opportunity."

Later, when Lauren lost movement in one of her arms, she realised something was wrong. She was taken straight to the emergency department and hospitalised for a week.

It was while in the hospital that a doctor sat with Lauren and asked her about herself, her career and what she did outside work. "He was the one who thought Michael Barnett at the Brain and Mind Centre would be the perfect neurologist for me," Lauren says. "That's how I got the referral."

It has been seven years since Lauren first saw Professor Michael Barnett, a neurologist and multiple sclerosis specialist at the University of Sydney's Brain and Mind Centre. He has helped Lauren throughout her journey, from navigating the initial diagnosis to treatment and ongoing management. His clinic is the only multiple sclerosis facility in Australia that is based within a university and therefore integrated with the latest research.

"The thing with multiple sclerosis is that if you stop it when you're young, you don't have that damage going forward," says Lauren. "So, it's really important to get in early and stop it in its tracks and that's exactly what Michael did for me."

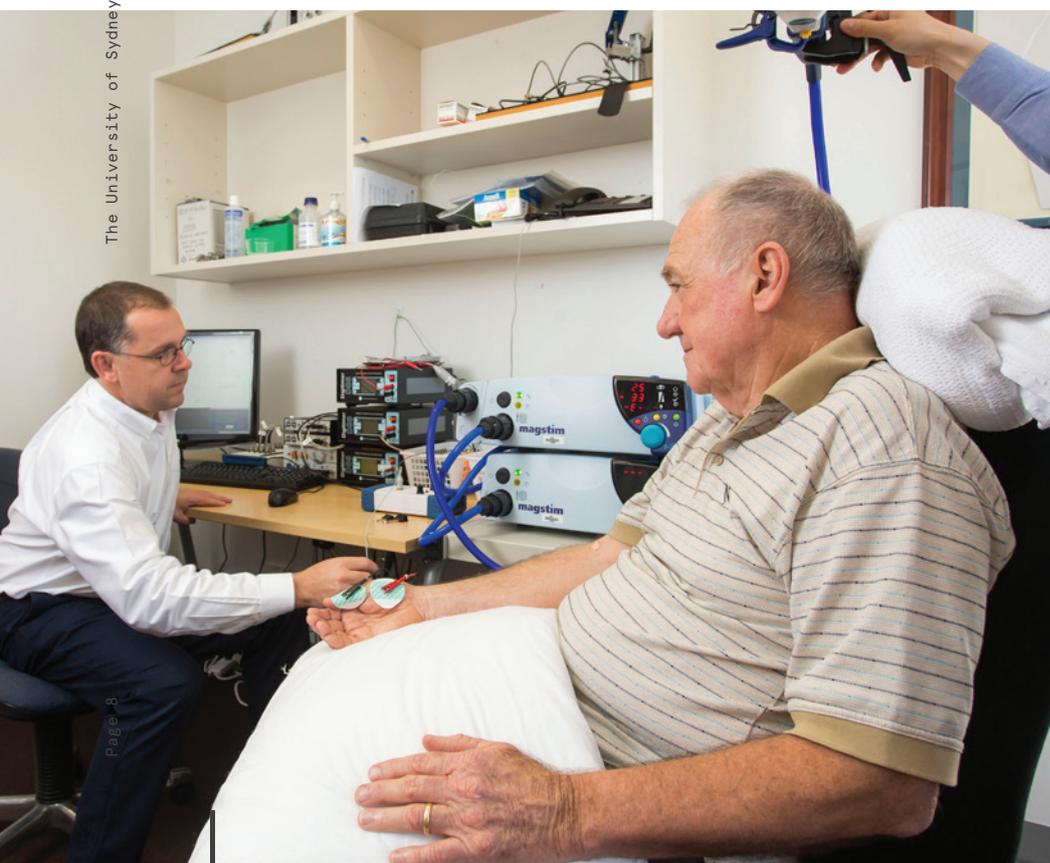
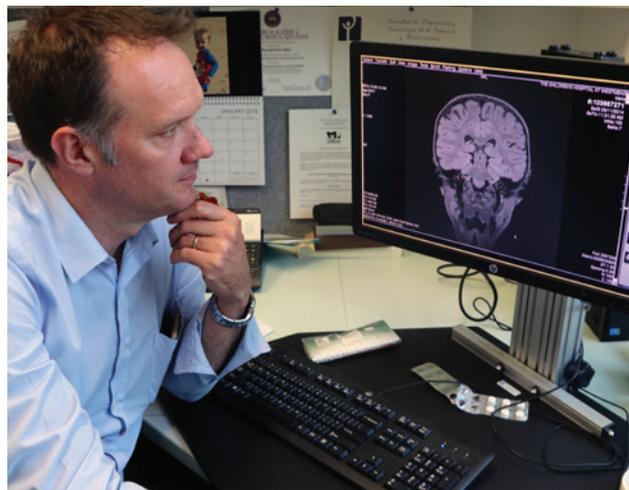
Lauren has not had any relapses or degeneration so far, and she has gone on to lead a successful career as an academic lawyer at one of Australia's top law schools.

Our objectives

Translational research

3. Take a patient-centred approach to pioneer new systems of care, spanning pre-clinical, clinical and translational research, starting in laboratories and extending beyond to clinics by integrating current clinical practice with research

- 3.1 Deliver translational models of research which expedite improvements in patient care
- 3.2 Develop closer links with Sydney Health Partners, Local Health Districts and foster more translational research collaborations
- 3.3 Engage in policy research and advocacy to inform and drive government policy and funding
- 3.4 Capitalise on advances in basic science and emerging technologies to advance patient care





Jess's story

Mood disorders can affect every part of a person's life. For some, it makes working, studying and socialising impossible.

This was certainly the case for Jess, who lived with depression for much of her life. "I was severely depressed and had constant battles with anxiety from a young age," Jess recalls.

Simple daily tasks like eating, sleeping and showering became unbearable. Eventually, Jess was forced to leave high school. She couldn't be in public without experiencing severe anxiety and struggled with self-harm and suicidal thoughts.

It was a chance meeting between Jess's mother and a psychiatrist working with headspace and the Brain and Mind Centre that sparked change for Jess. She took part in one of its research programs involving cognitive studies, MRI scans and sleep research. "The Brain and Mind Centre is pretty much the reason I am here today," Jess says.

Jess is now in her final year of university. She works part-time and maintains strong, loving relationships with her family and partner. She's also become a mental health advocate and met the Prime Minister.

Today, Jess is able to see herself in a different light. "I started to break away from the constant years I had been referring to and believing myself to be a mental illness and nothing more," she says.

By getting treatment and support she needed, Jess defied her own expectations and can now live a life that is defined by her achievements, not her illness.

Our objectives

Organisation and infrastructure

4. Provide the infrastructure and collegial environment required to attract talented and innovative research teams and develop tomorrow's researchers and clinicians

- 4.1 Develop and provide appropriate infrastructure for our portfolio of researchers and research themes
- 4.2 Improve leadership capability of Brain and Mind Centre team leaders and other senior researchers
- 4.3 Provide role models and skill building programs for Early and Mid-Career Researchers to conduct more successful high quality multidisciplinary and translational research
- 4.4 Create appropriate management forums and communication channels to encourage participation and inclusiveness
- 4.5 Develop and promote team access to philanthropic and industry funding sources
- 4.6 Deliver an education environment that offers a unique, interdisciplinary brain and mind science experience, integrated with high quality research and prepares students to take up leading roles in research and clinical practice



Stephen's story

Imagine you were a senior architect and, after creating precise designs for more than 20 years, you found yourself unable to draw a straight line.

That's where Stephen found himself, when he was diagnosed with Parkinson's disease 10 years ago. "I had trouble writing my signature at first – that's when I knew there was something wrong," recalls Stephen. "It took six months for neurologists to agree on my diagnosis and they confirmed my worst fears."

As is often the case with Parkinson's disease, Stephen found his condition beginning to worsen.

"By 2012, I had to retire from work – I was just tired all of the time. On top of that, I started to lose the fine motor control that I needed to draw," explains Stephen.

Then one afternoon, Stephen fell asleep at the wheel of his car and crashed into a parked vehicle. "Thankfully nobody was hurt, but I could have killed my wife or others."

He decided the extreme tiredness he was experiencing had to be addressed. He turned to the Brain and Mind Centre to take part in a sleep study. While at the centre, Stephen met Professor Simon Lewis whose research has focused on the wide variability in symptoms across patients with Parkinson's.

By applying his research findings to his clinical practice and adopting a holistic approach to his treatment plan, Professor Lewis was able to dramatically improve Stephen's symptoms.

"The change was almost instantaneous," says Stephen. "My facial animation returned, my hands and arms became usable, my drowsiness disappeared and I was able to drive and draw again." Stephen has been able to get back to doing what he loves.



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