An invitation to build a Stroke Research Centre in Western Australia

perron institute
for neurological and translational science

A note from our CEO

"With the generous support of Philanthropists, a collaboration between a leading neurological research institute, and The University of Western Australia (UWA) was formed in 2022 to fund the Perron Institute/UWA Chair of Stroke.

The subsequent creation of the Perron Institute's Stroke Research Centre, led by Professor Graeme Hankey, is providing world-class research into the surveillance, prediction and prevention, acute treatment and rehabilitation for this debilitating condition.

This year, Professor Erin Godecke, an expert in stroke recovery and rehabilitation, was appointed to co-lead the centre alongside Professor Hankey.

The Perron Institute Stroke Research Centre now has five dedicated research specialists - global epidemiological studies; genetics; infant stroke; AI enabled prediction; and rehabilitation.

This is only the beginning. We have a world-class team, and a huge task ahead of us to substantially reduce the burden of this disease.

In Western Australia, where remote locations amplify the challenges of stroke survival and care, this research has the potential to transform lives.

We invite you to join us in revolutionizing stroke research and care. Your support can help reduce the global impact of stroke and bring hope to many people around the world."

Steve Arnott
CEO, Perron Institute

Professor Graeme Hankey

Perron Institute Chair in Stroke Research at UWA, Professor Graeme Hankey is recognised nationally and internationally for excellence in medical and health science in the field of stroke research. A medical graduate of UWA, he trained in neurology at Royal Perth Hospital, Mayo Clinic, USA, and Western General Hospital, Edinburgh, UK.

Professor Hankey's main research interests focus on epidemiological studies and clinical trials of treatment strategies for acute stroke and stroke prevention.

He has been principal investigator of several international studies and has co-authored over 1000 scientific publications, including 13 books and 27 book chapters. With an h-index of over 150, Professor Hankey is one of Australia's most highly cited neurology researchers.

As a clinician-scientist, Professor Hankey has made an outstanding lifetime contribution to stroke research, with a special interest in epidemiological studies and clinical trials of interventions for the treatment and prevention of stroke. Internationally recognised for his achievements, he has led several pivotal studies in collaboration with leading researchers worldwide.

Our aim is to build on the outstanding stroke research now undertaken at the Perron Institute in collaboration with existing clinical and stroke research groups. Another important aim is to extend our local, regional, rural, national and international collaborations, engaging new partners in the quest to reduce the impact and burden of stroke globally.

Our dedicated team

Professor Graeme Hankey
Stroke Research

Graeme Hankey is Perron Institute Chair in Stroke Research at The University of Western Australia and the Perron Institute for Neurological and Translational Science, Perth, Australia. He trained in medicine at the University of Western Australia and in neurology at the Royal Perth Hospital, Australia; Mayo Clinic, USA; and Western General Hospital, Edinburgh, UK. His main research interests include epidemiological studies and clinical trials of treatment strategies for acute stroke and stroke prevention. He has led large international clinical trials including the VITATOPS and AFFINITY trials, and is now co-leading the SEANCON phase 2 trial of the cerebroprotectant ARG-007 in acute ischaemic stroke; the Librexia Stroke phase 3 trial of the oral factor XIa inhibitor, milvexian for preventing recurrent ischaemic stroke; and the Australian arm of the ASPIRING trial of antiplatelet monotherapy for preventing major vascular events after stroke due to intracerebral haemorrhage. He is the Data Safety Monitoring Board chair of 3, and member of 6, ongoing clinical trials.

He is an Associate Editor of Circulation, Editorial Consultant for The Lancet Neurology and JACC Advances, Section Co-Editor for the Epidemiology, Outcomes, & Population Science section of Stroke, editorial board member of Neuro-epidemiology and a senior editor of Cerebrovascular Diseases. He is a Web of Science Clarivate Analytics Highly Cited Researcher for 2 017-2019, having authored or co-authored 13 books and over 1090 publications, which have yielded over 240,000 citations according to Scopus and over 380,000 citations. He has a Field-weighted Citation Impact of 23.16. He has delivered over 600 invited lectures at international, national, and local scientific meetings.

He was awarded the 2015 American Stroke Association David G. Sherman Award for outstanding lifetime contributions in the field of stroke. Most of his work has been done as teamwork, and with the contributions and collaboration of others. Hence, he would like to inspire, train and help early and mid-career stroke researchers to enjoy and establish their research careers and to build their collaborations and partnerships with local, national and international colleagues.

Professor Erin Godecke
Stroke Recovery and Rehabilitation

Professor Erin Godecke, BSc (Speech and Hearing Science), PhD, Grad Cert Business, is the co-lead of the Perron Institute's Stroke Research Centre. She worked as a speech pathologist in acute care hospitals in Western Australia for 16 years and completed Post Doctoral Research Fellowship in Speech Pathology (2010-2014). She has 74 peer-reviewed publications, with her work being cited over 160,000 times. Her Field-weighted citation index of 2.41 which is 141% above the international average.

Professor Godecke's primary research is in the area of aphasia – language difficulty after stroke. In particular, her work focuses on the very early post-stroke recovery phase (first month following stroke). Her PhD was the first Randomised Clinical Trial (RCT) in Australia to investigate the effects of very early aphasia intervention. The positive effects of very early aphasia therapy, seen in her PhD and international clinical trials, has been confirmed in Australia's Stroke Clinical Guidelines and best practice statements internationally. She was the recipient of 2023 Researcher of the year North Metropolitan Health Service (WA); 2022 Edith Cowan University's 'Outstanding Research Mentor' award recognising her successful clinical research mentoring program and 2017 Stroke Foundation / Stroke Society of Australasia "National Stroke Care Champion" for 'Inspirational professionals and researchers working tirelessly to improve the lives of survivors'.

Clinical Professor David Blacker AM
Medical Director, Perron Institute, Clinical Neurologist
Clinical Professor David Blacker AM, received recognition as a Member of the Order of Australia (AM) in the King's Birthday 2023 Honours for services to medicine and neurological research. After many years seeing thousands of patients with stroke, Dr Blacker retired from clinical work in 2024. He remains Medical Director of the Perron Institute and has shifted focus to working with Parkinson's disease. He is eager to assist his long-term colleagues, Professors Hankey and Godecke, to establish the Perron Institute's Stroke Research Centre as a world leader. David's expertise includes building clinical teams who specialise in the diagnosis and management of stroke and working alongside nursing and allied health staff to drive cutting-edge stroke research in clinical practice.

Dr Adam Edwards
Infant Brain Injury
Dr Adam Edwards currently holds a Senior Postdoctoral Fellowship and is the lead of Discovery and Translational Science stream within the Perron Institute's Stroke Research Centre. Dr Edwards completed his PhD at the Perron Institute in 2019 under the guidance of Professor Bruno Meloni and Clinical Professor Neville Knuckey, where he developed preclinical models to investigate the role of a new drug therapy to prevent a form of brain injury that affects newborn infants. Dr Edwards is the current Regulatory Affairs and Neonatal Scientific Advisor for Argenica Therapeutics and has completed extensive training in global regulatory affairs for pharmaceuticals and medical devices. Dr Edwards is an inaugural member of the United States Food and Drug Administration's, Critical Path Institute, International Neonatal Consortium to accelerate drug development in neonates.

Dr Edwards' primary research is in neuroprotection which focuses on the development of new drugs and diagnostics to reduce the impact of brain injury that affects infants and adults. Dr Edwards has built an extensive preclinical drug development pipeline with the goal of rapidly developing drug therapies and diagnostics to treat neurological disorders with significant unmet need. As an academic researcher, Dr Edwards has secured $8 million in competitive grant funding and serves as the Specialist Editor in Stroke for Frontiers in Neurology.

Dr Jan Ho
MBBS, FRACP
Dr Jan Ho, MBBS, FRACP is a neurologist and the Stroke Research Fellow at the Perron Institute. He is a medical graduate from the University of Adelaide and moved to Western Australia to embark on his physician training. He completed neurology training at the Sir Charles Gairdner Hospital and his training journey took him to Austin Hospital, Melbourne, completing a Stroke fellowship with Prof Vincent Thijs. With his keenness for research, Dr Ho is currently undertaking a PhD with Professors Vincent This and Graeme Hankey and A/Prof Heath Pardoe.

With a deep passion for incorporating new techniques and technology into research, he is building new ways to use machine learning and artificial intelligence in building models to incorporate features of perivascular fat in analysing carotid atherosclerosis to identify plaques that are at greatest risk of causing stroke. His research will increase the accuracy of predicting who will have a stroke and help reduce stroke risk. Dr Ho will be at the forefront of the Perron Institute's drive to recruit early career researchers who have the highest intellectual curiosity and drive, to improve patient outcomes.

Dr Cynthia Xintian Ge
AI and Genomic Research
Dr Cynthia Xintian Ge holds a bachelor's degree in Pharmaceutical Engineering (2007) and a Ph.D. in Plant Biology (2015). With years of experience in bioinformatics and machine learning, Dr Ge is at the forefront of integrating advanced AI frameworks into medical research. In recent years, Dr Ge has focused on harnessing deep learning technologies to predict and understand human diseases. Her groundbreaking work has led to the development of high-accuracy AI models for predicting outcomes in Alzheimer's disease, diabetic kidney disease, heart failure, heart attack, and pancreatic and prostate cancer. By uncovering the underlying genetic interactions driving these diseases, Dr Ge's research aims to transform healthcare through early diagnosis, precision prediction, personalised gene therapy, and optimised rehabilitation in stroke research. Her vision aligns with the future of AI, where advancements in artificial general intelligence (AGI) will improve prevention, diagnosis, and treatment of stroke with unprecedented precision and care.

Stroke is one of Australia's leading causes of death

Of all the medical conditions that confront us, stroke is one that is perhaps less understood by the wider community.

The importance of this research is best seen in the context of the significant impact of stroke as a disease in our community.

In 2021 there were 8,500* deaths in Australia directly attributed to stroke and 29,000* new stroke victims.

The impact of stroke on our health system is highlighted by the fact that there are over 41,000* hospitalisations each year directly attributed to stroke.

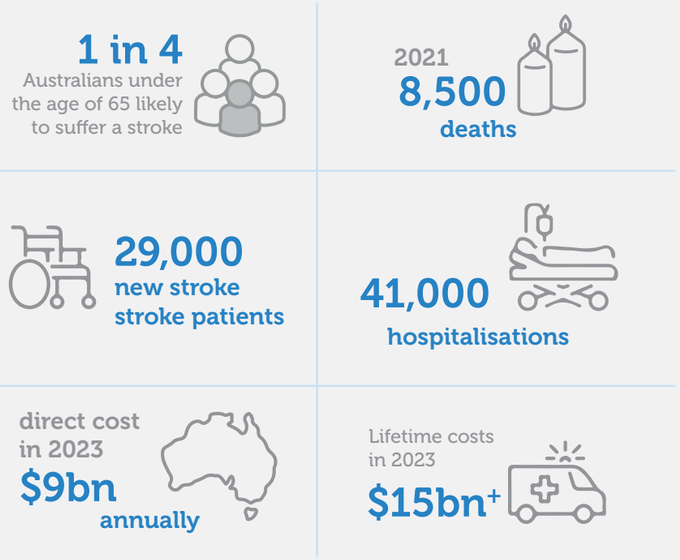
*Australian Institute of Health and Welfare

The impact of stroke in our community is growing, with 1 in 4 Australians under the age of 65* likely to suffer a stroke.

In 2023, the direct cost of stroke in Australia was $9bn*, however the lifetime costs associated with strokes that occurred in 2023 exceeds $15bn*.

This figure puts a financial scale on the impact of stroke but does nothing to highlight the physical and emotional impact that a stroke can have on the stroke patient and their family, work and support networks.

*Stroke Foundation



Creating an engine room of neurological research for stroke prevention and treatment

The challenge we face is evidenced by the scale of the rate of stroke across Australia. Under the leadership of Professor Hankey, the Perron Institute Stroke Research Centre will enable the specialists and resources to meet this challenge head on.

Perron Institute Stroke Research Centre has four main objectives:

1. Medical research into the identification of stroke susceptibility and preventative treatments.
2. Advances in medical procedures to treat Stroke emergency – both physically and remotely.
3. Immediate after-care treatment to minimise the impact of brain damage following a stroke.
4. Rehabilitation and therapies to improve post stroke quality of life outcomes.

The Stroke Research Centre will build on the significant success already achieved by researchers at the Perron Institute, however, will be accelerated with the added resources and collaboration now in place with The University of Western Australia.

The foundation of this collaboration was made possible with a matched contribution from UWA, the Perron Institute and generous philanthropists.

The Perron Institute is a leader in delivering research outcomes to the international community.

Research translation is part of our DNA.

Translating results from the lab into community benefit, through discoveries and treatments is what we set out to achieve – safely and as quickly as possible.

Building on world leading research success

To date, our primary research focus has been to develop neuroprotective treatments to minimise brain damage after a stroke.

The discovery by the Perron Institute research team led by Clinical Professor Neville Knuckey and Professor Bruno Meloni, that peptides rich in the amino acid arginine are highly neuroprotective and can limit brain damage after a stroke has led to further work to develop a lead peptide known as ARG-007 as a potential therapy to reduce brain damage immediately following a stroke.

The UWA and Perron Institute ASX listed spin-out company Argenica Therapeutics was established in 2021 to progress ARG-007 to clinical trials and expedite research development.

This new therapy could potentially extend the therapeutic time window for medical interventions to repair a rupture or remove a blood clot in the brain which caused the stroke, ultimately preserving brain tissue and improving patient outcomes.

In 2022, a Phase 1 trial for ARG-007 commenced, and in early 2024, a Phase 2 trial started in Melbourne, a significant step in the development of this important potential research discovery.

Focus for the Stroke Research Centre

An ambitious program of research planned will advance and build on the success already achieved at the Perron Institute. Our current stroke research focus has expanded to include:

1. Genetic predictors of stroke and cardiovascular disease in the Western Australian population.
2. Development of imaging carotid arteries for stroke risk prevention.
3. Aneurysm re-rupture prediction using machine learning.
4. Cerebral Amyloid Angiopathy studies.
5. Novel stroke prevention intervention RCT for evaluating digital innovations.
6. Leveraging mHealth to enhance stroke prevention through screening and lifestyle intervention.
7. Stroke prediction algorithm for first-ever and recurrent strokes.

Research is an investment in our future

The foundation contribution from UWA, the Perron Institute and major donors to develop a Chair in Stroke Research has opened a generational opportunity for Perron Institute to create a Stroke Research Centre in Western Australia. The Centre will not only advance globally relevant research, it will also concentrate on issues in stroke treatment specific to Western Australia due to its vast distances.

Our goal is to tackle new and difficult neurological conditions, and to build on the remarkable discoveries being made at the Perron Institute that are already improving the survival rate and the quality of life for survivors of a stroke. Attracting, nurturing, and retaining a highly skilled team of world standard quality, needs the backing of community and generous philanthropic support.

Perron Institute invites you to be a part of this vital initiative

Private and Corporate support is sought by the Perron Institute to build a world class Centre of Excellence in Stroke Research, directed by Professor Graeme Hankey. The lifetime of research, clinical experience and global networks Professor Hankey has amassed over his career is a priceless asset to be maximised for the benefit of Western Australia.

We are building on this legacy by attracting Researchers at the very highest levels to train under Professor Hankey, growing a world class nucleus of stroke professionals. We seek your support to build on the legacy of the Perron Institute for the benefit of all Australians, and ultimately, the world.

Your support can be made via:

Corporate Support:

The Perron Institute is seeking corporate partnerships to support this important work and to enable the training of the next generation of outstanding Stroke professionals. We invite you to join us in our endeavour to create a world-leading Stroke Research Centre. Options include:

1. Principle Benefactor naming rights for the Stroke Research Centre.
2. Funding of individual senior research positions.
3. Sponsorship of PhD students.
4. Untied donations.

For maximum impact the Perron Institute is seeking support for individual positions, either in full or in part, for a 5-year period. This enables potential Researchers security of tenure, and allows long-term research projects time to come to fruition.

Private Support:

As above, the Perron Institute is seeking support for individual positions either in full or in part.
Any donations over $2 are fully tax deductible.

For further details, to arrange a meeting to discuss options, or to meet our Stroke professionals please contact: Susie Jackson, 0417 848 829, susie.jackson@perron.uwa.edu.au

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