



ANNUAL REPORT

**2024**



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# Chair's Report



**I am pleased to present the Annual Report of the Centre for Healthy Brain Ageing (CHeBA) in my inaugural year as Advisory Committee Chair.**

My congratulations to CHeBA's Co-Directors, Professors Henry Brodaty and Perminder Sachdev, for their substantial contributions to dementia research and their unwavering commitment to healthier brain ageing in Australia and overseas. My thanks to Committee members for their support and suggestions: Deputy Chair John Gray, Barbara Cail AO, Joseph D'Agostino, Professor Kimberlie Dean, David Grotorex AO, Anita Jacoby AM, Peter Joseph AM, Dagmar Schmidmaier AM and Peter Schofield AO.

My involvement with and support of CHeBA spans many years and I have been privileged to be Patron of the Maintain Your Brain trial since 2018. I am an enthusiastic supporter of the Centre's research focus and its mission to make a difference to the international landscape of dementia.

In the years ahead, Alzheimer's disease and other dementias will become one of the biggest burdens on Australia's health and aged care systems. Dementia is the single greatest disability in older Australians and the second leading cause of death of all Australians. Provisional data suggest it will soon be the leading cause of death. Dementia is the main cause of death for Australian women and has been since 2016. With prevalence continuing to rise, and an anticipated tripling of numbers of people living with dementia by the middle of the century, the work that CHeBA is undertaking to delay the onset of dementia and target prevention efforts is vitally important.

An undeniable strength of CHeBA is its multi-disciplinary research approach, looking at age-related brain diseases across the spectrum of epidemiology, neuroimaging, genomics and epigenomics, proteomics, metabolomics and other innovative means. The intricacies of running such a multi-disciplinary centre are understood by the Advisory Committee, and as advancements in brain research occur, we believe CHeBA is perfectly positioned to take on the challenge.

I consider the brain to be the last great medical frontier. Although the challenges that dementia brings to society have a significant impact on individuals, families and communities, over the last decade there have been remarkable developments in neuroscience, such as advances in blood biomarkers for Alzheimer's disease which offer great hope for the future.

A handwritten signature in blue ink that reads "Ita Buttrose". Below the signature is a horizontal line.

Ita Buttrose AC OBE  
Chair



# Co-Directors' Report

**This year, we continued to strive toward ensuring CHeBA is a world-leader in brain ageing research. With the consistent goal of having a significant international impact on the societal burden caused by dementia, our team continued to advance and enhance its research, particularly with regards to prevention, early detection and treatment interventions.**

In 2024 we launched a first-ever national study investigating the societal and environmental factors that lay the path for health issues, including dementia, commenced new research on the brain microbiome, and saw a substantial increase in recruitment of study participants. We also brought together nearly 200 participants from across our longitudinal studies to showcase the impact of their 15 year involvement in research at a special Your Brain. Your Life event.

We were privileged to be honoured with two major awards this year, with Henry receiving a Lifetime Achievement Award at the Australian Dementia Research Forum, and Perminder acquiring the prestigious Lishman Oration Award. Both awards celebrated our life-long commitment to improving mental health and brain health globally, and a vision to transform care, support, public policy and research in Australia and internationally.

We are pleased to note that our research discoveries continue to be published in prestigious journals - indicative of our success and fundamental for the dissemination of our outcomes across the international research community.

Community engagement is a priority for us, with many of our researchers finding time to present to the public to raise awareness. Our resident social health expert, Dr Suraj Samtani, spoke at the series of Anglicare 'We Matter' forums, covering the vital role of social interactions in promoting longer, healthier lives.

We also acknowledge the many media opportunities coordinated by our head of communications Heidi Douglass and give credit to Dr Matthew Lennon whose research on blood pressure and prevention strategies made international headlines.

We also congratulate CHeBA's Centre Manager, Dr Sophia Dean, who received a UNSW Medicine & Health Values in Action Excellence Award.

We are extremely appreciative of the generosity of so many that provide us with the means to bring our community together. We extend our thanks to Morgans' Board Director Lisa Shand for an inspiring speech at our exclusive donor event and launch of Wipeout Dementia in February. This year, the Wipeout Dementia community demonstrated their enduring commitment to funding research. We are enthusiastically looking ahead to Wipeout Dementia's 10-year anniversary next year. Our thanks also go to Ambassador Keri Kitay through the launch of her book *The Long Goodbye* and Liane Fletcher through the delivery of *A Dementia Conversation*, and to Ambassadors PJ Lane and Edward Caser, who energetically continue to fundraise and advocate for CHeBA.

We remain acutely aware that research is a collaborative effort. The achievements throughout 2024 would not have been possible without our incredibly dedicated team who turn up every day to make a difference to the future of healthy brain ageing. We acknowledge and congratulate each and every one of our colleagues and collaborators for their impact.

We also gratefully acknowledge the contributions of our many supporters, fundraisers, volunteers and our research participants, who provide the impetus and inspiration to keep striving toward our goals.

We are certain that the success of 2024 will continue in the year ahead, and that our research outcomes will continue to provide hope to people living with dementia, and their families.

Sincerely,



Professor Henry Brodaty AO



Professor Perminder Sachdev AM

# About the Centre

The Centre for Healthy Brain Ageing (CHeBA) is a premier research institution within the Discipline of Psychiatry & Mental Health and UNSW Medicine & Health. It is headed by internationally acclaimed leaders in the field of brain ageing, Scientia Professor Henry Brodaty AO and Scientia Professor Perminder Sachdev AM.

## Our Vision

Our vision is to achieve, through research, healthier brain ageing and better clinical care of age-related brain diseases.

## Our Mission

Our mission is to conduct innovative research and provide the empirical basis to prevent and treat dementia and achieve healthy brain ageing for all Australians.

## Our Aims

The Centre aims to conduct multidisciplinary research into ageing in health and disease and be involved in knowledge dissemination and translational research. The Centre focuses in particular on the following aims:

- Determine the pathways of normal and abnormal brain ageing in the community.
- Identify risk factors for and protective factors against abnormal brain ageing.
- Develop strategies for prevention of cognitive decline with ageing.
- Promote global collaborations to develop knowledge and further research into brain ageing.
- Understand the behavioural as well as the cognitive and functional manifestations of brain ageing.
- Translate relevant research findings into practice.
- Determine the prevalence of age-related neurodegenerative and cerebrovascular disorders.
- Identify biomarkers for brain disorders.
- Investigate the pathophysiology of brain diseases so that novel treatments can be discovered.
- Conduct treatment trials of new drugs and non-pharmacological strategies.
- Conduct educational activities for the workforce involved in the care of the elderly population, especially those with dementia.
- Design models of assessment and care using the latest research evidence.
- Develop research programs in special populations, e.g., young-onset dementia, dementia in intellectual disability.
- Improving diagnosis, post-diagnostic care and long-term community and residential care.
- Improving quality of practice for GPs, memory clinics and hospitals through research and through establishing the Australian Dementia Network and Registry.





## Our Functions & Goals



Build capacity and research capability for age-related research, in particular brain research.



Support the development and sharing of infrastructure for research across different Centres, Schools and Faculties of UNSW Sydney.



Build relationships between the Centre and other similar centres in Australia and overseas.



Build relationships between the Centre and the industry involved in the treatment and care of the elderly.

## This will be achieved through:



Strengthened collaborative research programs among staff and partners locally, nationally and internationally, supported by increased peer-reviewed grants and commissioned research.



Development of specialised research facilities and laboratories that place the Centre at the forefront of brain ageing research nationally and internationally, to achieve the highest quality research and advance the Centre's attractiveness to prospective researchers of excellence.



Extensive linkages with practitioners and policy makers at local, state and national levels to improve relevance and impact of research.



Increased numbers and quality of skilled researchers undertaking research and evaluation activities in this field.



Enhancing numbers of postgraduate research students.



Exercising enhanced influence via dissemination and transfer of research findings through publications, presentations and forums with a focus on academic, practitioner and policy maker audiences.

# Advisory Committee



**Ita Buttrose AC OBE  
(Chair)**

Immediate Past Chair, Australian Broadcasting Corporation (ABC), 2013 Australian of the Year and first female Editor-in Chief of the Sydney Daily and Sunday Telegraph



**Barbara Cail AO**

Immediate Past Executive Chair, Rala Information Services, Founding President of Chief Executive Women and Governor of The Smith Family



**David Greatorex AO**

Past Chair of SecureNet, Past Chair of the State Bank of NSW, Managing Director of Capita and Chair and Managing Director of IBM NZ. Former Adjunct Professor at Wollongong and Macquarie Universities



**Anita Jacoby AM**

Chair, ABC Advisory Council, media executive, author and one of Australia's most awarded television producers, and leading advocate for women in media





### **Joseph D'Agostino**

Director, D'Agostino Solicitors, Property Law and Commercial Litigation Solicitor of the Supreme Court of NSW and High Court Australia



### **Professor Kimberlie Dean**

Head, UNSW Sydney Discipline of Psychiatry and Mental Health



### **John Gray**

Senior Partner in the Corporate and Commercial team at Hall and Wilcox, specialising in Technology and Intellectual Property



### **Peter Joseph AM**

Chairman, Black Dog Institute, The Ethics Centre and Director of Tonic Health Media. Former Chairman of St Vincents and Mater Health Sydney



### **Dr Dagmar Schmidmaier AM**

Publishing Specialist with The Book Adviser, former CEO and State Librarian of the State Library of NSW and former Chair of the War Widows Guild of Australia



### **Professor Peter Schofield AO**

Honorary Professor, UNSW Sydney and NeuRA (Neuroscience Research Australia), former President of the Australasian Neuroscience Society and Interim Director of the NHMRC National Institute for Dementia Research





# 2024 Centre Highlights

## Funding success to further develop the global epidemiology of dementia

This year, CHeBA was awarded a significant grant from the National Institutes of Health, USA, to allow expansion of our international research collaboration within the COSMIC consortia. The US\$7,270,286 grant will be used specifically to study novel risk and resilience factors such as the built and economic environments, air pollution, sleep, nutrition, social health and frailty.

CHeBA is a world leader in bringing together multiple studies from around the world to further develop the epidemiology of dementia, deal with the global inequity in such research, and expedite outcomes for dementia on the international stage. The best hope we have that will reduce its incidence and/or delay its onset is through intervention on modifiable risk factors. COSMIC is a global effort toward this goal.

Over a five-year period, the incidence of Mild Cognitive Impairment and dementia will be documented in diverse regions and risk models for dementia in specific populations developed. The team will also map the risk and protective factors for dementia and estimate their burden around the world, with an emphasis on under-represented populations so that population-specific risk indices for dementia can be developed to aid the global campaign to prevent dementia.

The grant funding will also support the examination of cerebrovascular disease and vascular risk factors by harmonising neuroimaging biomarkers, and study genetic markers in non-European populations, as well as investigate the potential of plasma biomarkers for Alzheimer's disease in diverse populations.

It will also support further development of the Dementias Platform Australia (DPAU) in partnership with the DPUK.

Professor Perminder Sachdev said "CHeBA is perfectly positioned to achieve major goals set by the World Health Assembly's Global Action Plan on the public health response to dementia, including evidence-based practice for dementia risk reduction, early and appropriate diagnosis, and global equity in research."

*The collaborative team on this grant includes the Davos Alzheimer's Collaborative (DAC), Dementias Platform UK (DPUK), Alzheimer's Disease Data Initiative (ADDI), Global Brain Health Institute (GBHI), Institute of Health Metrics and Evaluation (IHME).*

*National Institute On Aging, National Institutes of Health Award Number R01AG057531*









## Optimising social health to defeat dementia

A first-ever national study to be conducted over five years will investigate the societal and environmental factors that lay the path for health issues including dementia, with a focus on Australia.

The new research, led by Professors Permynder Sachdev and Henry Brodaty, has a vision to assess and address social determinants of health in ageing and dementia to improve health outcomes and quality of life in the older population, and deal with inequity in brain health – and to prevent future cases of dementia.

Social determinants of health are the non-medical factors that influence our health outcomes, and their influence on healthy ageing is increasingly recognised. They are the conditions in the environments in which we are all born, live, learn and work, and the wider set of forces and systems shaping the conditions of our daily lives. These determinants of health are shaped by social policies, economics and politics, and contribute to inequities and health disparities.

By delving into the determinants of healthy ageing, we can identify modifiable factors that may reduce dementia risk. Armed with this knowledge, tailored interventions and preventative measures can be designed to target specific risk factors and promote cognitive well-being as individuals age.

Project leader Associate Professor Simone Reppermund says that the new project “will allow us to identify whether certain individuals or communities are at higher risk of developing dementia as a result of societal factors such as socioeconomic position and access to health and education.”

Social health expert and researcher on the project Dr Suraj Samtani said that their social determinants index will also leverage AI technology to enable the detection of those at risk of developing dementia.

Under the funding, CHeBA will conduct a systematic review of social determinants for dementia and ageing, develop interventions for loneliness and social isolation in older people, and create a data linkage project of the social determinants of dementia in Australia through the National Integrated Health Services Information (NIHSI).

The researchers will also produce policy papers to influence health systems in Australia to consider the societal factors that impact on dementia risk and specify steps to address these issues at multiple levels of society.

This research, proudly supported by the Kennards Hire Foundation, will go beyond identification and be solution focused, providing novel interventions that can be scaled up for the ageing Australian population.

*CHeBA’s research on the connection between social and cognitive health has been referenced in a report by the US Surgeon-General and covered by the New York Times. The Centre’s researchers have contributed to understanding social health in dementia by clarifying terms and providing a framework.*



Professor Henry Brodaty AO, Graeme Samuel AC

*"It's been an incredible journey and one which continues to excite me."*  
**Professor Henry Brodaty AO**

## Professor Henry Brodaty honoured with Lifetime Achievement Award

At the 2024 Australian Dementia Research Forum, Professor Henry Brodaty was acknowledged for his lifetime service to dementia.

In 1982, inspired by his own personal experience and what was happening in USA and UK, Henry Brodaty led a group that established the Alzheimer's Disease and Related Disorders Society or ADARDS, NSW. Similar organisations sprang up across other states, and in 1984 they formed ADARDS Australia, later rebranded as Alzheimer's Australia and now as Dementia Australia.

Henry and his colleagues triggered the beginning of a movement to transform care, support, public policy and research in Australia and internationally. This worldwide movement we know as Alzheimer's Disease International, which now has 120 national associations as members.

Gradually Henry moved into research and clinical work and later into policy, until becoming a full time psychogeriatrician in 1990. Over the last 30 years he has continued as a clinician, policy advisor and strong advocate for people living with dementia and their carers.

"It's been an incredible journey and one which continues to excite me," he says.

At the Australian Dementia Research Forum Henry thanked his nominators and the committee for this prestigious award and, importantly, acknowledges his many colleagues and his wife Karol for giving him the space to contribute.

*Henry has published over 800 papers and book chapters, and his achievements have been recognised by becoming an officer of the Order of Australia in 2000. In June 2016, he was recipient of the International Ryman Prize for the world's best development, advancement or achievement that enhances quality of life for older people. In 2015 he was elected to the Australian Academy of Health and Medical Sciences.*





Dr Richard Kanaan, Chair of the Congress, presenting the award to Professor Perminder Sachdev AM

*"Professor Lishman inspired my entry into Neuropsychiatry which made it a special honour to receive this Award. I am grateful to my colleagues and students who are a continual source of inspiration."*  
**Professor Perminder Sachdev AM**

## Professor Perminder Sachdev honoured with Lishman Oration Award

At the 2024 International Congress on Neuropsychiatry and in recognition of significant contributions to neuropsychiatry internationally, Professor Sachdev was awarded the prestigious Lishman Oration Award. The Congress was hosted by the RANZCP.

This recognition is well deserved and celebrates Perminder's lifelong commitment to improving mental health and brain health globally.

*(L-R) Professor Anthony David, Professor of Neuropsychiatry at UCL, London (current President), Professor Valsa Eapen, UNSW (President -elect), Professor Perminder Sachdev and Dr Richard Kanaan, Chair of the Congress.*





# Our Groups



**Epidemiology**



**Genomics & Epigenomics**



**Neuroimaging**



**Neuropsychiatry**



**Neuropsychology**



**Molecular Biomarkers**





Professor Henry Brodaty AO & Professor Perminder Sachdev AM, Group Leaders



## Epidemiology

**The Epidemiology Group prioritises studying the patterns, causes, risks, protective factors and effects of neurocognitive disorders, in particular dementia, in older populations in Australia and internationally.**

The group analyses longitudinal cohorts from CHeBA's own studies – the Sydney Memory and Ageing Study, the Older Australian Twins Study and the Sydney Centenarian Study – with the original Memory and Ageing Study continuing to provide rich data allowing researchers to pursue investigation of risk factors, biomarkers and predictors of cognitive decline. CHeBA is a world leader in bringing together multiple studies from around the world to further develop the epidemiology of dementia, deal with the global inequity in such research and expedite outcomes for dementia on an international level. As part of that, the Group analyses data from international studies grouped into consortia, including those led by CHeBA: COSMIC, STROKOG and International Centenarian Consortium for Dementia (ICC-Dementia). This year we developed the Global CADASIL Consortium (GCC) and, in conjunction with the John Hunter Hospital, delivered an informative webinar highlighting the latest evidence and direction in CADASIL research. An important aspect of this Group's work is genetic epidemiology, which uses various approaches including genome-wide association studies and Mendelian randomisation methods to examine risk factors for dementia and other neurocognitive disorders. The Epidemiology Group also has significant involvement in other international consortia, including IGEMS, ENIGMA, CHARGE, EADB and BRIDGET. The Epidemiology Group provides a strong foundation for CHeBA to achieve major goals set by the World Health Assembly's Global Action Plan on the public health response to dementia.

**Group Leaders:** Professor Perminder Sachdev, Professor Henry Brodaty

**Staff:** Dr Nicole Kochan, Dr Karen Mather, Dr John Crawford, Dr Anbupalam Thalamuthu, Dr Darren Lipnicki, Dr Vibeke Catts, Dr Suraj Samtani, Dr Katya Numbers, Jessica Lo, Dr Adam Bentvelzen, Dr Danit Saks, Dr Ashleigh Vella, Fleur Harrison

## Group highlights

As part of NIH funding for COSMIC, collaborating centres were established in the USA, France, Peru, India, UK and Sweden. Six papers were published with data from COSMIC

STROKOG expanded to include cohorts from Norway, Nigeria and the UK, with Study Coordinator Jessica Lo presenting data at the International Stroke Update, South Korea

Ongoing recruitment for the Memory and Ageing Study 2, with sub-studies established on heart-brain connection in ageing, cognition and falls, and retinal biomarkers of ageing (collaborations with Victor Chang Cardiac Research Institute, St Vincent's Hospital and UNSW)

Cohort study established to examine CADASIL as a model for vascular cognitive impairment due to small vessel disease (AusCADASIL), with recruitment across several Australian cities





Arnav Bhattacharya, Dr Annabel Matison, Sri Chandana Kanchibhotla, Fatemeh Amjadimoheb, Dr Anbupalam Thalamuthu, Dr Karen Mather, Dr Sumangali Gobhidharan

## Genomics & Epigenomics

**We aim to identify and better understand the genomic, epigenomic and transcriptomic factors associated with human ageing and longevity.**

We examine these questions using data from CHeBA studies including the Sydney Memory and Ageing Study, the Older Australian Twins Study, the Sydney Centenarian Study and the Brain Ageing Study. We have collected whole genome sequencing, genotyping, epigenetic and gene expression data for many of our study participants. Our group has collaborations with both national and international research groups and consortia. In addition, we are using data from biobanks, such as the UK Biobank, and other accessible data sources. The findings of this work have facilitated the identification of novel genes and pathways that contribute to human traits, leading to new insights into the underlying biology. This year, two of our students completed their PhDs. Dr Annabel Matison's thesis examined diet, heritability

and depression. Working with national and international collaborators, Dr Matison published four peer-reviewed papers and shared her work at conferences and invited talks. Dr Jessica Lazarus looked at the role of genetic factors and epigenetic mechanisms in human longevity. During her candidature Dr Lazarus published one article and presented her work at national and international forums.

**Group Leader:** Dr Karen Mather

**Staff:** Dr Anbupalam Thalamuthu, Dr Sumangali Gobhidharan, Sri Chandana Kanchibhotla

**Students:** Dr Jessica Lazarus (PhD completed), Dr Annabel Matison (PhD completed), Abdulsalam Toyin Ademola (PhD student), Fatemeh Amjadimoheb (PhD student), Dr Adith Mohan (PhD student), Arnav Bhattacharya (PhD student), Bridget McGuckian (Medicine ILP student)



## Link between low fruit and vegetable intake and depression shown in twin studies

Landmark research led by CHeBA Post Doctoral Fellow Dr Annabel Matison, using four major international studies of twins, suggests that eating more fruit and vegetables could help reduce depression.

Although the benefit of high fruit and vegetable intake has previously been reported, few studies have focused on adults aged 45+ - or specifically on twins - which provides a unique opportunity to address some of the limitations of previous observational studies.

Twin pairs share 50-100% of their genetic background and often the same family environment. The study's twin design helps control for factors such as socioeconomic status early in life, influencing the results.

The study assessed the associations between fruit and vegetable intake and depressive symptoms over 11 years, in 3,483 twins from Australia, Denmark, Sweden and the USA, with findings revealing that higher intakes of both fruit and vegetables were associated with lower symptoms of depression over time.

The study collected data from the IGEMS consortium, specifically, CHeBA's Older Australian Twins Study, Minnesota Twin Study of Adult Development and Aging, Middle Age Danish Twins Study and The Swedish Adoption/Twin Study of Aging.

## Group highlights

Medicine ILP student  
Bridget McGuckian completed a project on super cognitive agers and the epigenetic modification, DNA methylation

Seven papers were published using genetic data from CHeBA studies

The first COSMIC genetics study began, focusing on polygenic risk for dementia and longitudinal cognitive performance





## Neuroimaging

**The Neuroimaging Laboratory (NiL) is dedicated to advancing our understanding of brain ageing by contributing to the prediction, diagnosis, and treatment of age-related brain diseases through neuroimaging techniques.**

Our research focuses on computational neuroanatomy and MRI-based structural, functional and physiological imaging of the ageing brain, with a growing emphasis on cerebrovascular burden. Recent efforts include investigating blood-brain barrier permeability using dynamic contrast-enhanced MRI and cerebrovascular reactivity through CO<sub>2</sub> challenge studies. NiL is an interdisciplinary team of researchers and students from diverse backgrounds, including engineering, computer science, data science, psychology and medicine. We welcome enthusiastic students to join our research.

NiL actively integrates AI, particularly deep learning, into our research. In 2024, we continued developing normative modelling and applying it to our studies. This approach enables individualised brain assessments relative to a

reference model, representing a step toward personalised medicine. We have also taken on the challenge of harmonising data across Research Analysis Platforms (RAP) like UK Biobank, DPUK, and our own datasets (MAS, SCS, OATS) using AI-driven methods such as federated learning. This strategy ensures data privacy while enabling the secure pooling of data from multiple studies housed in different RAPs, facilitating breakthroughs in neurodegeneration and brain age modelling and enhancing our understanding of complex brain processes.

**Group Leader:** Associate Professor Wei Wen

**Staff:** Dr Jiyang Jiang, Dr Lei Fan

**Casual Staff:** Shizuka Hayashi, Mai Phuong Ho, Keshuo Lin, Nikita Keshena Husein

**Students:** Shizuka Hayashi, Keshuo Lin, Mai Phuong Ho, Nikita Keshena Husein, Chaoyue Guo

**Visiting Fellows:** Dr Satoshi Hosoki, Dr Jing Du

Dr Chao Dong was awarded her PhD in August 2024, and is now a Research Associate at Cambridge University.



Dr Jiyang Jiang, Shizuka Hayashi, Keshuo Lin, Nikita Keshena Husein, Mai Phuong Ho, Dr Lei Fan, Associate Professor Wei Wen





## High blood pressure's impact on white matter could be key to dementia prevention

This year, Dr Jing Du and Associate Professor Wei Wen led research that provides compelling evidence for clinical practice to direct efforts toward preventing white matter damage in individuals with hypertension, to protect against cognitive decline and dementia.

High blood pressure negatively impacts many aspects of health and is also known to affect both the grey and white matter in the brain as we age.

The study published in *Hypertension*, revealed that white matter is more susceptible to damage from raised blood pressure than grey matter.

The researchers looked at brain scans from nearly 40,000 people with varying levels of blood pressure, ranging from normal to high. They found that as blood pressure increased, both grey and white matter showed signs of ageing, with white matter appearing to age faster. This suggests that memory and thinking problems are more likely to occur as a result of high blood pressure's impact on white matter, rather than grey matter.

## Group highlights

Dr Jing Du and Dr Chao Dong both graduated and moved to postdoctoral roles, continuing neuroimaging research on brain ageing at international institutions

Dr Lei Fan joined as a Postdoctoral Fellow to spearhead AI-driven neuroimaging research, and two PhD candidates, Mai Phuong Ho and Nikita Keshena Husein joined the team

Baseline MRI data collection for the MetMemory project completed with over 200 scans and ongoing longitudinal follow-ups

New neuroimaging studies launched focusing on vascular contributions to cognitive impairment (VCI), CADASIL and MAS2 through national and international collaborations







## Neuropsychiatry

**The Neuropsychiatry Group is a collaborative group composed of staff from CHeBA and the Neuropsychiatric Institute (NPI) at the Prince of Wales Hospital, Sydney. The NPI is a tertiary referral unit that specialises in the diagnosis and treatment of cognitive and psychiatric disorders associated with medical and neurological illnesses.**

It is unique in Australia in bringing together expertise within Psychiatry, Neurology, Neuropsychology, Neurophysiology and Neurosurgery to bear upon complex diagnostic issues. The Neuropsychiatry Group is at the forefront of diagnostic research into neuropsychiatric disorders, in particular dementia, drug-induced movement disorders, Tourette syndrome, functional neurological disorders, and mental illness associated with epilepsy, and the use of brain stimulation for treatment. The group also provides important education services for clinicians and trainees. In 2024, the clinic for Functional Neurological Disorders (FND), the Mindgardens FND Clinic was fully operational under the leadership of Dr Adith Mohan.

Other developments included the appointment of Associate Professor Rebecca Koncz to the UNSW Chair of Intellectual Disability Mental Health, within the National Centre of Excellence in Intellectual Disability Health, while her association with CHeBA continues. Dr Matthew Lennon completed his PhD and was awarded a HETI Fellowship for training in Neuropsychiatry at the NPI, due to begin in February 2025. Dr Lennon was also awarded a grant by the Dementia Australia Research Foundation for a study entitled "Genetic and clinical mapping of future treatments for vascular cognitive impairment and dementia (VCID)".

**Group Leader:** Professor Perminder Sachdev

**Staff:** Dr Adith Mohan, Dr Nicole Kochan, Associate Professor Rebecca Koncz, Emily Sedlacek-Swift, Dr Michael Connors, Dr Matt Paradise, Dr Matthew Lennon

Opposite: Dr Nicole Kochan, Dr Adith Mohan, Professor Perminder Sachdev

## Group highlights

The Neuropsychiatry Group led the revision of the ADNeT Memory and Cognition Clinic Guidelines and the Australian map of Memory Clinics

The Mindgardens FND Clinic, under the leadership of Dr Adith Mohan, received the South Eastern Sydney Local Health District (SESLHD) CORE Award for Excellence in the Provision of Mental Health Services

Associate Professor Rebecca Koncz was appointed to the UNSW Chair of Intellectual Disability Mental Health, within the National Centre of Excellence in Intellectual Disability Health while continuing her affiliation with CHeBA

Postdoctoral Fellow Dr Matthew Lennon was awarded a grant from the Dementia Australia Research Foundation for a study on VCID







Dr Nicole Kochan, Dr Suraj Samtani, Zara Page, Dr Russell Chander,  
Dr Adam Bentvelzen, Dr Karen Croot, Dr Katya Numbers

## Neuropsychology

**The Neuropsychology Group investigates cognitive changes associated with age-related neurocognitive disorders and dementia, and cognition characteristics of healthy brain ageing. We place a strong emphasis on the development of sensitive and culturally fair methods for measuring cognitive decline and treatment response in intervention trials, that are accessible to everyone and have high accuracy.**

The Neuropsychology Group, led by Clinical Neuropsychologist and Senior Research Fellow Dr Nicole Kochan, has an overall objective of translating research findings into better outcomes for all individuals with neurocognitive disorders through the improvement of diagnostic practices, enabling early and equitable identification of disease, and timely implementation of best practice interventions.

In 2024, we commissioned a group of 31 international expert neuropsychologists and neurologists to develop a harmonised neuropsychological assessment with guidelines for assessing vascular cognitive impairment and dementia, the second most common form of dementia. We are proud to announce that the Delphi guidelines, when finalised, will be adopted internationally to facilitate a consistent, gold-standard approach to assessment of these disorders for clinicians and researchers. These accompany consensus neuropsychological criteria for the diagnosis of vascular cognitive impairment and dementia that were established in a parallel Delphi study.

Research led by PhD student Zara Page aims to identify the most suitable and culturally fair methods to identify early stages of dementia in a large sector of the Australian population from culturally and linguistically diverse backgrounds. Information from a newly developed online tool - 'Characterising Language Experience and Acculturation Questionnaire' and from comparison of computerised and traditional assessment tools will assist in selecting the most suitable cognitive assessments and provide more equitable opportunities for early diagnosis of cognitive impairment in this underserved population.

**Group Leader:** Dr Nicole Kochan

**Staff:** Dr Adam Bentvelzen, Dr John Crawford, Professor Perminder Sachdev, Dr Suraj Samtani, Dr Russell Chander, Dr Katya Numbers

**Honorary Associates:** Dr Karen Croot, Dr Ben Lam, Matilda Rossie

**Students:** Zara Page (PhD student), Madeleine Skinner (Masters student)

## Group highlights

Over 250 older Australians, born overseas and whose native language was not English, completed the newly-developed 'Characterising Language Experience and Acculturation Questionnaire' online, designed to elicit information about language use and cultural identification that may assist clinicians to select suitable cognitive assessments for individuals from culturally and linguistically diverse backgrounds

Findings from two Master's student projects highlighted the impact of computer anxiety and test anxiety on test performance of older adults undertaking computerized neuropsychological assessments

Development of automated neuropsychological normative tools such as the Automated Neuropsychological Norming Tool (ANNT) (submitted for publication) has expanded to improve efficiency and quality of neuropsychological data collected in other CHeBA studies of cognition such as the CADASIL study and Memory and Ageing Study 2





## Molecular Biomarkers

**The Molecular Biomarkers Group has a key focus on identifying biomarkers and understanding the various mechanisms of age-related neurodegenerative diseases, particularly vascular dementia – the second most common form of dementia. In 2024 the innovative Group members continued to include clinicians, biochemists and laboratory scientists, who utilise CHeBA's diverse clinical studies, blood samples, and state of the art mass spectrometry techniques and software. PhD candidates are important members of this Group and this year Xiaoxi Ma joined ongoing candidates Gurpreet Hansra and Devashree Vakil.**

Over the course of this year, the Group created an Australian-first study of patients diagnosed with CADASIL to examine the clinical features and investigate blood biomarkers for earlier diagnosis. Evaluation of CADASIL related mutations was undertaken by Dr Tessa Helman, using cell culture and animal models. Biomarkers of Vascular Dementia and Cognitive Impairment (VCID) were also evaluated which

led to VCID plasma samples being sourced from multiple international studies - with the bulk of the work being completed by post-doc Dr Tharusha Jayasena and PhD candidate Gurpreet Hansra.

This year we also measured short- and long-chain fatty acids in plasma samples from CHeBA's Memory and Ageing Study. This data is being analysed in relation to cognitive decline, dementia, depression and mortality, as part of an international consortium. The Group continues to pride itself on collaborations, and blood biomarkers for Alzheimer's disease have also been measured for the Memory and Ageing Study, through the University of Gothenburg.



Dr Sohail Kavar Siddiqui, Devashree Vakil, Jacqueline Ngo, Dr Saeed Shanehsazzadeh, Professor Perminder Sachdev, Dr Vibeke Catts, Xiaoxi Ma, Dr Anne Poljak, Gurpreet Hansra, Dr Danit Saks



*As a major highlight of a very productive year for the Molecular Biomarkers Group, Professor Perminder Sachdev AM received the Lishman Oration Award, recognising his major contributions to neuropsychiatry internationally.*

**Group Leader:** Dr Anne Poljak

**Staff:** Professor Perminder Sachdev, Dr Tharusha Jayasena, Dr Satoshi Hosoki, Dr Vibeke Catts, Dr Danit Saks, Dr Tessa Helman, Dr Saeed Shanehsazzadeh, Dr Sohail Kavar Siddiqui, Professor Haluk Ertan

**Student:** Gurpreet Hansra, Devashree Vakil, Xiaoxi Ma, Vanessa Reyes, Dr Gurjeet Kaur Virk, Dr Fatemeh Khorshidi, Dr Chulkyu Kim



## Group highlights

The AusCADASIL study commenced with 36 participants fully assessed in 2024, led by Dr Danit Saks, who also published a protocol paper on the study

Two significant review articles were published in *Nature Reviews Neurology* and *Cerebral Circulation - Cognition and Behaviour* on biomarkers for vascular dementia and cognitive impairment (VCID)

VCID plasma samples from international cohorts are being sourced, with assays set up to measure approximately 20 biomarker candidates

PhD candidates continue to play a pivotal role in the group's work, with ongoing research in blood biomarkers for Alzheimer's disease, and fatty acid analysis in collaboration with international consortia





# Clinical & Care

## Executive Summary

A significant component of our vision at CHeBA is impact on the improvement of diagnosis and post-diagnostic care of age-related brain disorders. We are also focused on providing insight for the improvement of long-term community and residential care. Central to this is the enhancement of the quality of practice for GPs, memory clinics and hospitals through research and through setting up the Australian Dementia Network memory clinics network and the Clinical Quality Registry, and the development of ADNeT Memory Clinic Guidelines.

## Upholding healthcare standards during hospitalisation for people with dementia

Research led by Professor of Nursing Lynn Chenoweth and published in the Journal of Alzheimer's Disease evaluated the impact of the Kitwood model, a person-centred intervention on the quality of healthcare and clinical outcomes for people living with dementia, following hospitalisation.

One in four people living with dementia are admitted to hospital in any year and these admissions can be an extremely challenging experience for both the individual and carers. Challenges include separation anxiety, lack of knowledge from healthcare providers about the individual's life story and psychosocial needs, and difficult expectations.

For nine months, 90 sub-acute hospital nursing, allied health and medical staff received person-centred education and were supported in delivering person-centred healthcare by senior nursing, allied health and medical staff champions.

Compared with a group of 78 persons living with dementia not receiving person-centred healthcare, from hospital admission to the week of discharge there was a significant reduction in incidence of delirium and accidents/ injuries, a significant reduction in psychotropic medicines and readmission rates, and an increase in discharge to the person's own home for 80 persons with dementia who received person-centred healthcare.

The favourable health service and clinical results arising from the study confirm the benefits of providing education and supporting clinical staff in person-centred care practices.



## ADNeT

**The ADNeT Registry is the first nationwide clinical quality registry for people diagnosed with either dementia or mild cognitive impairment.**

CHeBA Co-Director Professor Henry Brodaty along with CHeBA Senior Research Fellow, Dr Stephanie Ward, are honoured to act as Steering Committee co-chairs for this national, multi-institutional endeavour. Dr Ward also oversees clinician engagement and clinical application of the Registry in her role as Clinical Lead.

In 2024, the ADNeT Registry published its third national Annual Report. Highlights of this report included that the mean age of diagnosis for MCI and dementia in Australia is 76 and 79 years respectively, Alzheimer's Disease was the most common subtype, diagnosed in 74% of dementia cases, and that biomarkers are rarely used in Australian clinical practice. By the end of 2024, participant recruitment

has well exceeded 6,000 and over 100 clinical sites were either contributing data or in the process of onboarding. ADNeT Registry data has been used by participating clinical sites for the purposes of auditing and accreditation, for local research projects, whilst the Australian Institute of Health and Welfare's Dementia Data monitoring is collaborating with the ADNeT Registry on outcome measures for the National Dementia Action Plan. In the year ahead, the ADNeT Registry database is being expanded to be able to collect data on safety and outcomes of novel dementia treatments.



**Australian Dementia Network**  
REGISTRY. CLINICS. TRIALS.



Dr Stephanie Ward

## Supporting those caring for people living with dementia

**CHeBA's Australia-wide distribution of updated, evidence-informed resources to support those caring for people living with dementia has continued throughout 2024.**

We were previously funded by the Commonwealth Department of Health, Ageing and Aged Care to develop Guides for those helping people experiencing changed behaviours and psychological symptoms associated with dementia (BPSD)\*. BPSD Guides for clinicians and care partners providing formal and informal care are available online and in print. Summarised app versions are also available free for Apple and Android devices. Unsolicited feedback and ongoing interest indicate that the Guides, in their varied formats, are being widely used across Australia:

***"I can see this is a great tool to educate staff, build on practice, and guide our clinicians in supporting people living with dementia."***

Access to these BPSD resources and more information is available on the Clinical & Care section of the CHeBA website:

- <https://cheba.unsw.edu.au/clinicians-bpsd-guide-2023>
- <https://cheba.unsw.edu.au/clinicians-bpsd-field-guide-2023>
- <https://cheba.unsw.edu.au/guide-carers>



A Clinician's BPSD Guide on the App Store (apple.com)

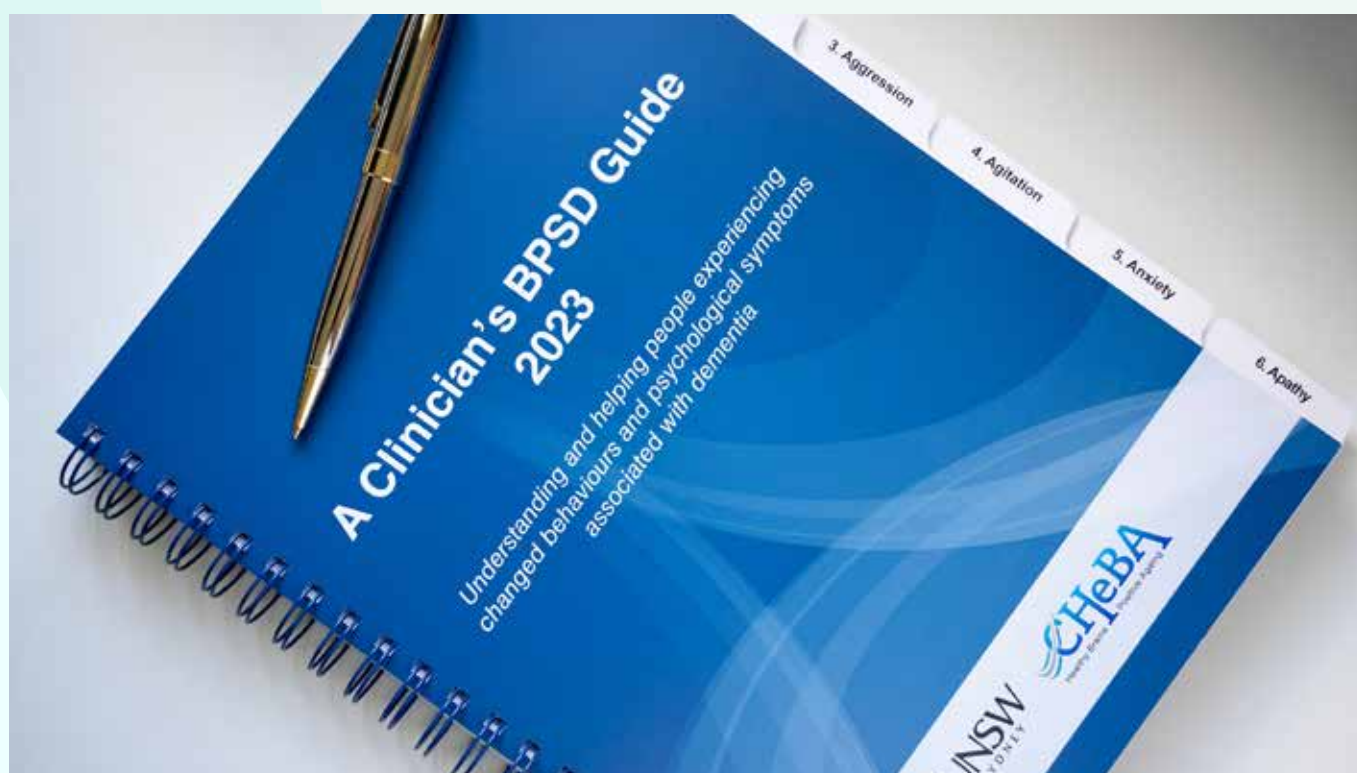
A Clinician's BPSD Guide - App on Google Play



CareForDementia on the App Store (apple.com)

CareForDementia - App on Google Play

*\*This terminology and abbreviation are used respectfully for communication between professionals supporting people living with dementia. For more information about consumer preferences on terminology, please consult the language guidelines developed by Dementia Australia.*



## Mindgardens FND Clinic

**The Mindgardens Functional Neurological Disorders (FND) Clinic has operated at the Neuropsychiatric Institute of Prince of Wales Hospital since August 2022. Led by CHeBA Research Fellow Dr Adith Mohan, it is the first public outpatient clinic of its kind in NSW and offers neuropsychiatric assessment and interdisciplinary treatment and support to patients with FND.**

In the Clinic's first two years, 227 referrals were received, with 105 patients accepted to the clinic and 80 currently on a waiting list. A baseline demographic and disability profiling study has been presented at several conferences and the manuscript is ready for submission. Aggregate outcome data have shown improvements across all assessed domains at the 3 and 6-month follow-up assessments, with interim analyses noting statistically significant improvements at both follow-up time points.

Dr Mohan also leads the Clinical Alliance for Research and Education in FND (CARE FND) consortium, which has a

focus on binational data-driven improvement in standards of FND care and capacity building in the health workforce. Key activities thus far include:

- Hosted two CARE FND Symposia with 200 attendees in November 2023, and 277 attendees in October 2024. Participants came from across Australia and New Zealand and provided overwhelmingly positive feedback;
- Completed and published first FND service mapping project for Australia and New Zealand (Connors et al, 2024; DOI/10.1016/j.jocn.2024.05.043);
- Ethics submission for multi-site data repository and harmonisation project.



Dr Adith Mohan, FND Clinic Head



## Highlights

Mindgardens FND Clinic awarded 2024 SESLHD CORE Award for Excellence in the Provision of Mental Health Services

The Clinic was among only five finalists in the Highest Quality Healthcare category in the 2024 NSW Premier's Awards, the peak award for outstanding work in the NSW public sector

Obtained continued Mindgardens seed-funding of \$50,000 and philanthropic donations of \$65,000 to secure another year of the clinic, totalling \$495,000 of funding over 2.5 years



### ***Future planning:***

- Provision of telehealth outreach aimed at capacity building in NSW health workforce across public, private and NGO sectors;
- Engaged in discussion with Ministry of Health for effective public sector services for FND in NSW;
- Cross-LHD partnership being established to facilitate stepped care for FND, leveraging telehealth technologies;
- Seeking funding for development of an FND treatment guide focussing on inpatient services and upskilling of clinical teams;
- FND/FCD collaboration underway with UNSW and an international group in the UK.





Dr Danit Saks, Professor Perminder Sachdev

# Consortia

## AusCADASIL

**CADASIL (Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy) is a rare monogenic condition which typically causes multiple strokes, complex migraines, mood changes and vascular dementia. CHeBA leads a multi-site study involving collaboration with hospitals and universities across Australia including other departments within UNSW.**

The AusCADASIL study (led by Professor Perminder Sachdev and coordinated by Dr Danit Saks) aims to investigate CADASIL and how it presents in an Australian context. The AusCADASIL protocol paper was published in May 2024 in *Cerebral Circulation-Cognition and Behaviour*. [DOI/10.1016/j.cccb.2024.100225](https://doi.org/10.1016/j.cccb.2024.100225)

AusCADASIL began assessments in April 2024. Since then, 52 participants and 15 controls have been screened, and 36 individuals have fully completed the assessments. The comprehensive assessment battery involves neuropsychological testing, brain MRI, blood collection, optometry and wellbeing questionnaires. AusCADASIL assessments are due to take place in Sydney, Newcastle

and Melbourne in 2025. Additional sites are also planned for Brisbane and Perth, all centrally coordinated by CHeBA.

To support the clinical CADASIL study, CHeBA staff and students have undertaken various research projects focused on improving mechanistic understanding of CADASIL. These include biomarkers of cerebral Small Vessel Disease including CADASIL (led by Dr Anne Poljak and Dr Tharusha Jayasena), research into the structure of the CADASIL mutation (led by Professor Haluk Ertan and Dr Khawar Siddiqui) and analysis of the MRI features of CADASIL (led by Dr Jiyang Jiang). CHeBA has also obtained collaborative access to a knock-in mouse model to study the behavioural features of CADASIL (led by Dr Tessa Helman).

**Staff:** Professor Perminder Sachdev, Dr Danit Saks, Dr Adam Bentvelzen, Dr Nicole Kochan, Dr Jiyang Jiang, Associate Professor Wei Wen, Dr Anne Poljak, Dr Tharusha Jayasena, Dr Khawar (Sohail) Siddiqui, Professor Haluk Ertan, Dr Tessa Helman, Dr Vibeke Catts, Dr Karen Mather, Dr Russell Chander, Dr Matthew Lennon, Associate Professor Claudia Hillenbrand

**Students:** Jacqueline Ngo, Gurpreet Hansra, Mai Ho



Dr Vibeke Catts, Dr Danit Saks, Dr Sohail Kavar Siddiqui, Professor Haluk Ertan, Dr Tharusha Jayasena, Dr Adam Bentvelzen, Gurpreet Hansra, Dr Karen Mather, Dr Tessa Helman, Dr Matthew Lennon, Dr Anne Poljak, Dr Russell Chander, Dr Nicole Kochan, Associate Professor Wei Wen, Professor Perminder Sachdev, Associate Professor Claudia Hillenbrand



## COSMIC

**Beginning in 2012, COSMIC (Cohort Studies of Memory in an International Consortium) combines data from population-based longitudinal cohort studies to identify common risk factors for dementia and cognitive decline. There are 60 official member studies, from 38 countries across six continents.**

Three new members joined in 2024:

1. Whitehall II Study (UK)
2. Transforming Cognitive Frailty into Later-life Self Sufficiency (AGELESS) (Malaysia)
3. Hubei Memory and Aging Cohort Study (China)

COSMIC has produced 30 publications to date. Six were published in 2024, including papers on cognitive decline after stroke (Jessica Lo) and decreased dementia risk with antihypertensive use (Dr Matthew Lennon) that received worldwide media attention.

There are 26 current projects, including eight that started in 2024:

4. Climate factors and dementia risk (Ding Ding, Fudan University)
5. Physical activity, traumatic brain injury, and cognitive decline (Benjamin Tari, University of Oxford)
6. Illiteracy, lack of formal education, and gender influence on dementia risk (Dae Jong Oh, Kangbuk Samsung Hospital)
7. Associations of cardiovascular-kidney-metabolic syndrome with cognitive decline and dementia (Xin Xu, Zhejiang University)
8. Association of type 2 diabetes and prediabetes with post-stroke cognitive decline (Jessica Lo, CHeBA)
9. Associations of olfactory function and snoring with cognition and dementia (Rui-Qi Ricky Shi, National Taiwan University)



Dr Darren Lipnicki, Study Coordinator

10. Education, occupational complexity, socioeconomic status and incident dementia (Dr Annabel Matison, CHeBA)
11. Clinical and sociodemographic pathways linking hearing loss and dementia (Dr Russell Chander, CHeBA)

AAIC 2024 Philadelphia was a successful conference for COSMIC. There were oral presentations on COSMIC projects by CHeBA researchers, on the incidence of all-cause dementia and Alzheimer's disease around the world (Dr Ashleigh Vella) and on the genetic epidemiology of dementia in under-represented ethnic communities (Dr Karen Mather), and we held an ancillary meeting of international COSMIC collaborators.

### Highlights:

- Six new publications
- Eight new projects started
- Presentations by CHeBA researchers at AAIC 2024

**Staff:** Professor Perminder Sachdev, Dr Darren Lipnicki, Dr John Crawford, Professor Henry Brodaty, Dr Suraj Samtani, Associate Professor Wei Wen, Dr Jiyang Jiang, Dr Nicole Kochan, Jessica Lo, Dr Vibeke Catts, Rory Chen, Dr Karen Mather, Dr Anbupalam Thalamuthu, Dr Ashleigh Vella, Dr Renecia Lowe

**Students:** Dr Matthew Lennon, Dr Annabel Matison, Nikita Keshena Husein, Keshuo Lin

## Treating high blood pressure to prevent Alzheimer's disease

Research led by Dr Matthew Lennon and emanating from the COSMIC consortium suggests that high blood pressure treatment should be part of Alzheimer's disease prevention strategies.

Hypertension is the most common risk factor for dementia, affecting over half of all people over the age of 65.

Published in *Neurology*, the research looked at data from 31,250 individuals across 14 nations, to investigate whether previous hypertension or antihypertensive use modifies Alzheimer's disease risk in those older than 60 years of age. "Previous trials and longitudinal studies have indicated that ongoing antihypertensive use in late life reduces dementia risk, but the specific impact on Alzheimer's disease and non-Alzheimer's disease risk remained unclear," said Dr Lennon.

The study found that those with untreated hypertension over the age of 60 had a 42% greater risk of developing Alzheimer's dementia compared to those with treated hypertension. However, if someone had a diagnosis of hypertension and was receiving treatment, the risk for Alzheimer's dementia was no different from those without hypertension.

The study also found that the effect of the antihypertensive medication did not significantly diminish in older participants, indicating that even as people enter their 80s there are still associations between antihypertensive use and reduced risk of Alzheimer's disease.



## Research suggests higher intake of fruit reduces development of depression

Globally, depression is a major public health concern. According to the World Health Organisation it is the largest contributor to non-fatal burden of disease, with more than 80% of this burden represented across low- and middle-income countries.

New research led by Postdoctoral Fellow Dr Annabel Matison has for the first time addressed the lack of research evidence that exists for adults 45 years and older in low- to middle-income countries.

Published in the *Journal of Affective Disorders* ([DOI/10.1038/s41598-024-79963-2](https://doi.org/10.1038/s41598-024-79963-2)), the study assessed 7,801 community-based adults without depression over a nine-year period and revealed a beneficial association between higher fruit intake and lower risk of depression.

Participants in the study came from multiple regions across six continents, and data was collected and harmonised from ten longitudinal studies, with all groups part of COSMIC.

*The findings demonstrate the need for a greater emphasis on diet in healthcare, with future research warranted that considers consumption of different types of fruit and vegetables using standardised measures and focusing on larger numbers of older adults.*





## CHeBA Consortia Collaborations

*CHeBA collaborates extensively both nationally and internationally. The breadth of our consortia research collaborations is clearly highlighted here for STROKOG and COSMIC.*

### COSMIC Consortia



### STROKOG Consortia



## STROKOG

**STROKOG is an international consortium of longitudinal studies investigating cognitive disorders following stroke, transient ischemic attack (TIA), or small vessel disease. Led by Professor Perminder Sachdev, it is the first global initiative to harmonise studies on post-stroke dementia.**

### Highlights:

#### 1. Growing membership

Three new studies officially joined STROKOG:

- Apathy and Outcome after Stroke, Cambridge University, UK;
- Imperial Post-stroke Aphasia Recovery Study, Imperial College London, UK;
- Risk Assessment of Cnm-Positive Streptococcus mutans in Stroke Survivors (RAMESSES), National Cerebral and Cardiovascular Center, Japan.

STROKOG now includes 42 member studies from 21 countries.

#### 2. High-impact publication and new projects

A new STROKOG publication, "Prevalence of poststroke anxiety and its associations with global cognitive impairment: An individual participant data analysis," was published in *Journal of Affective Disorders*. Led by collaborators at Lille University, France, Ruthmann et al. analysed baseline data from three STROKOG cohorts and found that post-stroke anxiety is common, especially in females, and is associated with depression and cognitive impairment. [DOI/10.1016/j.jad.2024.10.099](https://doi.org/10.1016/j.jad.2024.10.099)

Six STROKOG projects are currently underway, including two launched in 2024:

- Lena Oestreich (University of Queensland): Investigating how structural and functional brain disconnections relate to psychiatric complications in stroke survivors using "disconnectomes" to map how lesions disrupt brain connectivity;
- Jess Lo (CHeBA): Developing a user-friendly dementia risk model tailored for stroke populations, with contributions from 12 STROKOG studies.



Jessica Lo, Study Coordinator

### 3. International recognition at a stroke conference

STROKOG research was featured at the *International Stroke Conference Update (ISCU) 2024*, held in Seoul, South Korea from 28 – 30 November. Jess Lo, the STROKOG study coordinator and research lead, delivered an invited talk titled “Risk Factors and Cognitive Trajectories for Post-Stroke Cognitive Decline – Insights from STROKOG.” Addressing an international audience of stroke neurologists and researchers, the presentation highlighted STROKOG’s significant contributions, including recommendations to conduct cognitive assessments before patient discharge and implement ongoing assessments in primary care. The talk inspired valuable discussions on integrating these recommendations into clinical practice.

**Staff:** Professor Perminder Sachdev, Jess Lo, Dr John Crawford, Dr Darren Lipnicki, Dr Ashleigh Vella

## Stroke associated with long-term cognitive decline

New evidence this year from CHeBA, led by biostatistician Research Associate Jess Lo and published in *JAMA Network Open*, indicates that older adults who experience a stroke for the first time will have substantial immediate and accelerated long term-cognitive decline. [DOI/10.1001/jamanetworkopen.2024.37133](https://doi.org/10.1001/jamanetworkopen.2024.37133)

The research analysed data from 14 studies that followed 20,860 community-dwelling older adults without a history of stroke or dementia, with an average age of 73 over many years, tracking their health and cognitive abilities.

The research revealed that for older adults experiencing a stroke there was an associated significant immediate drop in cognitive ability in all areas of cognitive performance, including language, processing speed, and executive function, followed by a gradual long-term decline.

The research also found that individuals who had a history of diabetes, hypertension, high cholesterol, cardiovascular disease, depression, smoked or were APOE4 carriers exhibited significantly faster cognitive decline before any stroke, supporting the hypothesis that vascular risk factors exert their greatest impact on cognitive function years before stroke onset. Targeting modifiable risk factors at an early stage may reduce the risk of stroke but also subsequent risk of stroke-related cognitive decline and cognitive impairment.





## Social Health and Reserve in the Dementia Patient Journey (SHARED)

**SHARED (Social Health And Reserve in the Dementia patient journey) is a project designed to uncover the links between social and brain factors connected to cognitive decline.**

It was jointly funded by the National Health and Medical Research Council (\$750,000) and European Union's Joint Program for Neurodegenerative Disorders (€2.5 million). It is the first international effort to harmonise work on social variables and examine their link to the onset and course of cognitive decline.

### ***Aims:***

1. Examine the variance in cognitive function explained by social health (marital status; social network size; frequency of interactions; social support received and provided; independence in daily functioning; loneliness; quality of relationships), beyond that explained by APOE\*4, demographic variables, baseline cognitive function and physical health;

2. Study the trajectory of social health as individuals progress from MCI to dementia (latent growth class analysis);
3. Investigate the pathways that mediate the relationship between social and cognitive health (brain reserve as indicated through MRI, health behaviours, physiological factors, psychological factors) using structural equation modelling;
4. Examine the variance in social health explained by cognitive function, physical health and APOE\*4.

### ***Findings:***

We completed a qualitative study to understand the aspects of social connections which are important for people living with dementia. It was an international collaborative effort across Australia, Germany, Indonesia, Italy, the Netherlands and Poland. The study involved in-depth interviews with people living with dementia, their friends and family members and health professionals. We identified aspects of social



Dr Suraj Samtani, Study Coordinator

connections which are important to people living with dementia, but are not measured in studies of memory or ageing. These included the person's autonomy, adaptation, changing social roles and mixed feelings towards carers 'shielding' them during conversations. This opens a new avenue of research for the future, to develop novel and more comprehensive measures of social connections that truly take the perspective of people living with dementia. The paper was led by Martina S. Kristanti from the Indonesian team with contributions from Dr Suraj Samtani and Professor Henry Brodaty from CHeBA. It was published in *Frontiers in Psychiatry*. [DOI/10.3389/fpsy.2024.1384636](https://doi.org/10.3389/fpsy.2024.1384636)

We completed a longitudinal study exploring whether social isolation leads to cognitive decline via inflammation or depressive symptoms. The study sample included 7,136 people aged 50 and over from the English Longitudinal Study of Ageing (ELSA) followed for 12 years, and 2,604 aged 60 and over from the Swedish National Study on Aging and Care in Kungsholmen (SNAC-K) followed for six years. We found that having bigger social networks and more positive support reduced depressive symptoms, which led to better memory. Interestingly, there was no support for the idea that

social isolation led to cognitive decline via an inflammation pathway. The paper was led by Jean Stafford from the UK team with contributions from Dr Suraj Samtani and Professor Henry Brodaty from CHeBA. It was published in *The Lancet Healthy Longevity*. [DOI/10.1016/S2666-7568\(24\)00046-1](https://doi.org/10.1016/S2666-7568(24)00046-1)

### Key messages:

- We need to respect the autonomy and preferences of people living with dementia when it comes to social interactions;
- We need more comprehensive measures of social connections for people living with dementia;
- Having a larger social network and having positive support helps improve mood which helps us slow down memory decline.

**Staff:** Dr Suraj Samtani, Professor Henry Brodaty, Professor Perminder Sachdev, Gowsaly Mahalingam, Dr Ben Lam, Dr Darren Lipnicki

**Other investigators:** Contributing COSMIC study leaders and associates, and SHARED consortium associates









# Longitudinal Studies

## Maintain Your Brain



With the global population rapidly ageing, dementia has become a leading cause of death and disability, with nearly 433,000 Australians currently living with the condition. This number is expected to double by 2050, imposing significant financial burdens on individuals, families, and the Australian economy—estimated at \$18 billion annually. However, for the first time, research led by CHeBA is offering significant hope in the prevention of dementia.

*CHeBA's Maintain Your Brain (MYB) program is the largest online trial of its kind, aimed at preventing cognitive decline and dementia by targeting lifestyle factors such as physical activity, nutrition, brain training, and managing depression and anxiety.*

The program delivers individually tailored modules designed to support participants in making lasting lifestyle changes. The intervention was delivered intensively over 12 months, followed by monthly boosters for 24 months, with the aim of determining if the MYB program could maintain cognition in community-dwelling dementia-free persons aged 55-77 years.

*Maintain Your Brain* is a collaboration across a number of universities and expert researchers. This year our paper on the findings has been accepted by *Nature Medicine*. This evidence-based intervention represents a low-risk, high-impact solution that could transform dementia care in Australia. As findings are about to be published in early 2025, continued support for *Maintain Your Brain* could empower individuals to reduce their risk and improve their quality of life, positioning Australia as a global leader in dementia prevention.

**Staff:** Professor Henry Brodaty, Professor Perminder Sachdev, Tiffany Chau, Fleur Harrison, Megan Heffernan, Juan Carlo San Jose



## The Older Australian Twins Study: investigating genetic and environmental influences on healthy ageing

**Since it began in 2007, the Older Australian Twins Study (OATS) has significantly advanced our understanding of the factors that influence healthy ageing, particularly in relation to brain health. With identical twins sharing 100% of their genetic sequence and fraternal twins sharing 50%, OATS has provided researchers with a unique opportunity to study these two groups and measure the contributions of genetic and environmental factors to a wide range of diseases.**

The study recruited a total of 740 twin participants aged 65 and older, primarily from the Eastern seaboard of Australia, through collaboration with Twin Research Australia. Over the years, CHeBA researchers employed a range of methods to measure influences on ageing and cognitive health, including questionnaires, blood samples for chemistry and genetic analysis, and PET brain scans to measure amyloid plaques—biomarkers associated with Alzheimer's disease.

These and other features of the study distinguish it from other investigations, including its longitudinal design, comprehensive neuropsychological assessments, brain imaging measures, its range of genetic data and links with a brain donor program.

One of the study's most significant findings revealed that amyloid plaques, a hallmark of Alzheimer's disease, are moderately heritable, suggesting a combination of genetic

and environmental/modifiable risk factors contribute to the disease. Identifying these modifiable risk factors could help limit or slow down the accumulation of amyloid and therefore influence the development of Alzheimer's disease. OATS also showed that white matter lesions on brain MRI, which are indicative of small vessel disease, are highly heritable, suggesting a strong genetic basis for cerebral small vessel disease, a common problem affecting older people.

Overall, OATS has contributed to over 120 research projects, resulting in nearly 100 scientific papers focused on dementia, cognitive decline and biomarkers. OATS has also been integral to the international IGEMS consortium, which combines data from 17 twin studies worldwide to explore socio-economic and educational factors in dementia risk. Through OATS, over 37 research students have been trained, contributing to the development of the next generation of ageing researchers.

The dedication of OATS participants is a testament to their commitment to advancing science, with over 15,000 hours spent on questionnaires, assessments, and medical tests. Their contributions have helped to shape the future of ageing research, paving the way for more effective interventions and improved outcomes for ageing populations worldwide.

## Building on the success of the Sydney Centenarian Study

**For the first time in history, the number of Australians aged 65 and over has overtaken the population under the age of 15. This shift towards an older population presents challenges for our society, economy, and healthcare system.**

While life expectancy has increased significantly over the last century, there is still a big gap between lifespan - how long Australians live, and healthspan - how long they live in good health. Australians aged 65 and older are expected to spend over half of their remaining years dealing with disability, frailty, or dementia.

However, centenarians—people aged 100 and older—are a special group of exceptionally long-lived individuals who manage to avoid many of these health issues late in life. They represent an example of successful ageing and studying them gives us a unique opportunity to uncover the factors that contribute to healthy, long lives and a longer healthspan. This knowledge could help shape future strategies to promote health and prevent frailty and dementia as we age.

The Australian Centenarian Study (ACS) builds on the success of the CHeBA-led Sydney Centenarian Study (SCS), which tracked 501 people aged 95 and older for up to 3 years, focusing on their cognitive health. The SCS found that nearly 60% of participants lived independently, and although

fewer in numbers, men outperformed women on cognitive and functional tests. The new study will take this further by recruiting people aged 99 and older from Australia's eastern states, examining their health, biomarkers, genetics, healthcare use, and cognitive and physical abilities. We will use the latest tools for testing, including blood biomarkers and microbiome analysis.

***The ACS will also provide valuable insights into generational changes in ageing, comparing current centenarians to those studied in the original SCS, which started over 15 years ago. Centenarians are “outliers” in the ageing process, and studying them will help us test key theories about ageing and better understand what factors support a long, healthy life.***

This research will pave the way for the creation of the **Australian Centre for Centenarian Research (ACCR)**, which will play a crucial role in preparing for the biggest demographic shift of the 21st century.







MAS2 Team: Professor Henry Brodaty, Dr Katya Numbers, Tiffany Chau, Georgina Brown, Dr Suraj Samtani, Abbie Lucien, Deena Sharabas, Dr Amanda Selwood, Isabella Beamish Chemis, Karina Chan

## Memory and Ageing Study 2

**The original Sydney Memory and Ageing Study (MAS), conducted over 14 years, is one of Australia's largest and longest-running studies on ageing and cognitive health. The study has contributed to over 200 publications in respected national and international journals, highlighting its significant impact on the field.**

Building on the success of MAS, the Memory and Ageing Study 2 (MAS2) is underway, aiming to recruit a new cohort representing a generation older than the original participants. This cohort reflects diverse life experiences, including growing up during the post-war economic boom, benefiting from improved healthcare, and encompassing a greater proportion of immigrants. In contrast, the MAS cohort experienced the Great Depression and World War II. MAS2 will replicate and refine the methodology of the first study, incorporating advancements in research to address the evolving landscape of ageing and cognitive health.

We started recruitment in June 2023 and have made significant progress throughout 2024. Initially, recruitment presented significant challenges with low participation rates. To address these challenges, we have expanded our outreach efforts to include social media campaigns, public talks and word of mouth. Additionally, we have expanded our catchment area from the original two electorates to encompass wider Sydney, in hopes of increasing participation rates.

Expanding recruitment strategies has been a success. To date, we have over 1,000 individuals who have expressed interest in the study, with over 650 participants joining. The team has also completed assessments for more than 550 participants. Notably, 94% of participants have also consented to blood collection, and over 130 participants have undergone MRI scans as part of the study.

We have also commenced first follow-up assessments, occurring one year after participants joined the study. These assessments are conducted via telephone and focus on any health changes over the last year, along with a short memory task.

We will continue recruitment efforts until mid-2025 while progressing through the first follow-up assessments. This groundwork will lay the foundation for future data analysis and insights into ageing and cognitive health in this unique cohort of Australians aged 70–90.

For more details, visit our website at [www.mas2.org](http://www.mas2.org)

**Staff:** Professor Henry Brodaty, Professor Perminder Sachdev, Tiffany Chau, Dr Suraj Samtani, Dr Katya Numbers, Dr Amanda Selwood, Deena Sharabas, Georgina Brown, Isabella Beamish Chemis, Matthew Barwell, Abbie Lucien, Karina Chan

*The original Memory and Ageing Study continues to provide rich data allowing researchers to pursue investigation of the links between risk factors for cognitive decline.*

## The impact of mild cognitive impairment and dementia on social skills

A study assessing more than 300 MAS participants looked at the impact of mild cognitive impairment and dementia on a person's ability to interact in social contexts.

The research, led by Dr Russell Chander and published in the *American Journal of Geriatric Psychiatry*, revealed significant differences in social cognitive performance between people who had no cognitive impairment, mild cognitive impairment or mild dementia.

Comprehensive social cognitive assessments were undertaken by Dr Chander and his team, who found that dementia was associated with poorer overall performance in assessments of social skills.

"This evidence suggests that the dementia process is associated with impaired social skills, which can start early and are imperceptible before growing more noticeable by others as the cognitive ability worsens," says Dr Chander.

"Expanding our work in how social skills relate to ageing lifestyles and brain health can help us to identify more of these early and subtle changes that signal the beginnings of cognitive decline."

## Highlights

Over 650 participants have enrolled and over 550 seen to date

Expanded recruitment strategies ensured a broader reach to help with recruitment challenges

MAS2 includes a blood collection component, with an exceptional 94% participation rate, and over 130 MRI scans have been completed





## Dementias Platform Australia (DPAU)

### Enhancing scientific discovery through improved data access

With the global burden of dementia set to rise from 55 million to almost 140 million by 2050, expediting research outcomes has become an international priority. To help facilitate this, data repositories have become increasingly important as focus grows on open science practices and data sharing.

A major challenge for researchers is sourcing relevant data that fit their needs. Standardly and particularly for multi-study research, accessing datasets often involves complex requirements, extensive administration and waiting periods. Upon approval, data harmonisation is usually required due to inconsistent data structures and labelling conventions, and harmonised datasets are hardly ever reused.

To address these problems, Rory Chen, who is a data scientist with Dementias Platform Australia (DPAU), has

created a new tool to improve data access and ultimately increase the potential for new discoveries, with the development published in the *Journal of Open Source Software*.

The new app – known as DataRepExp - will provide more flexibility and functionality at a fraction of the cost.

**Funding - This work is supported by grants from the National Institute on Aging/ National Institute of Health (NIA/NIH) [1RF1AG057531-01] and the Medical Research Council [MRC/T0333771].**





Dr Vibeke Catts, CHeBA Research Manager

## Excellence in Research Management

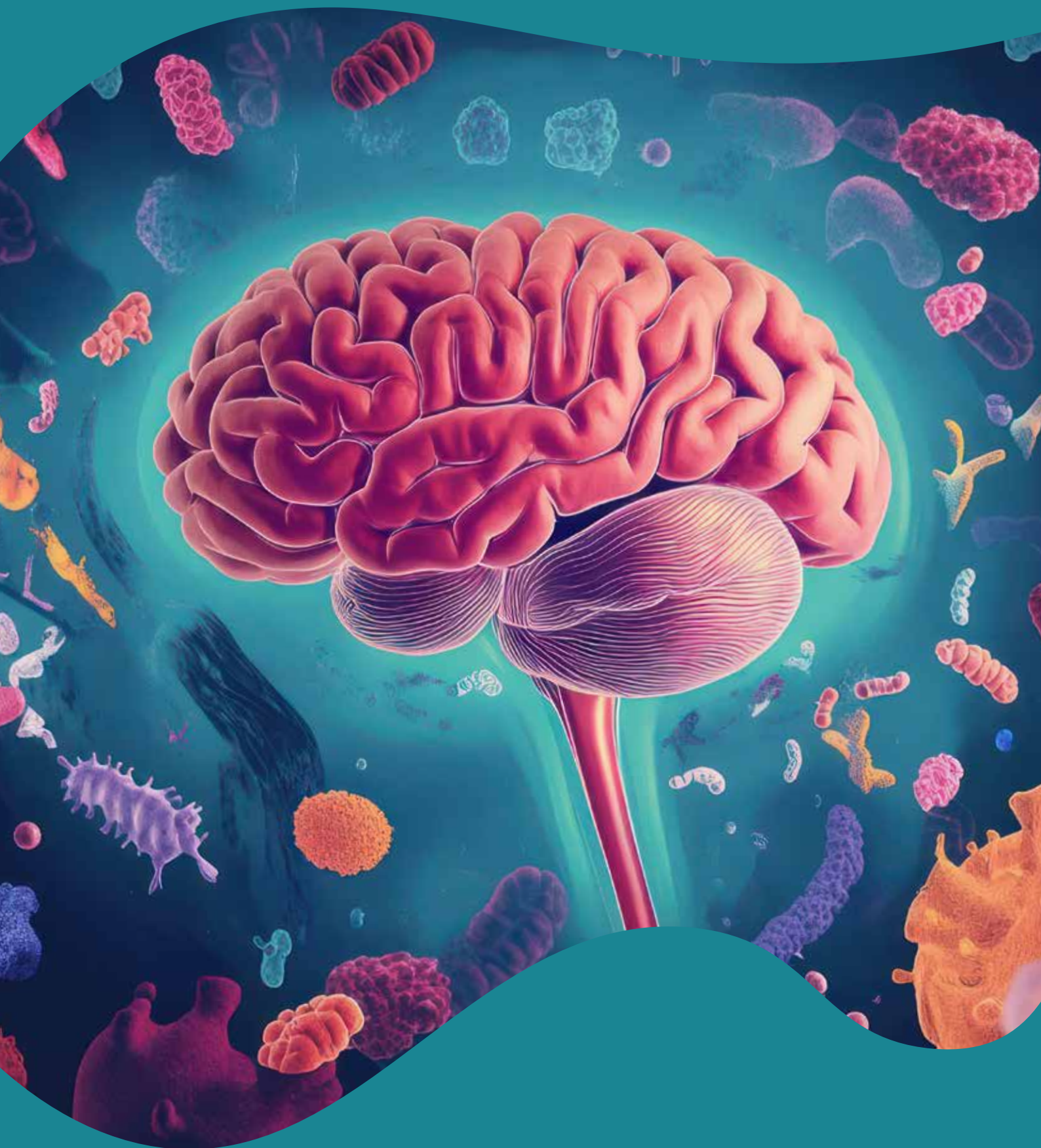
**Dr Vibeke Catts was appointed Research Manager of CHeBA in July 2021. With a background in molecular neurobiology and schizophrenia research, she joined the group with excellent credentials. Since then, she has played a major role in ensuring excellence of research in the Centre.**

This has involved maintaining high quality data curation for all studies, strict compliance with ethical guidelines, and facilitating access to data for various researchers. She has been a positive influence on junior researchers and supported their endeavours through research training and access to resources, and has provided mentorship to several higher degree students. She has facilitated several research grant applications for innovative projects and furthering of national and international collaborations.

She has also played a significant role in the development of the Dementias Platform Australia (DPAU), to facilitate data sharing from projects related to dementia between researchers in Australia and around the world.

This is unique to Australia and one of only three such platforms internationally. Beyond these accomplishments, Vibeke has spearheaded the rollout of the online version of the Older Australian Twins Study and has formalised the CHeBA Research Data and Biobanking, which is now an international resource. She has many other achievements, all carried out in her calm and reassuring manner, and always with a welcoming smile. Dr Catts is indeed one of the strongest pillars of CHeBA and a valuable asset for the University.

***Vibeke, as the source of all knowledge about accessing the large number of CHeBA's databases, has helped dozens of researchers locally and internationally.***





# Project Highlights

## Microbiome of the Brain



**For the first time, CHeBA is considering the role of the brain microbiome in promoting health and the prevention of cognitive decline and dementia, thanks to a multi-year \$90,000 grant awarded by the Mostyn Family Foundation – an inter-generational Foundation that was established in 2011 by brothers Richard, Andrew and Robert with their late father Bob Mostyn. The Foundation has generously supported projects at CHeBA since 2019.**

Despite increasing evidence that certain environmental and lifestyle factors can help reduce risk of dementia, there is limited understanding of the microbiome of the brain and its relationship with neurodegenerative diseases such as Alzheimer's.

The new research, led by Dr Karen Mather, Head of CHeBA's Genomics & Epigenomics Group, will systematically investigate the existence of the brain microbiome and its influence on healthy brain ageing. It will optimise brain

sampling and microbiome techniques and examine brains from 'healthy' and neurodegenerative disease cases obtained from the Sydney Brain Bank at Neuroscience Research Australia.

Dr Karen Mather says that this work will add to the body of literature regarding the brain microbiome, and its potential relationships with healthy brain ageing and neurodegenerative disease.

The study is led by Dr Karen Mather, working together with Dr Claire Shepherd, Director of the Sydney Brain Bank, based at Neuroscience Research Australia (NeuRA), and Dr Fatima El-Assaad, an international expert on the microbiome from the Microbiome Research Centre at UNSW. An international PhD student, Arnav Bhattacharya, who holds a Master's degree in Genetic Engineering, has recently joined the project and will use cutting-edge techniques to examine the brain microbiome.



Mostyn Family Foundation members (excluding Josie Mostyn)





## National first to investigate rare genetic condition

This year, CHeBA established the first Australian study of individuals affected by CADASIL, a rare hereditary genetic condition that is characterised by multiple small strokes and complex migraines, which lead to significant disturbances in motor and speech function, mood changes, dementia and often incontinence.

It is estimated that 500 – 1,250 people in Australia are living with CADASIL, with symptoms typically arising in midlife.

Although it is rare, it is the most common genetic form of cerebral small vessel disease. The actual prevalence remains unknown and is thought to be underestimated. Our goal with taking a national lead on researching this condition is to investigate neuroimaging and blood biomarkers to assist in early diagnosis and identify disease progression to work towards improved understanding, including the potential for prevention strategies, as well as increased education and support.

The Sachdev Foundation supported the initial development of AusCADASIL in 2024, building on their long-standing commitment to CHeBA's broader research efforts since 2016. Their support has been instrumental in establishing the Sydney CADASIL site and setting the foundation for future expansion.

***Australians with CADASIL have been campaigning for more research, and we are committed in our support.  
(Dr Danit Saks)***

***We are seeking funding of \$500,000 over 3 years for the processing and analysis of blood samples, MRI scans, and the expansion of new sites across Australia. This support will help ensure the continued success of this vital research.***

***Read more about AusCADASIL in the Consortia section.***



## Integrating AI into CHeBA's neuroimaging research

Artificial intelligence, especially deep learning, is set to transform neuroimaging research by enabling the analysis of complex, high-dimensional data. These methods enhance the detection of disease markers, improve diagnostic accuracy, and uncover subtle patterns that traditional techniques often miss. By integrating AI, neuroimaging studies become more precise, scalable and impactful.

Over recent years, the paradigm of data-sharing among researchers has shifted significantly, with organisations such as the UK Biobank, DPUK and CHeBA-led DPAU now providing Research Analysis Platforms that restrict data access and analysis to their environments. While these platforms ensure robust data security and comply with region-specific policies, they present a critical challenge: researchers cannot pool data across platforms, hindering studies requiring integrated cohorts.

The Neuroimaging Laboratory at CHeBA has consistently faced this challenge in harmonising data from across external data sets and our own (within the Sydney Memory and Ageing Study, the Older Australian Twins Study and the Sydney Centenarian Study).

To address this, we began incorporating AI into our research in 2022 and we are now taking an international lead in AI-driven solutions to analyse data across platforms

while preserving privacy. A key focus has been developing models to estimate 'brain age' as a proxy for brain health in the ageing brain. We are also collaborating with UNSW Sydney's School of Biomedical Engineering, Faculty of Engineering, to use AI in detection of lesions (eg microbleeds in the brain), which will change the way large datasets are analysed. This is an exciting time for research within our Neuroimaging Laboratory with our researchers determined to produce research that stands out internationally, supports advancements in areas such as neurodegeneration, and enhances understanding of complex brain phenomena.

To accelerate progress and explore novel AI applications in neuroimaging, we welcomed Dr Lei Fan as a Postdoctoral Fellow in July 2024 to spearhead innovative research in this field.

***CHeBA is currently seeking philanthropic support for our AI-assisted neuroimaging research, with specific need for a high-end workstation and data cleaning by a Research Assistant.***



## Are nightmares in older people a risk factor for dementia?

An interesting project coming out of the CHeBA is whether nightmares – disturbing dreams that wake us up from our sleep – can predict future dementia and Alzheimer's disease in older individuals.

The research, led by Dr Darren Lipnicki, is investigating nightmares as a risk factor or early indicator of Alzheimer's disease and other dementias. We are also looking at whether older individuals who remember dreams have less genetic risk for Alzheimer's disease, lower Alzheimer's biomarker levels and reduced chances of cognitive decline.

The study is part of the CHeBA-led consortia COSMIC, which has a goal of bringing together specific studies from around the world to better understand the determinants of cognitive ageing and dementia.

Early findings from this study indicate that nightmares may predict future Alzheimer's disease in men and dementia in people in their 60s, and that people with the strongest genetic indicator of having Alzheimer's disease in the future are less likely to remember dreams.

***We are seeking funding for research under the COSMIC consortia to obtain more biomarker data, allow analysis of stored blood samples and proceed with processing and analysis of existing MRI scans. This would allow us to expand upon our disturbing dreams work to look not only at biomarkers, but also their association with social support, a known factor for healthy brain ageing.***





## Digital biomarkers for earlier diagnosis of Alzheimer's disease

CHeBA is leading an exciting new project to enhance the Memory and Ageing Study 2 (MAS2) – by using digital biomarkers to assess risk and protective factors for dementias as well as rates of cognitive decline.

Digital biomarkers, called the “new blood biomarkers” have the potential to drive earlier diagnosis of Alzheimer’s disease, which means earlier intervention and greater benefit

Digital biomarkers are real-time physiological and behavioural data that are collected and measured through wearable digital devices such as smart watches. These data can reveal changes in people’s cognitive abilities, motor skills and the development of movement disorders, and provide early indicators of conditions such as Alzheimer’s disease.

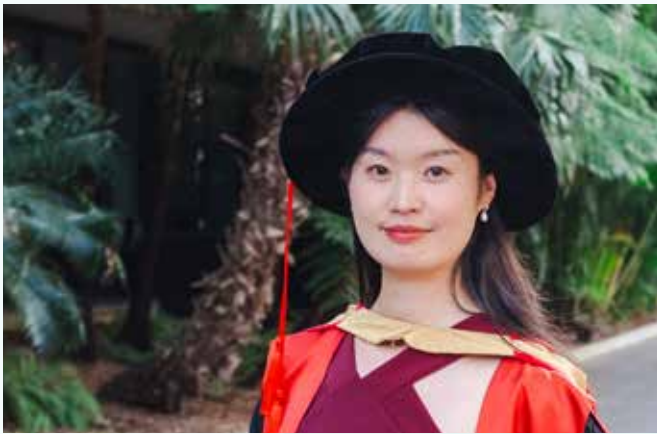
Led by Professor Henry Brodaty, 200 older individuals aged 70-90 will participate in this project, with the intention of eventually scaling this approach nationally to reach all people over the age of 50.

***Although the MAS2 study has been funded to examine a range of factors such as demographic, lifestyle, diet, health, neuropsychological function, genetics and bloods, it has not been funded to examine digital biomarkers. We are seeking funding of \$200,000 over 2 years to support the purchase of portable digital devices, voice analysis, monitoring of keyboard use and data analysis involving machine learning and AI.***



# Students, Achievements & Awards

## PhD Completions



**Dr Chao Dong**

Genetic and environmental influences on human brain changes in ageing

**Supervisors:** Associate Professor Wei Wen, Dr Jiyang Jiang, Dr Karen Mather, Dr Anbupalam Thalamuthu, Professor Perminder Sachdev



**Dr Chulkyu Kim**

Multi-omics profiling and neurotherapeutic strategies to promote healthy brain ageing in both sexes, with clinical relevance to Alzheimer's disease

**Supervisor:** Professor Perminder Sachdev



**Dr Jessica Lazarus**

Genetic and epigenetic modulation of human lifespan – Examining candidate longevity loci associated with the brain

**Supervisors:** Dr Karen Mather, Associate Professor John Kwok



## PhD Completions



### Dr Matthew Lennon

Blood pressure, antihypertensive use and dementia risk –  
An international harmonisation of longitudinal studies

**Supervisors:** *Professor Perminder Sachdev, Dr Anbupalam Thalamuthu, Dr John Crawford, Dr Ben Lam*

#### **Other achievements**

##### **Global Neuropsychiatry Group and International Neuropsychiatry Association Trainee Abstract Award for Best Early Career Researcher Presentation**

The award was presented by Professor Valsamma Eapen at the 2024 International Congress on Neuropsychiatry and was hosted by Royal Australian and New Zealand College of Psychiatrists (RANZCP).

##### **Conferred Titleholders - Excellence in Research (Clinicians)**

2024 Faculty Awards

##### **Dean's Award**

Outstanding PhD Theses for his thesis, Blood pressure, antihypertensive use and dementia risk –  
An international harmonisation of longitudinal studies



### Dr Annabel Matison

Food for thought – Exploring the links between diet, heritability and depression in middle-aged and older adults

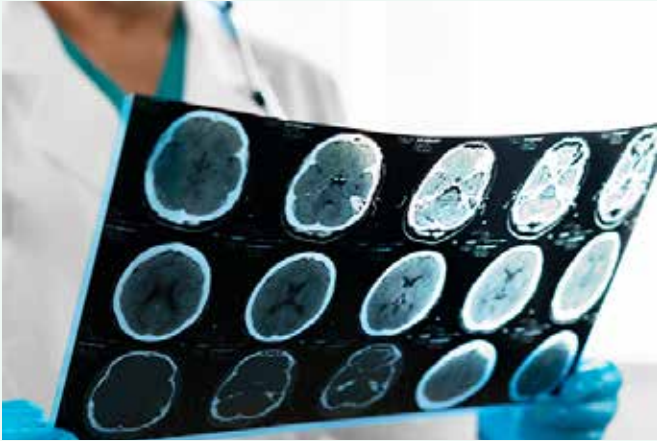
**Supervisors:** *Dr Karen Mather, Associate Professor Simone Reppermund, Professor Vicki Flood (USyd)*

#### **Other achievements**

##### **First place in the 2024 Australian Association of Gerontology Publication Awards.**

Annabel's paper examines the link between fruit and vegetable intake and depression.

## CHeBA Visiting Fellows



### Molecular Biomarkers to Diagnose Vascular Cognitive Impairment and Dementia

A study led by CHeBA Visiting Fellow Dr Satoshi Hosoki and published in *Nature Reviews Neurology*, suggests that the research pace into understanding biomarkers for the diagnosis of vascular cognitive impairment and dementia needs to be accelerated.

The review indicates that whilst multiple molecular biomarkers have been associated with VCID, none have yet been translated into clinical application.

Understanding this area is significant given vascular cognitive impairment and dementia (VCID) is the second most common cause of dementia after Alzheimer's disease, accounting for at least 20% of all dementia diagnoses. Identification of clinically useful molecular biomarkers would greatly improve diagnosis and management of the condition.

The review examined current knowledge of molecular biomarkers of VCID and their potential in clinical management. They looked at the roles of large and small vessel disease in VCID considering the underlying pathophysiological processes that lead to vascular brain damage – including arteriolosclerosis, haemorrhage and inflammation – and assessed the key molecules in each of these processes, looking at their potential as biomarkers for VCID.

## CHeBA Publication Awards

The CHeBA Publication Awards aim to recognise excellent performance, quality research and outstanding papers within our team.

### Jess Lo –

Student category

### Dr Matt Lennon –

Early Career Researcher

### Rory Chen –

Professional Staff







# Our Community

## A Dementia Conversation

The inaugural event 'A Dementia Conversation' was held in April 2024, a new initiative brought to life by CHeBA supporters Liane Fletcher and Antonia Haralambis, and hosted by Robert and Dania Molnar. The event Master of Ceremonies was PJ Lane, CHeBA Ambassador since 2012, who has shown unwavering dedication to this role since losing his father to dementia in 2009. CHeBA Co-Directors Professors Henry Brodaty and Perminder Sachdev provided the audience with crucial information on behaviour change and risk factors for dementia, while also highlighting the importance of research.

***The audience was able to engage in an open discussion about the many complex facets of Alzheimer's disease and other dementias, with \$16,230 generously donated to CHeBA.***

Following its success, a second event was held in September, hosted by Rachelle and Danny Hofbauer. The events raised vital funds for CHeBA's groundbreaking research projects - Microbiome of the Brain and Maintain Your Brain.



Liane Fletcher, Professor Henry Brodaty, Antonia Haralambis, Dania Molnar



Highest fundraising team captained by Mike Gordon, with Wipeout Dementia Ambassadors

## Wipeout Dementia

### Industry backing for Wipeout Dementia raises \$2.5 million for research

Despite wild weather, Olympic Bronze Medalist Owen Wright and 1999 World Surfing Champion Mark Occhilupo joined Sydney's property industry executives on Friday 5 April to surf in support of CHeBA's critical research into Alzheimer's disease and other dementias.

The 2024 event raised \$265,000, bringing the total funds raised for The Dementia Momentum to over \$2.5 million, with representatives from more than 30 organisations across the property industry getting on board.

The number of people living with a dementia diagnosis has surged from 44 million to approximately 57 million since the first Wipeout Dementia. With more than a quarter of the population set to be aged 65+ by mid-century, the need to target early to mid-life to reduce risk of dementia has never been more critical.

Long-time Ambassador and 1978 World Surfing Champion Wayne 'Rabbit' Bartholomew AM delivered a heartfelt speech at the awards ceremony, supporting those living with a dementia diagnosis and encouraging greater support for research.

The annual event's coveted 'Gnarly Award', a Mark Richards surfboard, went to highest fundraiser Mike Gordon for the third year running.



Wipeout Dementia Ambassadors Mark Occhilupo and Owen Wright check out the surf conditions



Cliff's Carvers captained by Craig Rodgers



Ambassador Owen Wright, creator of Wipeout Dementia Heidi Douglass, Ambassadors Mark Occhilupo and Wayne Bartholomew with Wipeout Dementia judge Steve Harrison of Global Surf Tag



Wipeout Dementia captains, Peter Clemesha, Craig Rodgers, Philip Vivian, Anthony Scotts, Mike Gordon, Steve Watson and Darren Beasley with Ambassadors Wayne Bartholomew, Mark Occhilupo and Owen Wright

Gordon personally raised over \$36,000 and led his team to their third consecutive fundraising victory – raising over \$71,000 and taking home a money-can't buy experience at URBNSURF.

A competition DHD surfboard signed by Ambassadors Wayne 'Rabbit' Bartholomew, Owen Wright and Mark Occhilupo was awarded to top fundraisers Mick Cafe of Buildcorp, Mark Gross of Morgans, Avenor Director Peter Clemesha and David Kemp of Buildcorp Interiors, each raising over \$10,000.

The 2024 Surf Off championship team was captained by Avenor Director Peter Clemesha, with Steve Watson's Watto's Wavehunters winning the Battle Royale, which saw all surfers hit the water at once to compete for waves.

***The event was sponsored by Morgans, AWM, Avenor, Buildcorp, SHAPE, Sense Projects, Winten Property Group, NetNada, Haigs and SBC Plumbing.***

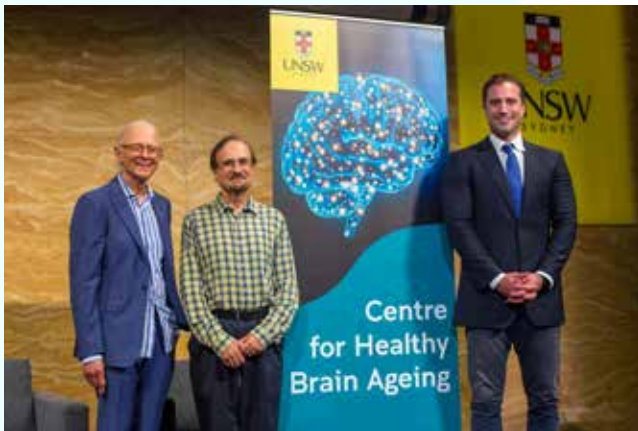
***Photography by Sprout Daily.***

***In-kind event bag sponsors were Caddie Snacks and Tracks Magazine.***

***In-kind event awards were donated by: Bunnings Warehouse, Destination Towels, Garfish Restaurant, Samsonite, Tesalate Towels and Three Blue Ducks.***

***Awards ceremony held at Glory Days.***





Professor Henry Brodaty, Professor Perminder Sachdev, CHeBA Ambassador PJ Lane



Dr Vibeke Catts with participants from CHeBA's long-running studies

## Your Brain. Your Life.

This year, on Saturday 2 March, we brought together nearly 200 participants from CHeBA's long-running studies (the Sydney Centenarian Study, the Older Australian Twins Study and the Memory and Ageing Study), as well as the CogSCAN study. The exclusive event showcased the research findings as a result of their voluntary involvement in these studies, and the incredible impact these studies have had internationally. A highlight of the event was a panel discussion including four key experts - Professor Henry Brodaty, Professor Perminder Sachdev, Dr Suraj Samtani (social health expert and clinical psychologist) and Dr Karen Mather (Leader of the Genomics & Epigenomics Group), which was moderated by geriatrician and UNSW Senior Research Fellow Dr Stephanie Ward (of ABC's Old People's Home for 4 Year Olds). This discussion provided information about dementia and healthy brain ageing, followed by an energetic Q&A session with the audience. The program also included presentations from Research Manager Dr Vibeke Catts, Leader of the Neuropsychology Group Dr Nicole Kochan, Post-Doctoral Research Fellow Dr Katya Numbers, Associate Professor Simone Reppermund,

PhD student Zara Page and head of communications and fundraising Heidi Douglass. Ambassador PJ Lane generously supported the event as Master of Ceremonies, and spoke about the escalating need for advances in dementia research, especially after losing his father to Alzheimer's disease when he was 24 years of age.

***A key message from the event was the possibility and potential of us reaching our vision of a future where the onset of dementia will be postponed, if not prevented, and a future where people who do develop dementia are supported with care and compassion.***

It also emphasised the significance of philanthropic support to fund the continuation of these 15-year studies, and the seeding of new and innovative ideas to be competitive.



Professor Henry Brodaty, Morgans Director Lisa Shand, Professor Perminder Sachdev



Professor Henry Brodaty, CHeBA Advisory Committee Chair Ita Buttrose, ABC Radio Host Hamish Macdonald

## Donor Event

An exclusive event for CHeBA donors and key supporters was held on Thursday 22 February, with special guest Lisa Shand, Director from Morgans, officially launching the 2024 Wipeout Dementia campaign and highlighting their commitment to corporate social responsibility. The private event, supported by UNSW Development and held in UNSW's Wallace Wurth Building, was a wonderful opportunity to showcase how contributions and fundraising have enhanced CHeBA's research achievements.

## Union Club: Henry Brodaty in conversation with Hamish Macdonald

On Tuesday 27 August 2024, Professor Henry Brodaty engaged in a lively conversation for members and guests of the Union, University and Schools Club Sydney with Hamish Macdonald, co-host of Global Roaming on ABC Australia Radio National and Dementia Australia's podcast Hold the Moment.

Professor Brodaty touched on the global challenges of dementia and strategies for maintaining cognitive health. Their engaging discussion provided valuable takeaways on how to maintain brain health, promote cognitive resilience and prevent dementia.

Advisory Committee Chair Ita Buttrose AC OBE also attended and spoke, with CHeBA Advisory Committee and Union, University and Schools Club Sydney member Barbara Cail AO convening the event.



Team Luna Partners

## City2Surf

On Sunday 11 August, 17 champions laced their runners and joined the 90,000 strong pack for the 2024 City2Surf. This group of fundraisers from Luna Partners, led by CHeBA Ambassador Edward Caser, and Neu Capital, led by supporter Niki Paramor, raised \$13,314 for critical research projects at CHeBA. There is indisputable evidence that physical inactivity increases the risk of heart disease, high blood pressure, stroke, obesity, diabetes and depression – all of which are risk factors for dementia. The CHeBA Champions in this year's City2Surf walked the talk in promoting the relationship between physical activity throughout life and better brain health in late life.



Professor Henry Brodaty, CHeBA Ambassador Keri Kitay

## CHeBA Ambassador Launches Book

The launch of Keri Kitay's personal memoir, *The Long Goodbye*, which includes input from Professor Henry Brodaty, took place at Defiance Gallery in Paddington. The book is a poignant tribute to her mother, Terry, who was diagnosed with young onset Alzheimer's disease at just 54 years of age.

Keri has been a CHeBA Ambassador since 2013 and in that time has become a powerful advocate for dementia research, raising awareness about risk factors for dementia, and educating others on how to better care for people living with dementia.

At the launch, Professor Henry Brodaty joined Keri in a heartfelt discussion, moderated by Scott Henderson from Hachette.

*The Long Goodbye* combines memoir and hard-earned knowledge, detailing Keri and her family's journey. The book features interviews with Professor Brodaty and Dr Karen Mather, Leader of CHeBA's Genomics & Epigenomics Group. Keri's story was prominently featured in ABC News online, and she also shared her experiences with Richard Fidler on *ABC Conversations*.





Professor Baroness Susan Greenfield, Professor Henry Brodaty



Professor Henry Brodaty

## CHeBA Visiting Lecture Series

Since 2020, CHeBA's Visiting Lecture Series has hosted world-leading researchers both in-house and by webinar. This year, Founder and CIO of Neuro-Bio Ltd and neuroscientist, writer and broadcaster, Professor Baroness Susan Greenfield, shared her cutting-edge research on T14, a molecule linked to Alzheimer's disease. Professor Baroness Greenfield has maintained a longstanding relationship with Professor Henry Brodaty, dating back to their time as speakers at the Alzheimer's Australia event at NSW Parliament House in 2011.

In September we hosted Associate Professor Sarah Bauermeister, cognitive neuropsychologist and senior scientist at Dementias Platform UK (DPUK), in relation to how a new system (C-Surv) was created to organise and search data, and how it facilitates the harmonisation of datasets across multiple studies internationally. DPUK supported the 2021 launch of the CHeBA-led Dementias Platform Australia (DPAU) and has since collaborated to accelerate discoveries in dementia understanding and diagnosis.

## Public Forums

### Thriving, Connecting and Ageing

On 23 October 2024, nearly 500 people attended the Eastern Suburbs Older Persons' Mental Health Services forum at Souths Juniors in Kingsford, with expert speakers providing strategies to reduce psychological distress and memory disorders as we age. The event, supported by SESLHD, Randwick City Council, and CHeBA, featured expert speakers like Dr Lindsay Wu from the Black Dog Institute, Macquarie University's Professor of Clinical Psychology Viviana Wuthrich, and Clinical Psychologist Melissa Levi. Professor Henry Brodaty led an insightful presentation and stressed the significance of social connections for cognitive resilience and health, pointing out the risks of social isolation and its link to dementia.

## Donors 2024

Mr and Mrs V Alfieris	Sue Edwards	Zaharoula and Kalie Matina and Zervos
Sylvia Allegos	Lauren Ehrlich	Mr and Mrs L Mavromattis
Greta Allen	Iris Ellis	Angie and Peter McHugh
Vanessa Andersen	Eleni Endt	Kaydence Merchant
Maurice Ben-Mayor	Eva and Tom Breuer Foundation	David Michaelis
Karen Berson	Polyhronis Family	Nancy Milne OAM
BP Giving Force Foundation	Dena Fatseas	Elaine M Milner
Stefan Brasch	Gisela Fletcher	Morgans Foundation
Angela Brooks	Peter Fletcher	Sandra Moss
Sarah J Cairns	Ben Green	Mostyn Family Foundation
Lily G Calderbank	Matina Hellen	Matina Mottee
Ralene Carr-Reuveny	Eileen Hoggett	Mary Moutzouris
Jodie Carter	Johnson Hung	Barbara Munn
Mrs Matina Castrissios	Idle Acres Foundation	Larry Narunsky
Hon Hei Victor Chan	J&E Kogan	Marina Oliveira
Michael Cohen	Shirley Jenkins	Mrs Marika O'Neill
Martina Comino	Jodie Carter Design	P. D. Calligeros
Mr G and Mrs D Comino	S and H Kastrissios	George and Marina Poulos
Theo & Irene Comino	Enid Kay	Rubina Pradhan
Rene Condoleon	Kennards Hire Foundation	Carol Pryer
George G Conomos	Lucienne P Layton	Steve and Anna Psaltis
Angelo and Erenie Crones	Lead Group Nursing Agency	Paul Richmond
Cronulla Gay Group Inc	Susan A Lee	Roberts Family Foundation
Lisa Darke	Lara Levin	Lindsay Robinson
Peter Dinham	Andrew K Looi	Debbie Rutstein
Natalie Downing	Maria Mallos	Sachdev Foundation

George and Koula Samios	Eugenia Spyrides	Susan Tornya
Dana Sawyer	Nick Stamatakos	John and Maria Travassaros
SBC Plumbing	James Stavroulakis	Mr M & Mrs H Travassaros
Dagmar Schmidmaier AM	James Peter Stevens	Sheridan Trevenar
Hannah Schwartz	Ben Stewart	John and Koula Tzannes
Michele Shaked	Kathleen Stone	Spiro and Irene Tzannes
Athina Shelston	Deborah Stonley	M Varipatis
Shirley Silverton	Michele Sykes	Emmanuel and Toula Varipatis
Phylia Simos	Rena Symeou	Kim Weintroub
George Simos	Nick Tambakis	Jacqueline White
Michael Skully	Peter Tambakis	Richard Williamson
Craig Smith	Mrs H Tekirdaglis	Julie Witts
Ms P Sofios	The Australian Philanthropic Services Foundation	Liz (Beryl) Woolfson
Soundblock Solutions	The Howarth Foundation	Debbie and Trevor Zabow
Dr Denise Sporr		Mr and Mrs T Zantis

## Leaving a Legacy

***"CHeBA was founded the year after Ashley passed away, and I was amongst their earliest supporters, promising a gift in will to ensure their good work can continue for many years to come. These are wonderful, committed people, and this is a very worthy cause."***

Cherry Cordner is an historian, public servant and published author, and is leaving a Gift in Will to CHeBA in memory of her husband Ashley. This legacy will support ongoing research into the understanding and prevention of Alzheimer's disease and other dementias.





## Participate in research



### Maintaining Social Engagement study

Dr Suraj Samtani, a researcher at the Centre for Healthy Brain Ageing (CHeBA) is leading a team of researchers from UNSW Sydney, University of Queensland and Silverchain to find out how to help older adults maintain or enhance their social engagement and well-being. Silverchain is one of Australia's largest aged care providers and provides services for over 21,000 older adults in the community. The project is funded by a Dementia Australia Research Foundation fellowship awarded to Dr Samtani.

You can take part if you:

- Are aged 55+
- Have noticed changes in your memory or thinking OR have a diagnosis of mild cognitive impairment or mild dementia
- Feel lonely sometimes
- Can join online sessions using a computer or tablet
- Can do basic daily activities without help
- Can have conversations in English
- Can see and hear well (with glasses or hearing aid/s if needed)
- Do not have a severe psychiatric disorder (e.g., psychosis or bipolar disorder)
- Life expectancy is over 12 months
- Live in Australia

### Lost in Translation

The research study seeks to understand the reasons behind globally observed low male participation rates in social and health promotion programs, with the goal of finding effective strategies to overcome this. Specifically, we are seeking to understand how attitudes towards ageing, gender stereotypes, study recruitment language, objectives and modality affect willingness to participate.

You will be eligible for the study if you:

- Identify as male
- Are aged 65 years or above
- Are able to understand, read and write in English sufficiently well to complete questionnaires and provide informed consent.
- Live in Australia



## Memory & Ageing Study 2

The original study, Sydney Memory and Ageing Study (MAS), ran for 14 years and is one of Australia's largest and longest running studies of ageing and cognitive health. Over 200 publications using MAS data have appeared in a large range of respected national and international journals.

Following the success of MAS, MAS2 will recruit a new cohort that is a generation older. This new cohort will comprise Australians who have had different life experiences to the original MAS cohort.

The MAS2 study is actively recruiting participants aged 70-90 years old who:

- Are fluent in English
- Can see and hear well (with glasses or hearing aid/s if needed)
- Have a family member or close friend who can answer questions about your health
- Do not live in residential aged care
- Do not have dementia, multiple sclerosis, motor neuron disease, or a developmental disability
- Do not have a life-threatening disease or are receiving treatment for cancer
- Do not have a severe psychiatric disorder (such as psychosis or bipolar disorder)
- Did not take part in the original Sydney Memory and Ageing Study (MAS1) which started in 2005



## Developing Biomarkers for Vascular Cognitive Impairment (VCI)

This project aims to develop novel imaging biomarkers of early cerebrovascular alterations in VCI, and examine how they relate to brain vascular lesions, cognition (including dementia), blood biomarkers of vascular disease, and vascular risk factors.

The VCI study is actively recruiting participants (aged 50-80 years old) who:

- Have Vascular Dementia,
- Have Vascular Mild Cognitive Impairment or
- Are healthy without cognitive impairment.





# Appendices

## Appendix A: Staff List

### Leadership

#### Henry Brodaty

Scientia Professor, Co-Director CHeBA, Co-Leader Epidemiology Group

#### Perminder Sachdev

Scientia Professor, Co-Director CHeBA, Co-Leader Epidemiology Group, Leader Neuropsychiatry Group

#### Sophia Dean

Centre Manager

#### Vibeke Catts

Research Manager

#### Heidi Douglass

Team Lead – Innovations & Communications

#### Nicole Kochan

Research Fellow, Leader CogSCAN Study, Leader Neuropsychology Group

#### Amit Kumar

Postdoctoral Fellow, Data Scientist (until 29 February 2024)

#### Darren Lipnicki

Postdoctoral Fellow, COSMIC Consortium Coordinator

#### Jessica Lo

Research Associate, STROKOG Consortium Coordinator

#### Karen Mather

Senior Research Fellow, Leader Genomics & Epigenomics Group

#### Annabel Matison

Postdoctoral Fellow, Social Determinants of Health

#### Adith Mohan

Senior Lecturer, PhD Candidate

### Academic Staff

#### Adam Bentvelzen

Senior Research Associate, Centres of Research Excellence for Vascular Cognitive Disorders (CRE-VCD)

#### Lei Fan

Postdoctoral Fellow, Neuroimaging Laboratory

#### Tessa Helman

Postdoctoral Fellow, Brain Ageing Research Laboratory

#### Tharusha Jayasena

Postdoctoral Fellow, Molecular Biomarkers Group

#### Jiyang Jiang

Postdoctoral Fellow, Neuroimaging Laboratory

#### Katya Numbers

Postdoctoral Fellow, Project Coordinator Memory and Ageing Study (MAS2) (until July 2024) and C-STAM Project

#### Anne Poljak

Leader Molecular Biomarkers Group

#### Simone Reppermund

Scientia Associate Professor, C-STAM, Social Determinants of Health

#### Danit Saks

Postdoctoral Fellow, Vascular Contributions to Dementia – Centre of Research Excellence (VCD-CRE)

#### Suraj Samtani

Postdoctoral Fellow, Dementia Australia Research Foundation Fellow

**Saeed Shanehsazzadeh**

Postdoctoral Fellow, Nanotechnology Project

**Anbupalam (Anbu) Thalamuthu**

Senior Research Fellow, Genomics & Epigenomics Group

**Ashleigh Vella**

Postdoctoral Fellow, COSMIC / IGEMS

**Stephanie Ward**

Senior Research Fellow, Clinical Leader ADNet Project (ADNet-CQR Initiative)

**Wei Wen**

Associate Professor, Leader Neuroimaging Group, Director Neuroimaging Laboratory

**John Crawford**

Senior Statistician, CHeBA Longitudinal Studies

**Naja Fragante**

Data Officer

**Katrina Fyfe**

Acting Project Manager, The Australian Dementia Network (ADNet) Project (from July 2024)

**Sumangali (Sumi) Gobhidharan**

Research Officer, Genomics & Epigenomics Group

**Gurpreet Hansra**

Research Assistant (casual), VCD-CRE

**Fleur Harrison**

Research Officer (casual)

## Professional & Technical Staff – Research

**Matthew Barwell**

Research Assistant, Memory and Ageing Study 2 (MAS2) (until December 2024)

**Georgina Brown**

Research Assistant, MAS2 (until December 2024)

**Isabella Beamis Chemis**

Research Assistant, MAS2

**Anne-Nicole Casey**

Research Officer (Casual)

**Karina Chan**

Research Officer, Purple Food Project (until November 2024) and MAS2 (from December 2024)

**Russell Chander**

Research Officer, VCI

**Tiffany Chau**

Research Officer and Study Coordinator, MAS2

**Rory (Xinyue) Chen**

Senior Project Officer, Dementia Platforms Australia (DPAU) Project

**Shizuka Hayashi**

Research Assistant (casual), CHeBA Longitudinal Studies

**Mai Phuong Ho**

Research Assistant (casual), CHeBA Longitudinal Studies

**Sri Chandana Kanchibhotla**

Research Assistant, Genomics & Epigenomics Group

**Renecia Lowe**

Project Officer, COSMIC

**Abbie Lucien**

Research Assistant, MAS2

**Inga Mehrani**

Project Manager, The Australian Dementia Network (ADNet)

**Kathy Nguyen**

Research Officer, C-STAM

**Zara Page**

Student Assistant, CHeBA Longitudinal Studies  
Research Assistant (casual), eDIVA Projects

**Amanda Selwood**

Research Assistant, MAS2

**Deena Sharabas**

Research Assistant, MAS2

**Eman Shatnawi**

Research Assistant, Social Engagement Project

**Khawar Sohail Siddiqui**

Research Officer, CHeBA Biobank VCD-CRE

**Emily Swift**

Research Officer, Functional Neurological Disorders (FND) Project

**Bridie Vaughan**

Project Officer, COSMIC (until July 2024)

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**Professional & Technical Staff – Support****Janelle Burns**

Engagement &amp; Projects Officer

**Belinda Cooper**

Digital Communications Officer

**Heidi Douglass**

Team Lead – Innovations &amp; Communications

**Helena Hudson**

Project Administrator

**Rachel Tarlinton**

Project Administrator

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**UNSW Adjunct & Conjoint Staff****Catherine Browning**

Adjunct Associate Lecturer

**Lucia Chinnappa-Quinn**

Adjunct Associate Lecturer (from April 2024)

**Michael Connors**

Conjoint Senior Lecturer

**Karen Croot**

Adjunct Senior Lecturer

**Brian Draper**

Conjoint Professor

**Heidi Foo**

Adjunct Associate Lecturer

**Megan Heffernan**

Conjoint Lecturer

**Yue Huang**

Adjunct Associate Lecturer

**Tiffany Jessop**

Adjunct Lecturer

**Rebecca Koncz**

Adjunct Senior Lecturer

**Elizabeth (Li-Jung) Ku**

Adjunct Fellow

**Matthew Lennon**

Conjoint Lecturer

**Matthew Paradise**

Adjunct Senior Lecturer

**Anne Poljak**

Adjunct Senior Lecturer

**Matilda Rossie**

Adjunct Associate Lecturer

**Kuldip Sidhu**

Adjunct Associate Professor

**Julian Trollor**

Adjunct Professor

**Anne Wand**

Adjunct Associate Professor



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## UNSW Honorary Academics

**Lynn Chenoweth**

Honorary Professor

**Michael Valenzuela**

Honorary Professor

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## UNSW Visiting Fellows

**Jessica Baker**

Visiting Fellow

**Kim Burns**

Visiting Fellow

**Jing Du**

Visiting Fellow

**Meredith Gresham**

Visiting Fellow

**Satoshi Hosoki**

Visiting Fellow

**Chulkyu Kim**

Visiting Fellow

**Ben (Chun Pan) Lam**

Visiting Fellow

**Gowsaly (Saly) Mahalingam**

Visiting Fellow

**Isabella Malarasan**

Visiting Fellow

**Louise Mewton**

Visiting Senior Fellow

**Janet Mitchell**

Visiting Fellow

## Appendix B: External Appointments

### Dr Adam Bentvelzen

- Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) Professional Membership

### Professor Henry Brodaty

- Senior Psychogeriatrician, Old People's Mental Health Service, Prince of Wales Hospital (1990–present)  
Member, International Advisory Committee of the National Institute of Dementia, South Korea (since 2013)
- Professorial Fellow, Black Dog Institute (since 2000)
- Honorary Professor, Kiang Wu Nursing College, Macau (since 2014)
- Chair, Australian Institute for Health and Welfare, Dementia Advisory Committee (2021–2024)
- Honorary Lifetime Vice-President, Alzheimer's Disease International (ADI) (since 2005)
- Honorary Medical Advisor, Dementia Australia NSW (since 1992)
- Ambassador for Dementia Australia (since 2015)
- Member, Australian Advisory Board for Nutricia (since 2012)
- Ambassador, Montefiore Homes (since 2006)
- Chair, Clinical Advisory Committee, Montefiore Homes (since 2012)
- Expert Advisory Panel, NHMRC National Institute for Dementia Research (since 2016)
- Dementia Expert Advisory Panel, Commonwealth Department of Health (since 2022)
- Member, International Research Network for Dementia Prevention Advisory Group (since 2017)
- WHO Blueprint for Dementia Research Working Group and WHO mhGAP Guidelines Development Group – guidelines for mental health management especially for LMIC (since 2022)
- Editorial board member for the following journals: *Aging and Mental Health* (since 1996), *Alzheimer Disease and Associated Disorders* (1995–present), *Alzheimer's and Dementia* (since 2005), *Australian and New Zealand Journal of Psychiatry* (since 1981), *CNS Drugs* (since

1999), *Dementia and Geriatric Cognitive Disorders* (since 2010), *Neurodegenerative Disease Management* (since 2010), *The Australian Journal of Dementia Care* (since 2012)

- Deputy Editor, *International Psychogeriatrics* (since 2017)

### Dr Anne–Nicole Casey

- World Health Organization (WHO) Global Dementia Observatory (GDO) Knowledge Exchange Platform peer-review network member
- Contributor to the World Health Organization (WHO) research priority setting exercise to establish the WHO Grand Challenges in Social Connection
- Expert advisory panel member for the development of the Recommended Public Health Guidelines for Social Connection  
<https://www.socialconnectionguidelines.org/en>

### Dr Vibeke Catts

- Member, Behaviour Genetics Association (since 2019)
- Member, Australian Society for Medical Research (since 2006)

### Professor Lynn Chenoweth

- Adjunct Professor, School of Nursing and Midwifery, The University of Notre Dame Australia (since 2015)
- Honorary Member of Staff, War Memorial Hospital, Waverley, NSW (since 2021)
- Member of the following societies/committees: Human Research Ethics Committee B, UNSW (2015–2025); War Memorial Hospital Research Committee (2019–present); Academic and Curriculum Advisory Committee, School of Nursing, University of Notre Dame Australia, Sydney (2017–2024); Gerontological Alliance of Nurses Australia (GANA) (since 2021)
- Editorial board member for the following journals: *International Journal of Older People Nursing* (2019–present), *Older People Nursing Journal* (since 2019), *BMC Health Care Services* (2021–2024), *BMC Nursing* (2021–2024), *Healthcare* (2020–2024)

**Fleur Harrison**

- Student Member, Australian Psychological Society (since 2016)
- Member, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) (since 2011)
- Member, Australian Association of Gerontology (since 2016)

**Dr Nicole Kochan**

- Member, AHPRA (1991–2024)
- Associate Editor, *Journal of Alzheimer's Disease* (since 2024)

**Dr Rebecca Koncz**

- Associate Professor and Chair, Intellectual Disability Mental Health, National Centre of Excellence in Intellectual Disability Health, UNSW Sydney (since 2024)
- Clinical academic neuropsychiatrist, Intellectual and Developmental Disability, South Eastern Sydney Local Health District (SESLHD) (since 2024)
- Editorial board member, Australian and New Zealand Journal of Psychiatry (since 2023)
- Advisory group member, SANE Australia (since 2024)
- Executive committee member, Intellectual Disability Health, NSW Health Agency for Clinical Innovation (since 2024)
- Executive committee member, Section of Psychiatry of Intellectual & Developmental Disabilities, RANZCP (since 2024)
- Member, SESLHD Disability Inclusion Action Plan Implementation (since 2024)
- Member, SESLHD Collaborative Research Committee (since 2024)
- Member, SESLHD Mental Health Clinical Council (since 2024)
- Fellow, Royal Australian and New Zealand College of Psychiatrists (RANZCP) (since 2017)
- Senior Lecturer, Psychiatry, Concord Clinical School, The University of Sydney (2018–2024)
- Clinical academic neuropsychiatrist, Sydney Local Health District (2018–2024)

**Dr Matthew Lennon**

- Member, Australian and New Zealand Association of Neurologists
- Member, Australian Medical Association
- Conjoint Associate Lecturer, University of New South Wales
- Editorial board member, *Journal of Alzheimer's Disease*

**Dr Darren Lipnicki**

- Associate Editor, *Frontiers in Dementia* (Section: Aging and Risk Factors for Dementia) (since 2022)
- Review Editor, *Frontiers in Epidemiology* (Section: Neurological and Mental Health Epidemiology) (since 2022)
- Adjunct and Graduate Faculty (Co-supervisory role and supervisory committee member role) in the Department of Psychology, Faculty of Arts, University of Prince Edward Island, Canada (2023–2026)

**Dr Karen Mather**

- Associate Editor, *Genetics and Biomarkers of Dementia, Frontiers in Dementia* (since 2023)
- Member, Australasian Neuroscience Society (since 2023)
- Member, Australian Association of Gerontology (since 2020)
- Member, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) (since 2015)
- Member, Australasian Epigenetics Alliance (since 2023)

**Dr Adith Mohan**

- Clinical Director, Eastern Suburbs Mental Service (ESMHS), South Eastern Sydney Local Health District (SESLHD) Mental Health Service
- Senior Staff Specialist, Neuropsychiatry, Prince of Wales Hospital
- Chair, Mental Health Medical Staff Council, SESLHD
- Committee member, Section of Neuropsychiatry, RANZCP
- Member of the Functional Neurological Disorders Society (FNDS)



**Dr Katya Numbers**

- Member, Global Dementia Carers' Views on Ageing Expertise Network (since 2024)
- Associate Investigator of the UNSW Ageing Futures Institutes (AF) (since 2021)
- Associate Investigator of the Australian Human Rights Institute (AHRI) (since 2022)
- Member, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) (since 2020)
- Discipline of Psychiatry & Mental Health Representative for Faculty of Medicine Phase 2 Committee (since 2023)
- Discipline of Psychiatry & Mental Health Representative for Faculty of Medicine Advanced Study and MD Research Committee (ILP/Hons) (since 2023)
- Discipline of Psychiatry & Mental Health Education Governance Committee Member (since 2024)
- Discipline of Psychiatry & Mental Health Development Group Member (since 2024)
- EMCR Representative for the Centre for Healthy Brain Ageing (since 2024)
- Member, Psychiatry & Mental Health HDR Research Conference Planning Committee (since 2024)
- Co-Lead of Postgraduate Outreach for Psychiatry Students (POPS) Group (since 2022)
- Member, Faculty of Medicine's Health Equity & Patient Advocacy Re-Design Team (since 2023)
- Member, Faculty of Medicine's Professionalism, Ethics & Professional Identity Re-Design Team (since 2023)
- Member, Faculty of Medicine's Preventive Medicine & Social Prescribing Re-Design Team (since 2023)
- Associate Editor, *Journal of Psychology and AI*
- Editorial board member for the following journals: *PLOS ONE*, *Frontiers in Ageing Neuroscience*, *Frontiers in Ageing Psychiatry*, *BMC – Psychology*
- Guest Editor (Special Issue), *Diagnostics*

**Zara Page**

- Ambassador, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) (since 2022)
- ISTAART AWARE PIA Steering Committee Member (since 2023)

- ISTAART PIA to Elevate Early Career Researchers (PEERs) Continent Lead – Australia
- HDR Representative, Discipline of Psychiatry HDR Research Committee (since 2022)

**Dr Matthew Paradise**

- Clinical appointments as a VMO Psychogeriatrician, Concord Hospital

**Dr Anne Poljak**

- Senior Research Scientist, Bioanalytical Mass Spectrometry Facility, Mark Wainwright Analytical Centre, UNSW Sydney
- Conjoint Lecturer, School of Medical Sciences, UNSW Sydney
- Member, Scientific Review Committee, NSW Brain Bank Network (NSWBBN)
- Member, Scientific Advisory Committee, Rebecca L. Cooper Medical Research Foundation
- Member, Cochrane Community
- Reviewer, Alzheimer's Association International Conference (biomarkers, non-neuroimaging)

**Associate Professor Simone Reppermund**

- Associate Editor, *Scientific Reports* (since 2023)
- Associate Editor, *Aging Brain* (since 2024)
- NHMRC grant review panel member
- Postgraduate Coordinator, Discipline of Psychiatry and Mental Health, UNSW (since 2022)
- School of Clinical Medicine Research Committee Representative (since 2023)
- Member of the Academic Promotion Committee at the Faculty of Engineering (2023–2024)

**Professor Perminder Sachdev**

- Clinical Director, Neuropsychiatric Institute, Prince of Wales Hospital, Sydney (since 1987)
- Visiting Fellow, Australian National University (since 2009)
- Visiting Professor, Jiao Tong University, Shanghai (since 2018)
- Committee Member, WHO's Expert Advisory Committee for the Global Dementia Observatory (GDO)

- Executive Member, International Society of Vascular Behavioural and Cognitive Disorders (VASCOD) (since 2012)
- Member, Neurocognitive Disorders Work Group for DSM-5 (since 2007)
- Member, International Advisory Group for the Revision of ICD-10 Mental and Behavioural Disorders and the International Advisory Group for the Revision of ICD-10 Diseases of the Nervous System, WHO ICD-11 Expert Working Group on Neurocognitive Disorders (since 2011)
- President, International College of Geriatric Psychoneuropharmacology (since 2012)
- Expert Advisory Panel Member, NHMRC National Institute for Dementia Research
- Founding Executive Committee Member, Tourette Syndrome Association of Australia (since 1989)
- Scientific Advisory Committee Member, Alzheimer's Association of Australia (since 1995)
- Committee Member, Psychotropic Drugs and Other Physical Treatments, Royal Australian and New Zealand College of Psychiatrists (since 1996)
- Chair, Medical Advisory Committee of the Tourette Syndrome Association of Australia (since 1996)
- Chair, Section of Neuropsychiatry RANZCP (since 2005)
- Fellow, Australian Academy of Health & Medical Sciences (since 2015)
- Fellow, NHMRC Academy (since 2011)
- Member, NHMRC Assessor's Academy (since 2012)
- Australian Advisory Board Member, Biogen (since 2018)
- Alzheimer's Disease Advisory Board Member, Biogen Australia and New Zealand (since 2021)
- Advisory Board Member, Roche Australia (since 2021)
- Invited Member, Task Force of the International League Against Epilepsy (since 2011)
- Invited Member, Neuropsychobiology Commission (since 2011)
- Deputy Director, Alzheimer's Disease Network (ADNeT)
- Committee Member, Ageing Futures Institute, UNSW Sydney
- Dean's Advisory Committee Member, UNSW (since 1995)
- Scientific Steering Committee Member Neuroscience

Institute of Schizophrenia and Allied Disorders (NISAD), Garvan Institute (since 1996)

- Scientific Review Committee Chair, Division of Psychiatry, ESAHS Eastern Section (since 1996)
- Ministerial Advisory Committee Member, Psychosurgery in NSW (since 1996)
- Faculty of Medicine Research Committee Member, UNSW (since 2005)
- Brain Sciences UNSW Executive Committee Member (since 2008)
- Overseas Ambassadors Advisory Group (since 2014)
- NSW Microbiome Research Centre's Advisory Committee Member (since 2021)
- Editorial board member for the following journals: *Current Opinion in Psychiatry* (Neurocognitive Disorders section), *Middle Eastern Journal of Ageing*, *Middle Eastern Journal of Psychiatry & Alzheimer's*, *Brain and Mind Matters*, *The Open Neuroimaging Journal*, *International Psychogeriatrics*, *Alzheimer's & Cognitive Disorders*

#### Dr Suraj Samtani

- Member, Australian Psychological Society, Australian Clinical Psychology Association
- Sessional Lecturer (Child and Adolescent Brain Development), NYU Sydney (Feb–July 2023)
- Clinical Psychologist, Sunrise Psychology Group Pty Ltd. (Mar 2023–present)

#### Dr Ashleigh Vella

- Session chair and guest speaker organiser for CHeBA Seminars
- Member of the COSMIC education and training committee
- GBD collaborator
- Member, Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART) and part of the Alliance of Women Alzheimer's Researchers (AWARE), Cognition, Diversity and Disparities, PIA to Elevate Early Career Researcher (PEERs), Reserve Resilience and Protective Factors

## Appendix C: Students

### Current

#### Toyin Abdulsalam Ademola

Scientia PhD student

*Examining the influence of genetic variation across gene expression, methylation, and apolipoproteins in older adults*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Perminder Sachdev, Dr Karen Mather, Dr Anbu Thalamuthu, Dr Anne Poljak, Prof Marc Wilkins (School of Biotechnology and Biomolecular Sciences, UNSW)

#### Fatemeh Amjadimoheb

PhD student

*Circular RNAs as modulators of longevity and healthy aging*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Dr Karen Mather, Dr Anbu Thalamuthu

#### Arnav Bhattacharya

PhD student

*Investigating the presence of the brain microbiota using metagenomic sequencing and a deep proteomic approach*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Dr Karen Mather, Dr Claire Shepherd (School of Biomedical Sciences, UNSW; NeuRA), Dr Fatima El-Assaad (UNSW Microbiome Research Centre (MRC), St George Hospital)

#### Gurpreet Kaur Hansra

PhD student

*Blood biomarkers for the diagnosis and prognosis of vascular dementia*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Perminder Sachdev, Dr Anne Poljak, Dr Tharusha Jayasena

#### Fleur Harrison

PhD student

*Apathy in older community-dwelling persons: improving assessment, investigating its association with immune markers, differentiating from depression and fatigue and modelling its longitudinal course*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Henry Brodaty, Dr Liesbeth Aerts, Dr Katrin Seeher, Prof Adam Guastella, Prof Julian Trollor, Prof Andrew Lloyd

#### Shizuka Hayashi

PhD student

*Enlarged perivascular spaces in the ageing brain, automated detection using deep learning, and analysis of their association with vascular risk factors*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: A/Prof Wei Wen, Dr Jiyang Jiang, Prof Perminder Sachdev, Prof Dadong Wang, A/Prof Yang Song

#### Mai Phuong Ho

PhD student

*Joint structural-functional analysis of mild cognitive impairment at a network level via streamline-surface projection*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: A/Prof Wei Wen, Dr Jiyang Jiang, Prof Perminder Sachdev

#### Nikita Hussein

PhD student

*Impacts of cerebrovascular burden in vascular cognitive impairment across ethnicities: East Asians and Whites*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: A/Prof Wei Wen, Dr Jiyang Jiang, Prof Perminder Sachdev



**Keshuo Lin**

PhD student

*Post-stroke white matter hyperintensity, its progression, relationships with cognitive change*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health and St Vincent's Clinical School, UNSW

Supervisors: Dr Jiyang Jiang, A/Prof Wei Wen

**Ping-Hsiu Lin**

PhD student

*Development, validation and implementation of a computerised tool to assess instrumental activities of daily living*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: A/Prof Simone Reppermund, Dr Katya Numbers, Dr Jacqueline Wesson (University of Sydney)

**Jessica Lo**

PhD student

*Vascular risk factors for cognitive impairment and dementia*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Perminder Sachdev, Dr John Crawford, Dr Heidi Welberry

**Xiaoxi Ma**

PhD student

*Plasma biomarkers of Alzheimer's disease in diverse ethnic communities*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Perminder Sachdev, Dr Anne Poljak, Dr Anbu Thalamuthu

**Adith Mohan**

PhD student

*Influence of ageing on the human brain transcriptome*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Perminder Sachdev, Dr Karen Mather, Dr Anbu Thalamuthu

**Jacqueline Ngo**

PhD student

*Investigating the use of fluid biomarkers for CADASIL*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Perminder Sachdev, Dr Tessa Helman, Dr Jason Kovacic (Victor Chang Cardiac Research Institute), Dr Tharusha Jayasena, Dr Anne Poljak

**Zara Page**

PhD student

*Towards achieving culture-fair neuropsychological assessment for mild Cognitive impairment and dementia in culturally and linguistically diverse (CALD) older Australians*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Henry Brodaty, Dr Nicky Kochan, Dr Karen Croot

**Alice Powell**

PhD student

*Exceptional cognition in old age and interactions with other aspects of successful ageing*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Prof Henry Brodaty, Prof Perminder Sachdev, Prof Jacqueline Close (NeuRA), Prof Yun-Hee Jeon (University of Sydney), Dr Lara Harvey (NeuRA)

**Minal Tanvir**

PhD student

*Factors influencing instrumental activities of daily living measured (IADLs) in older adults with normal cognition, mild cognitive impairment and dementia by a novel, computerised tool*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: A/Prof Simone Reppermund, Dr Katya Numbers, Prof Henry Brodaty

**Devashree Vakil**

PhD student

*Mesenchymal stem cell exosomes as a therapeutic strategy in Alzheimer's disease*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: Dr Anne Poljak, Dr Tessa Helman, A/Prof Kuldip Sidhu, Prof Perminder Sachdev

**Completed****Dr Chao Dong, PhD**

*Genetic and environmental influences on human brain changes in ageing*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisors: A/Prof Wei Wen, Dr Jiyang Jiang, Dr Karen Mather, Dr Anbu Thalamuthu, Prof Perminder Sachdev

Degree conferred: Aug 2024

**Dr Chulkyu Kim, PhD**

*Multi-omics profiling and neurotherapeutic strategies to promote healthy brain ageing in both sexes, with clinical relevance to Alzheimer's disease*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisor: Prof Perminder Sachdev

Degree conferred: Nov 2024

**Dr Jessica Lazarus, PhD**

*Genetic and epigenetic modulation of human lifespan – examining candidate longevity loci associated with the brain*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health

Supervisor: Dr Karen Mather, A/Prof John Kwok

Degree conferred: Dec 2024

**Dr Matthew Lennon, PhD**

*Blood pressure, antihypertensive use and dementia risk – An international harmonisation of longitudinal studies*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health, and St Vincent's Clinical School, UNSW

Supervisors: Prof Perminder Sachdev, Dr Anbu Thalamuthu,

Dr John Crawford, Dr Ben Lam

Degree conferred: Aug 2024

**Dr Annabel Matison, PhD**

*Food for thought – Exploring the links between diet, heritability and depression in middle-aged and older adults*

Discipline of Psychiatry and Mental Health, School of Clinical Medicine, UNSW Medicine and Health, and St Vincent's Clinical School, UNSW

Supervisors: Dr Karen Mather, A/Prof Simone Reppermund, Prof Vicki Flood (University of Sydney)

Degree conferred: Aug 2024

**Honours, ILP and Practicum Exchange Students****Akina Li**

Honours student

*The relationship between cerebral blood flow, small vessel disease and cognition*

Supervisor: Dr Jiyang Jiang, Prof Perminder Sachdev,

A/Prof Wei Wen

**Emily Ma**

Honours student

*Engagement, adherence and cognitive outcomes in a remote Mediterranean diet intervention: a randomised controlled trial*

Supervisors: Prof Henry Brodaty, Dr Katya Numbers, Dr Suraj Samtani, Tiffany Chau

**Tanuj Malhotra**

Honours student (Euroa Centre, POWH)

*Evaluation of long-term patient outcomes of the Mindgardens Functional Neurological Symptom Disorders clinic – a longitudinal follow-up study*

Supervisors: Dr Adith Mohan, Prof Perminder Sachdev

**Kate McEwen**

Honours student

*Living with others buffers the association between frailty and dementia*

Supervisors: Dr Katya Numbers, Dr Suraj Samtani,

Rory Chen

**Bridget (Didge) McGuckian**

ILP student

*Identification of differentially methylated genes  
in super cognitive agers*

Supervisor: Dr Karen Mather

**Lucia Perez**

Research practicum student (Apr – Aug 2024)

University of Santiago de Compostela

Supervisor: Dr Katya Numbers

**Charlie Thelander**

Honours student

*Instrumental activities of daily living (IADL) and cognitive  
decline – implications of adjusting for physical impairment  
when assessing functional ability*

Supervisors: A/Prof Simone Reppermund,  
Dr Katya Numbers

**Jeffrey Tse**

Honours student

*Engagement, adherence and cognition in an online physical  
activity intervention – a substudy of the Maintain Your Brain  
randomised controlled trial*

Supervisors: Prof Henry Brodaty, Dr Katya Numbers,  
Dr Suraj Samtani, Tiffany Chau



## Appendix D: Awards and Promotions

### **Fatemeh Amjadimoheb**

CHeBA Funding Support for HDR students

### **Dr Adam Bentvelzen**

UNSW School of Clinical Medicine Travel Bursary

### **Arnav Bhattacharya**

Kwan Fung and Yuet Fung Healthy Brain Ageing Research Award

### **Professor Henry Brodaty**

Lifetime Achievement Award presented at the 2024 Australian Dementia Research Forum

Winner of the "Best Teacher Undergraduate (Prince of Wales Hospital)" Award; School of Clinical Medicine, Discipline of Psychiatry and Mental Health, UNSW Medicine & Health

### **Dr Russell Chander**

Alzheimer's Association Travel Fellowship

### **Dr Sophia Dean**

Faculty of Medicine Values in Action Excellence Award

### **Fleur Harrison**

CHeBA Funding Support for HDR students

Emerging Researchers Australia (ERA) Travel Grant

UNSW School of Clinical Medicine Conference Travel Bursary

UNSW Student Support Grant

### **Associate Professor Rebecca Koncz**

Promoted from Senior Lecturer at the University of Sydney to Associate Professor and Chair, Intellectual Disability Mental Health, UNSW Sydney

MRFF Grant Award 2024: CIA Ratnamohan, CIB Koncz et al. Network for Coordinated Health-Education Interventions for Emotionally-Based School Avoidance (NiCHE). \$687,869 (2025 – 2026)

University of Sydney Start-Up Funds: CIA Koncz. The Healthy Brain Ageing in Intellectual Disability (HBA-ID) Study. \$75,000 (2024)

### **Dr Matthew Lennon**

Global Neuropsychiatry Group and International Neuropsychiatry Association Trainee Abstract Award for Best Early Career Researcher Presentation

Deans Award for Outstanding PhD Thesis: Blood pressure, antihypertensive use and dementia risk – An international harmonisation of longitudinal studies

Winner of the CHeBA Publication Awards (Category: Early Career Researcher)

2024 Faculty Awards: Conferred Titleholders – Excellence in Research (Clinicians)

### **Ping-Hsiu Lin**

CHeBA Funding Support for HDR students

People's Choice Award at the Inaugural Psychiatry and Mental Health HDR conference

### **Jessica Lo**

CHeBA Funding Support for HDR students

Winner of the CHeBA Publication Awards (Category: Student)

### **Dr Annabel Matison**

First place in the 2024 Australian Association of Gerontology Publication Awards

### **Dr Adith Mohan**

Mindgardens FND Clinic awarded 2024 SESLHD CORE Award for Excellence in the Provision of Mental Health Services; The Clinic was among only five finalists in the Highest Quality Healthcare category in the 2024 NSW Premier's Awards, the peak award for outstanding work in the NSW public sector

Obtained continued Mindgardens seed-funding of \$50,000 and philanthropic donations of \$65,000 to secure another year of the clinic

### **Dr Katya Numbers**

Lead Investigator, Ageing Futures Institute (AFI) Seed Funding \$49,873 (1 year, 2024)

### **Zara Page**

CHeBA Funding Support for HDR students

Alzheimer's Association AAIC Conference Fellowship

### **Professor Perminder Sachdev**

Lishman Oration Award presented at the 2024 International Congress on Neuropsychiatry, hosted by the Royal Australian and New Zealand College of Psychiatrists (RANZCP)

### **Dr Danit Saks**

Kwan Fung and Yuet Fung Healthy Brain Ageing Research Award

School of Clinical Medicine Travel Bursary

### **Dr Suraj Samtani**

Promoted as Lecturer (from Jan 2025)

### **Minal Tanvir**

CHeBA Funding Support for HDR students

### **Devashree Vakil**

Josh Woolfson Memorial Scholarship

McConaghy Prize for Best 3-minute Thesis, awarded at the inaugural Psychiatry and Mental Health HDR Conference

### **Dr Ashleigh Vella**

AAIC 2024 Travel Grant

## Appendix E: Research Grants & Funding

### Grants

#### Mapping the neurobiological risks and consequences of alcohol use in adolescence and across the lifespan

Funding Source: University of Sydney / National Institutes of Health Subaward

Project ID: RG240324

Investigator/s: Louise Mewton, Wei Wen\*, Lindsay Squeglia, Matthew Sunderland

Duration: 5 years; Sep 2023 – Apr 2028

Total Funds: USD1,275,511 (\*USD184,304 / \$282,458.24 only)

#### The Australian Dementia Network (ADNeT): Bringing together Australia's dementia stakeholders – interim payment

Funding Source: University of Melbourne / NHMRC Boosting Dementia Research Grant Shared Grant – Department of Health and Aged Care Contribution

Project ID: RG234243

Investigator/s: Christopher Rowe, Perminder Sachdev\*, Sharon Naismith, Michael Breakspear, Henry Brodaty, Kaarin Anstey, Ralph Martins, Stephanie Ward, James Vickers, Colin Masters

Duration: 1 year; 2024

Total Funds: \*\$298,936

#### The Mindgardens Functional Neurological Disorders (FND) Clinic – evaluation of feasibility and effectiveness of an interdisciplinary tertiary FND clinic with a nested brief psycho-behavioural intervention study

Funding Source: Mindgardens Neuroscience Network / Translational Research Grants

Project ID: RG233718

Investigator/s: Adith Mohan

Duration: 3 years; Oct 2023 – Dec 2025

Total Funds: \$200,000

#### An Integrated Method for the Assessment and Monitoring of Dementia and Cognitive Impairment: The Cognition - Optimised, Digitised, And Harmonised (C-ODH) platform

Funding Source: Monash University / MRFF Dementia Ageing and Aged Care Mission Shared Grant

Project ID: RG232611

Investigator/s: Inga Mehrani

Duration: 5 years; Jul 2023 – Jun 2027

Total Funds: \$18,933.20

#### Predicting all-cause dementia risks in low- and middle-income countries

Funding Source: Alzheimer's Disease Data Initiative / William H. Gates, Sr. Fellowship

Project ID: RG232396

Investigator/s: Jiyang Jiang

Duration: 2 years; Aug 2023 – Aug 2025\*

Total Funds: USD100,000 (\$154,202)

\*Extended to Oct 2025



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**The Australian Consortium for Aged Care – Quality Measurement Toolbox (ACAC-QMET): Improving quality of care through better measurement and evaluation**

Funding Source: South Australian Health and Medical Research Institute Limited (SAHMRI) / MRFF Dementia Ageing and Aged Care Mission Shared Grant

Project ID: RG223129

Investigator/s: Stephanie Ward, Maria Inacio, Johanna Westbrook, Len Gray et al.

Duration: 4 years; Jun 2022 – May 2025

Total Funds: \$152,886

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**A randomised controlled trial for a co-designed social cognitive skills intervention for older adults with memory concerns**

Funding Source: Dementia Australia Research Foundation / DGP Post-doctoral Fellowships

Project ID: RG222862 / RG222862-A

Investigator/s: Suraj Samtani

Duration: 4 years; Jun 2023 – Jun 2026

Total Funds: \$405,000

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**Living with uncertainty: What information do people with mild cognitive impairment and families need and want after diagnosis?**

Funding Source: Australian Association of Gerontology / The Hal Kendig Research Development Program

Project ID: RG222382

Investigator/s: Meredith Gresham

Duration: 3 years; Nov 2022 – Nov 2024

Total Funds: \$17,979

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**A global epidemiology of cognitive impairment and dementia due to Alzheimer's disease and related disorders: the COSMIC collaboration**

Funding Source: National Institutes of Health (NIH) / Research on Current Topics in Alzheimer's Disease and Its Related Dementias

Project ID: RG220087

Investigator/s: Perminder Sachdev, Louisa Jorm, Louise Mewton, Nicole Kochan, Darren Lipnicki, John Crawford, Vibeke Catts, Wei Wen, Karen Mather, Anbu Thalamuthu, Rory Chen, Jiyang Jiang, Ben Chun Pan Lam

Duration: 5 years; Sep 2023 – Jun 2028

Total Funds: USD7,270,286 (\$11,185,055.40)

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**A randomised trial of a carer end of life planning intervention (CELPI) in people dying with dementia**

Funding Source: University of Western Australia / NHMRC Targeted Research Grant Shared Grant

Project ID: RG214288

Investigator/s: Christopher Etherton-Beer, Lynn Chenoweth\*, Kirsten Howard, Tony Celenza, Meera Agar, Glen Arendts, Katrina Spillsbury, Jane Pearce, Linda Schnitker, Stephan Asha, Barbara Hayes

Duration: 4 years; Oct 2021 – Sep 2025

Total Funds: \$1,486,231 (\*\$98,802 only)

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**Understanding intergenerational change in the health and well-being of older adults and its effects: The Sydney Memory and Ageing Study 2 (MAS2)**

Funding Source: NHMRC / Clinical Trials and Cohort Studies Grants

Project ID: RG212928

Investigator/s: Henry Brodaty, Perminder Sachdev, Colin Masters, Maria Fiatarone Singh, Annette Dobson, Aletta Schutte, Henry Cutler, Carol Brayne, Nicole Kochan, Katya Numbers, Karen Mather, Wei Wen, Katherine Samaras, Heidi Welberry, Ben Chun Pan Lam, Fleur de Crespigny, Michael Schapiro, Suraj Samtani

Duration: 5 years; Oct 2022 – Sep 2027

Total Funds: \$3,304,760.16

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**Exceptional cognition in old age and interactions with other aspects of successful ageing. Postgraduate Scholarship for Dr Alice Powell**

Funding Source: NHMRC / Postgraduate Scholarships

Project ID: RG212082

Investigator/s: Henry Brodaty, Alice Powell

Duration: 3 years; Jan 2022 – Sep 2025

Total Funds: \$124,846.60

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**Development, validation and implementation of a computerised tool to assess instrumental activities of daily living**

Funding Source: NHMRC / MRFF Dementia Ageing and Aged Care Mission

Project ID: RG210254

Investigator/s: Simone Reppermund, Henry Brodaty, Katya Numbers, Lindy Clemson, Nicole Kochan, Brian Draper, Kim Delbaere, Julian Trollor, Jeewani Ginige, Jacqueline Wesson, Perminder Sachdev, Ben Chun Pan Lam, Quoc Truong, Stephanie Ward, Claudia Woolf, Katharina Luttenberger

Duration: 5 years; Jun 2021 – May 2025\*

Total Funds: \$1,252,778

\*Extended to May 2026

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**Vascular contributions to Dementia (VCD-CRE): a transformative approach to reducing the burden of cognitive disorders**

Funding Source: NHMRC / Centres of Research Excellence

Project ID: RG203943

Investigator/s: Perminder Sachdev, Mark Parsons, Amy Brodtmann, Christopher Levi, Katherine Samaras, Jason Kovacic, Michael O'Sullivan, Kenneth Butcher, Andrew Bivard, Nicole Kochan, Velandai Srikanth, Karen Mather, Wei Wen, Anne Poljak, Deborah Remfry, Maria Fiatarone Singh, Matthew Pase, Dennis Chang, Veer Gupta, Vivek Gupta

Duration: 5 years; Nov 2021 – Oct 2026

Total Funds: \$3,000,000

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**Food for thought: preventing decline and improving cognition through diet and dietary advice in older people at risk (PURPLE project)**

Funding Source: University of Wollongong / DCRC World Class Projects

Project ID: RG203154

Investigator/s: Karen Charlton, Henry Brodaty\*, Kaarin Anstey, Steven Roodenrys, Katrina Weston-Green, Katherine Kent, Vida Bliokas, Lyn Phillipson

Duration: 3 years; Jul 2021 – Dec 2024

Total Funds: \$599,552 (\*\$118,440 only)

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**e-DiVA (empowering dementia carers with an iSupport visual assistant)**

Funding Source: National Ageing Research Institute (NARI) / NHMRC e-ASIA Joint Research Program

Project ID: RG203150

Investigator/s: Tuan Nguyen, Henry Brodaty\*, Lily Xiao, Bianca Brijnath, Adrian Esterman, Susan Kurre, Maria Crotty, Penelope Schofield, Sunil Bhar, Andre Andrade, Nilmini Wickramasinghe, Libby Roughead, Thu Ha Dang, Ron Sinclair

Duration: 4 years; Jul 2021 – Jun 2025

Total Funds: \$1,883,366 (\*\$58,265 only)

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**The impact of the environment and pollution on cognitive health (EPOCH): building the knowledge base through international collaboration**

Funding Source: Australian Catholic University / UKRI-NHMRC Built Environment Prevention Research Scheme Shared Grant

Project ID: RG201875 / RG201875-A

Investigator/s: Kaarin Anstey, Perminder Sachdev\*, Fiona Matthews, Luke Knibbs, Bin Jalaludin, Ester Cerin, Suzanne Mavoa, Yu-Tzu Wu, Matthew Prina, Benjamin Barratt

Duration: 3 years; Oct 2020 – Sep 2024

Total Funds: \$681,240 (\*\$116,925 only)

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**Developing robust biomarkers for vascular cognitive impairment and dementia: adding V to the ATN research framework**

Funding Source: NHMRC / Investigator Grant

Project ID: RG193540 / RG193540-A

Investigator/s: Perminder Sachdev

Duration: 5 years; Jan 2021 – Dec 2025

Total Funds: \$3,289,215

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**The APPLE Tree programme: active prevention in people at risk of dementia through lifestyle behaviour change and technology to build resilience**

Funding Source: Economic & Social Research Council (ESRC)-NIHR Dementia Research Initiative Shared Grant, University College London/ Queen Mary University of London

Project ID: RG191662 / RG245518

Investigator/s: Claudia Cooper, Helen Kales, Henry Brodaty\*, Penny Rapaport, Miguel Rio, Anne-Marie Minihane, Irene Petersen, Julie Barber, Iain Lang, Rachael Hunter, Zuzana Walker, Nicholas Bass, Natalie Marchant, Jonathan Huntley, Jennifer Wenborn, Joanne Rodda, Paul Higgs, Kate Walters, Sarah Morgan-Trimmer, Elisa Aguirre, Karen Ritchie, Alexandra Burton

Duration: 5 years; Jan 2019 – Dec 2024

Total Funds: £7,738.43 (\*\$13,863.19 only)

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**Improving health outcomes, well-being and care of people living with dementia in the hospital setting**

Funding Source: NHMRC / Dementia Collaborative Research Centre

Project ID: RG180842-E

Investigator/s: Lynn Chenoweth, Henry Brodaty, Claire Burley, Zhixun Liu, Anna Williams, Genevieve Maiden, Jane McGuire, Patricia Reyes

Duration: 2 years; Jan 2021 – Dec 2023\*

Total Funds: \$536,000

\*Extended to Jun 2024

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**Healthier drinking choices and cognitive decline in older risky drinkers**

Funding Source: NHMRC / Dementia Collaborative Research Centre

Project ID: RG180842-D

Investigator/s: Louise Mewton, Perminder Sachdev, Nicole Kochan, Maree Teeson, Nicola Newton, Matthew Sunderland, Cath Chapman, Andrew Baille

Duration: 4 years; Jan 2020 – Dec 2023\*

Total Funds: \$525,516.25

\*Extended to Jun 2024

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**The Australian Dementia Network (ADNeT): Bringing together Australia's dementia stakeholders**

Funding Source: NHMRC / Boosting Dementia Research

Project ID: RG181548 / RG191015 (UNSW Central Contribution)

Investigator/s: Christopher Rowe, Perminder Sachdev\*, Sharon Naismith, Michael Breakspear, Henry Brodaty, Kaarin Anstey, Ralph Martins, Stephanie Ward, James Vickers, Colin Masters

Duration: 5 years; Jul 2018 – Jun 2024\*

Total Funds: \$18,000,000 (\*\$1,456,591.33)

\*Extended to Jun 2025



**Clarify risk and protective factors for dementia with the  
interplay of genes and environment in multiple studies  
(IGEMS) consortium**

Funding Source: University of Southern California /  
National Institutes of Health (NIH) Project  
Subaward

Project ID: RG182556

Investigator/s: Nancy Pedersen, Margaret Gatz, Vibeke  
Catts, Perminder Sachdev

Duration: 6 years: Jul 2018 – Mar 2025

Total Funds: \$189,891.95

**Philanthropic**

**AusCADASIL**

Funding Source: Sachdev Foundation

Project ID: PS73216\_PS73217

Awardee/s: Perminder Sachdev

Total Funds: \$111,975 (2024)

**Microbiome of the brain**

Funding Source: Mostyn Family Foundation

Project ID: PS72200\_PS72235

Awardee/s: Karen Mather

Total Funds: \$90,000 (2024–2026)

**Social determinants of dementia**

Funding Source: Kennards Hire Foundation Pty Ltd

Project ID: PS70838\_PS708851

Awardee/s: Perminder Sachdev, Henry Brodaty

Total Funds: \$1,743,553.50 (2023–2027)

**The application of nanotechnology to the diagnosis  
of Alzheimer’s disease and vascular dementia**

Funding Source: Anonymous

Project ID: PS63654\_PS63673

Awardee/s: Perminder Sachdev

Total Funds: \$250,000 (2021–2025)

## Other

### The Healthy Brain Ageing Fund

Funding Source: Miscellaneous Donor Contributions

Project ID: PS22384\_PS41631

Awardees: Henry Brodaty, Perminder Sachdev

Duration: Ongoing

Total Funds: \$124,792\*

\*As of 31 Dec 2024

### The Dementia Momentum

Funding Source: Miscellaneous Donor Contributions

Project ID: PS38235\_PS38252

Awardees: Henry Brodaty, Perminder Sachdev

Duration: Ongoing

Total Funds: \$675,733

\*As of 31 Dec 2024

### Centre for Healthy Brain Ageing Event Spending Fund

Funding Source: Miscellaneous Sponsorship Contributions

Project ID: PS33379\_PS33397

Awardees: Henry Brodaty, Perminder Sachdev

Duration: Ongoing

Total Funds: \$12,288

\*As of 31 Dec 2024

### The Kwan Fung & Yuet Ying Fung Healthy Brain Ageing Research Award Fund

Funding Source: Late Kwan Fung & Yuet Ying Fung Estate

Project ID: PS36983\_PS37138

Awardees: Perminder Sachdev, Henry Brodaty

Duration: Ongoing

Total Funds: \$120,077\*

\*As of 31 Dec 2024

### The Josh Woolfson Memorial Scholarship Fund

Funding Source: Beryl (Liz) Woolfson

Project ID: PS42948\_PS42948/PS42978

Awardees: Perminder Sachdev, Henry Brodaty

Duration: Ongoing

Total Funds: \$379,367\*

\*As of 31 Dec 2024

## Appendix F: Financial Statement

Statement of Financial Performance for the Year Ended 31 December 2024

	2024	2023
<b>Revenue</b>		
Faculty Contributions	280,179	198
UNSW Contributions	119,450	278,764
University Contributions	399,630	278,963
Donations & Bequest-draw downs	1,324,952	1,767,242
NHMRC Revenue	3,046,052	3,036,990
ARC Revenue	0	0
Other Restricted Revenue	1,810,341	518,388
Other Revenue	37,768	13,685
<b>Total Revenue</b>	<b>6,618,741</b>	<b>5,615,267</b>
<b>Costs</b>		
<b>People costs</b>	<b>5,181,634</b>	<b>4,872,141</b>
Scholarship Expenses	130,064	132,228
Contract & Consulting Services	170,084	302,742
Entertainment	3,201	0
Marketing	9,168	9,607
Utilities	1,399	588
Repair & Maintenance	755	293
Consumables	114,037	136,194
Travel	87,125	113,345
Equipment	10,621	35,351
Software License Fees	12,653	6,240
Hire /Rental/Lease (Exp)	5,238	1,570
Licence Fees (incl. Library Subs)	363	205
Internal expenses	326,373	100,639
Other	182,943	83,117
<b>Non-people costs</b>	<b>1,054,025</b>	<b>922,119</b>
Minor Capital Expenditure	0	0
<b>Total Costs</b>	<b>6,235,660</b>	<b>5,794,260</b>
<b>Operating Result after minor capex</b>	<b>383,082</b>	<b>(178,994)</b>
Opening Balance	2,466,181	1,652,665
Prior Year Adjustments		992,509
<b>Closing Balance</b>	<b>2,849,262</b>	<b>2,466,181</b>

## Commentary

Faculty Contributions - Operating funds provided by the faculty are budget allocations, with no revenue transferred to CHeBA.

### **UNSW Contributions:**

- funding provided to CHeBA from UNSW as a strategic investment in the Centre's research activities.
- funding awarded to CHeBA from UNSW through various competitive scheme supporting research activities and infrastructure.

External research revenue other than NHMRC/ARC.



## Appendix G: Publications

### Journal Articles

1. Balez R, Stevens CH, Lenk K, Maksour S, Sidhu K, Sutherland G, Ooi L. Increased Neuronal Nitric Oxide Synthase in Alzheimer's Disease Mediates Spontaneous Calcium Signaling and Divergent Glutamatergic Calcium Responses. *Antioxid Redox Signal*. 2024 Aug; 41(4-6):255-77. DOI: 10.1089/ars.2023.0395. PMID: 38299492 [Epub 2024 Mar 20]
2. Bilgrami A, Aghdaee M, Gu Y, Cutler H, Numbers K, Kochan NA, Sachdev PS, Brodaty H. Patterns in health care use and intensity for diagnosed and undiagnosed cognitive impairment in the older Australian community: implications for primary care management. *SSM – Population Health*. 2024 Jul 2:101693. DOI: 10.1016/j.ssmph.2024.101693
3. Błaszczewicz M, Szcześniak D, Ciulkowicz M, Kowalski K, Rymaszewska JE, Bartosz B, Bulińska K, Karczewski M, Brodaty H, Rymaszewska J. Biomedical knowledge of dementia is not enough to counteract its stigma - quantitative research among future medical and social care staff in Poland. *Aging Ment Health*. 2024 Oct; 28(10):1317-1325. DOI: 10.1080/13607863.2024.2320139. PMID: 38407168 [Epub 2024 Feb 26]
4. Błaszczewicz M, Szcześniak D, Ciulkowicz M, Rymaszewska JE, Low LF, Brodaty H, Rymaszewska J. Fostering social health of people with dementia: evaluation of the Razem przed siebie dementia awareness campaign in Poland. *Front Public Health*. 2024; 12:1418867. DOI: 10.3389/fpubh.2024.1418867. PMID: 39234073 / PMC11371569 [Epub 2024 Aug 21]
5. Boen R, Kaufmann T, van der Meer D, ..., Brodaty H, ..., Mather KA, ..., Sachdev PS, ..., Thalamuthu A, et al. Beyond the Global Brain Differences: Intra-individual Variability Differences in 1q21.1 Distal and 15q11.2 BP1-BP2 Deletion Carriers. *Biol Psychiatry*. 2024 Jan 15; 95(2):147-60. DOI: 10.1016/j.biopsych.2023.08.018. PMID: 37661008 [Epub 2023 Sep 3]
6. Cerin E, Soloveva MV, Molina MA, Schroers RD, Knibbs LD, Akram M, Wu YT, Mavoa S, Prina M, Sachdev PS, Sorensen Catts V, Jalaludin B, Poudel G, Symmons M, Barnett A, Hamidul Huque M, Leung Y, Cherbuin N, Anstey KJ. Neighbourhood environments and cognitive health in the longitudinal Personality and Total Health (PATH) through life study: A 12-year follow-up of older Australians. *Environ Int*. 2024; Aug 25; 191:108984. DOI: 10.1016/j.envint.2024.108984. PMID: 39208561 [Epub 2024 Aug 25]
7. Chan LLY, Delbaere K, Numbers K, Lam B, Menant J, Sturnieks DL, Trollor JN, Brodie MA, Lord SR. Poor mobility and lower limb weakness are associated with three distinct depressive symptom trajectories over 6 years in older people. *Australas J Ageing*. 2024 Jun; 43(2):333-42. DOI: 10.1111/ajag.13273. PMID: 38217882 [Epub 2024 Jan 13]
8. Chander RJ, Numbers K, Grainger SA, Cleary R, Mather KA, Kochan NA, Brodaty H, Henry JD, Sachdev PS. Differential Social Cognitive Performance in Older Adults With Mild Cognitive Impairment and Dementia. *Am J Geriatr Psychiatry*. 2024 Aug 24. DOI: 10.1016/j.jagp.2024.08.008. PMID: 39266407 [Epub 2024 Aug 24]
9. Chen R, Catts VS, Vella A, Jose JCS, Bauermeister S, Bauermeister J, Squires E, Thompson S, Gallacher J, Sachdev PS. DataRepExp: a R shiny Application that makes Data FAIR for Data Repositories. *The Journal of Open Source Software*. 2024 Sep; 9(101):6693. DOI: 10.21105/joss.06693 [Epub 2024 Sep 30]
10. Chen S, Chen S, Hanewald K, Si Y, Bateman H, Lin B, Xu X, Samtani S, Wu C, Brodaty H. Social environment, lifestyle, and genetic predisposition with dementia risk: A long-term longitudinal study among older adults. *J Gerontol A Biol Sci Med Sci*. 2024 Jul 1; 79(7):glae128. DOI: 10.1093/gerona/glae128. PMID: 38733088 [Epub 2024 May 11].
11. Chen Y, Lu P, Wu S, Yang J, Liu W, Zhang Z, Xu Q. CD163-Mediated Small-Vessel Injury in Alzheimer's Disease: An Exploration from Neuroimaging to Transcriptomics. *Int J Mol Sci*. 2024 Feb 14; 25(4):2293. DOI: 10.3390/ijms25042293. PMID: 38396970 [Epub 2024 Feb 14]

12. Chenoweth L. Supporting shared decision-making in medicines use with people living with dementia and their carers. *Nurs Older People*. 2024 Jan 24. DOI: 10.7748/nop.2024.e1458. PMID: 38263893 [Epub 2024 Jan 24]
13. Chenoweth L, Burley C, Cook J, Cheah SL, Reyes P, Maiden G, McGuire J, McCade D, Brodaty H, Sukhupure M, Harrison F, Williams A. Improving Healthcare Quality and Clinical Outcomes for Persons with Dementia in the Sub-Acute Hospital Through Person-Centered Care Practice. *J Alzheimers Dis*. 2024; 98(2): 619-28. DOI: 10.3233/jad-231056. PMID: 38427481
14. Christiansen C, Potier L, Martin TC, Villicaña S, Castillo-Fernandez JE, Mangino M, ..., Sachdev PS, Mather KA, et al. Enhanced resolution profiling in twins reveals differential methylation signatures of type 2 diabetes with links to its complications. *EBioMedicine*. 2024 May; 103:105096. DOI: 10.1016/j.ebiom.2024.105096. PMID: 38574408 [Epub 2024 Apr 4]
15. Coe S, Cossington J, Collett J, Meaney A, Mavrommati F, Ng Y, Izadi H, Wade W, Pindus DM, Bushnell O, Whaymand L, Theologis T, Swift E, Akgul E, Allen S, Dawes H. The effect of breaking sitting time with physical activity breaks on cognitive performance in young people with cerebral palsy: an exposure response cross-over feasibility design. *Transl Exerc Biomed*. 2024. DOI: 10.1515/teb-2024-2005 [Epub 2024 Mar 22]
16. Connors MH, Gibbs J, Large MM, Halligan PW. Delusions in postpartum psychosis: Implications for cognitive theories. *Cortex*. 2024 Aug; 177:194-208. DOI: 10.1016/j.cortex.2024.04.018. PMID: 38875734 [Epub 2024 May 24]
17. Connors MH, Kinder J, Swift E, Kanaan RA, Sachdev PS, Mohan A. Functional neurological disorder clinics in Australasia: A binational survey. *J Clin Neurosci*. 2024 Jun 8; 126:80-5. DOI: 10.1016/j.jocn.2024.05.043. PMID: 38852427 [Epub 2024 Jun 8]
18. Connors MH, Quinto L, Deeley Q, Halligan PW, Oakley DA, Kanaan RA. Hypnosis and suggestion as interventions for functional neurological disorder: A systematic review. *Gen Hosp Psychiatry*. 2024; Jan-Feb; 86:92-102. DOI: 10.1016/j.genhosppsych.2023.12.006. PMID: 38154334 [Epub 2023 Dec 14]
19. de Kort FAS, Vinke EJ, van der Lelij EJ, Anblagan D, Bastin ME, Beiser A, Brodaty H, Chaturvedi N, Cheng B, Cox SR, DeCarli C, Enzinger C, Fletcher E, Frayne R, de Groot M, Huang F, Ikram MA, Jiang J, Lam BYK, Maillard P, Mayer C, McCreary CR, Mok V, Maniega SM, Petersen M, Roshchupkin G, Sachdev PS, Schmidt R, Seiler S, Seshadri S, Sudre CH, Thomalla G, Twerenbold R, Valdés Hernández M, Vernooij MW, Wardlaw JM, Wen W, Kuijff HJ, Biessels GJ, Biesbroek JM. Cerebral white matter hyperintensity volumes: Normative age- and sex-specific values from 15 population-based cohorts comprising 14,876 individuals. *Neurobiol Aging*. 2025 Feb; 146:38-47. DOI: 10.1016/j.neurobiolaging.2024.11.006. PMID: 39602940 [Epub 2024 Nov 20]
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## Appendix H: Presentations

### Conferences

1. Bentvelzen AC, Kochan NA, Sachdev PS, VasCog-2 Neuropsychological Consortium. Consensus harmonised neuropsychological assessment and standards for Vascular Cognitive Impairment and Dementia: the VASCOG-2-NP. *Australian Clinical Neuropsychology Association Conference*. 28 Sep 2024; Brisbane, QLD, Australia.
2. Bentvelzen AC, Kochan NA, Sachdev PS, VasCog-2 Neuropsychological Consortium. Harmonised neuropsychological assessment for Vascular Cognitive Disorders: a Delphi consensus study. Online poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
3. Brodaty H. Plenary Speaker. How Ready is Australia for Dementia Disease Modifying Treatments. *Dementia Trials Australia Annual Conference*. Oct 11 2024; Sydney, NSW, Australia.
4. Brodaty H. Plenary Speaker. Managing Agitation in the Older Person with Dementia. *Hunter Geriatric Conference*. Oct 25 2024; Newcastle, NSW, Australia.
5. Burns K, Casey A-N, Brodaty H. Evidence-based comprehensive overview of research quality, effectiveness of interventions, and practice-based principles for clinicians supporting people who present with changed behaviours associated with dementia and for family care partners. Poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
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11. Chander RJ, Numbers KT, Chen R, Samtani S, Kochan NA, Brodaty H, Sachdev PS. Social, environmental, and cognitive correlates of community-dwelling older adults coping poorly with reduced social contact: A quasi-experiment set in Australia's COVID-19 lockdown in 2020. Lightning oral presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.

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14. [Harrison F](#), Mortby ME, Guastella AJ, Trollor JN, Mather KA, Sachdev PS, Brodaty H. Apathy and fatigue, but not depression, associated with inflammatory biomarkers in older adults. Online poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
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20. [Koncz R](#). Dementia assessment in people with intellectual disability. *60<sup>th</sup> Annual RANZCP Congress*. 19–23 May 2024; Canberra, ACT, Australia.
21. [Koncz R](#). Symposium Chair and Presenter. Clinical conundrums: neuropsychiatric presentations among people with intellectual disability. *60<sup>th</sup> Annual RANZCP Congress*. 19–23 May 2024; Canberra, ACT, Australia.
22. [Lo JW](#). Invited Speaker. Risk Factors and Cognitive Trajectories in Post-Stroke Cognitive Decline: Insights from the STROKOG Consortium. *International Conference Stroke Update (ICSU)*. 28–30 Nov 2024; Seoul, Korea.
23. [Mather KA](#), Thalamuthu A, Lipnicki DM, Sachdev PS, COSMIC Consortium. The genetic epidemiology of dementia in under-represented ethnic communities using studies of the COSMIC Consortium (Featured Research Session). *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
24. [Mather KA](#). Keynote speaker. Genetics, Epigenetics, Transcriptomics and Hallmarks of the Ageing Brain. *IBRO School 2024*. Aug 2024; Universiti Putra, Kuala Lumpur, Malaysia.
25. [Mohan A](#). Evidence Review in Emergency Medicine. *PHEMC 2024 conference*. 29 Feb 2024; Wollongong, NSW, Australia
26. [Mohan A](#). Mindgardens FND Clinic – baseline data. Poster presentation at the *5<sup>th</sup> International Conference on Functional Neurological Disorder*. 9 Jun 2024; Verona, Italy.
27. [Mohan A](#). The narrative approach to formulation in FND: The Mindgardens FND clinic approach. *2<sup>nd</sup> Annual CARE FND Functional Neurological Disorder Symposium Day*. Hosted by the RANZCP Section of Neuropsychiatry; 26 Oct 2024; Melbourne, VIC, Australia.
28. [Numbers KT](#). Invited Speaker. Ageism in the workplace and healthcare settings. *Tackling Stigma Conference*. 21–22 Nov 2024; UNSW Sydney, Australia.
29. [Numbers KT](#), Chander RJ, Chen J, Brodaty H. Exploring relationships among neuropsychiatric symptoms, subjective cognitive complaints, cognitive performance, and incident dementia: Findings from the Sydney Memory and Ageing

- Study. Online poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
30. [Numbers KT](#), Chander R, Chen J, Brodaty H. Invited Speaker. Relationships Among Neuropsychiatric Symptoms, Subjective Cognitive Complaints, and Cognitive Outcomes. *Australasian Neuropsychiatric Symptoms Symposium (ANSS)*. Feb 2024; Sydney, NSW, Australia.
  31. [Numbers KT](#), Sabatini S, Kochan NA, Sachdev PS, Brodaty H. Cross-sectional and longitudinal associations between cognitive domains and attitudes to ageing in older Australians. Poster presentation. *Australian Dementia Research Forum (ADRF)*. 3–5 Jun 2024; Gold Coast, QLD, Australia.
  32. [Page ZA](#), Croot K, Brodaty H, Kochan NA. Development and validation of a new measure *Characterising Language Experience and Acculturation (CLEAR-Q)* to inform the cognitive assessment of culturally and linguistically diverse older adults. Poster presented at the *Australian Dementia Research Forum (ADRF)*. 3–5 Jun 2024; Gold Coast, QLD, Australia.
  33. [Page ZA](#), Croot K, Lam BCP, Brodaty H, Kochan NA. Development and validation of a new measure *Characterising Language Experience and Acculturation (CLEAR-Q)* to inform the cognitive assessment of culturally and linguistically diverse older adults. Poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
  34. [Sachdev P](#). Invited Chair. The global epidemiology of dementia: meeting the challenges of ethnogeographic diversity and inequity. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia USA and online.
  35. Sachdev PS, [Bentvelzen AC](#), VasCog-2 Criteria Consortium. Revised diagnostic criteria for Vascular Cognitive Disorders: the VASCOG-2 criteria. Virtual poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA and online.
  36. [Saks D](#). Global effort to improve understanding of CADASIL - a monogenic cause of vascular dementia. Virtual poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
  37. [Saks D](#). Global CADASIL Collaboration. *CADASIL Symposium*. 28–29 Nov 2024; Paris, France.
  38. [Samtani S](#), Casey A-N, Thalamuthu A, Lam B, Catts VS, Brodaty H, Sachdev PS. Genetic and environmental contributions to the social connections of older adults and performance in specific cognitive domains in the Older Australian Twins Study. Poster presentation. *Australian Dementia Research Forum (ADRF)*. 3–5 Jun 2024; Gold Coast, QLD, Australia and online.
  39. Samtani S, Casey A-N, Thalamuthu A, Lam BCP, Catts VS, [Brodaty H](#), Sachdev PS. Social connection profiles of older adults as both heritable and modifiable influences on brain health: data from the Older Australian Twins Study. Poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
  40. [Samtani S](#), Mahalingam G, Wen W, Brodaty H, Sachdev PS. Associations of positive and negative social connections with brain health in UK Biobank data. Online poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
  41. [Reppermund S](#), Kalam S, Numbers KT, Lipnicki DM, Lam BCP, Brodaty H. Late-life depression and olfactory dysfunction as risk factors for dementia. *Society for Mental Health Research Annual Conference*. 6–8 Nov 2024; Sydney, NSW, Australia.
  42. [Vella AS](#), Selwood A, Catts VS, Numbers KT, Lee T, Thalamuthu A, Karlsson IK, Reynolds CA, Franz CE, Kremen WS, Gatz M, Sachdev PS. Subjective Cognitive Complaints: Heritability and Correlations with Dementia Diagnosis, Depression and Memory, Across Multiple Twin Studies. Poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.

43. [Vella AS](#), Visontay R, Lipnicki DM, Nichols E, Steinmetz J, Lipton RB, Llibre-Rodriguez JJ, Katz MJ, Scarmeas N, Guerchet M, Preux P-M, Ritchie K, Carriere I, Petersen MS, Skoog I, Rolandi E, Kim KW, Riedel-Heller SG, Shahar S, Ganguli M, Anstey KJ, Lobo A, Crawford JD, Mewton L, Sachdev PS, other COSMIC authors. The incidence of all-cause dementia and Alzheimer's disease from around the world: data from the COSMIC collaboration. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
44. [Vella AS](#), Incidence of all cause dementia from regions around the world, Data from the COSMIC consortium. Invited presentation as featured research for the DPUK Statistics Course, hosted by Oxford University. Nov 2024; online.
45. [Vella AS](#), Incidence of all cause dementia from regions around the world, data from the COSMIC consortium. *Ancillary meeting AAIC*. 28 Jul–1 Aug 2024; Philadelphia, USA.
46. [Vella AS](#), Invited guest speaker. Industry vs academia. How to decide? [Dementia Research Saloon Podcast](#); Jul 2024.
47. Welberry H, Ku L-JE, Shih STF, Jorm L, Singh MAF, Valenzuela M, Ginige JA, Heffernan M, Chau T, [Brodaty H](#). Cost-effectiveness of an online randomised controlled trial for dementia prevention, Maintain Your Brain, to improve cognition and lower dementia risk after 3 years. Poster presentation. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.
48. [Ward SA](#), Lin X, Wallis K, Brodaty H, Rowe CC, Masters CL, Naismith SL, Ahern S. Real-World Data on the diagnosis of Alzheimer's Disease in routine clinical practice: Insights from the Australian Dementia Network "ADNeT" Registry. *Alzheimer's Association International Conference (AAIC)*. 28 Jul–1 Aug 2024; Philadelphia, USA.

## Lectures, Seminars & Workshops

1. [Bhattacharya A](#), Shepherd C, El-Assaad, Mather KA. Finding Bugs in the Brain: The Multi-Omic way. Poster presentation. Inaugural Psychiatry and Mental Health HDR conference. 20 Nov 2024; UNSW Sydney, Australia.
2. [Bhattacharya A](#). Become an Engineer with a Healthy Mind –Understanding the importance of mental health for freshers. Invited speaker. *Induction Programme 2024* for the Cooch Behar Government Engineering College, Cooch Behar, West Bengal, India. 7 Sep 2024; online.
3. [Brodaty H](#). Invited Speaker. Reducing your risk of dementia: practical advice. *Wolper Wellbeing Program hosted by Dementia Support Australia*. 4 Sep 2024; online.
4. [Brodaty H](#). Invited Keynote speaker. Episode 3: Depression recognition and management "Improving mental health for older people in residential aged care services". *La Trobe National Mental Health Webinar Series*. 3 Jul 2024; online, La Trobe University.
5. [Brodaty H](#). Update on helping people with dementia. Webinar for Dementia Australia staff (N=130); 3 Sep 2024.
6. [Brodaty H](#). Reducing your risk of dementia. Presentation at Wolper Jewish Hospital (N= 450); 4 Sep 2024.
7. [Brodaty H](#). The future of dementia. Presentation for Professorial Grand Rounds, Westmead Hospital. 5 Sep 2024; Sydney, NSW, Australia.
8. [Brodaty H](#). Management of dementia. Presented to the Old Age Psychiatry Advanced Trainees. 11 Sep 2024.
9. [Brodaty H](#). Practical Diagnosis and Management of Dementia. Presented at the *Vietnamese Medical Association of Australia*. 13 Oct 2024.
10. [Brodaty H](#). Update on dementia. Webinar for the Old Age Psychiatry trainees. Oct 16, 2024.
11. [Brodaty H](#). Psychiatry of Neurodegenerative Diseases in Late Life. Presented to UNSW Medicine 1 & 2 students. 17 Oct 2024.



12. Brodaty H. North Shore Temple Film Club “Here Today”. Community online presentation. 20 Oct 2024.
13. Brodaty H. Thriving, Connecting and Ageing – Let’s Talk About It. *Older People’s Mental Health Annual Forum*. 23 Oct 2024; Sydney, NSW, Australia.
14. Harrison F. Invited Speaker. Apathy in community-dwelling older adults. Older Persons’ Mental Health Service, Prince of Wales Hospital. 4 Dec 2024 online.
15. Hosoki S. Review of vascular dementia markers. *CHeBA Seminar*. 13 Mar 2024; online.
16. Hosoki S. Brain blood flow in the UK Biobank cohort. *CHeBA Seminar*. 13 Mar 2024; online.
17. Jayasena T. Developing a panel of plasma biomarkers for vascular dementia. *CHeBA Seminar*. 13 Mar 2024; online.
18. Kochan NA, Bentvelzen AC. Neuropsychology – why, when and how do we do the tests we do. *CHeBA Seminar Workshop*. UNSW Sydney, Australia; 15 Aug 2024.
19. Koncz R. Invited international speaker. Systematic approaches to improving outcomes for people with intellectual disability in Australia. Presented to the UK Royal College of Psychiatrists Dean’s Grand Rounds Webinar. Feb 2024.
20. Koncz R. Invited speaker. Intellectual Disability Mental Health in NSW: Yesterday, Today, Tomorrow. Presented at the NSW Mental Health Partnerships Network Meeting. Dec 2024.
21. Xiaoping L. Dementia data in Australia. *CHeBA Seminar*. 13 Jun 2024; online.
22. Mather K, Thalamuthu A. A primer on genomics, transcriptomics (gene expression) and epigenomics. *CHeBA Seminar Interactive Workshop*. 26 Sep 2024; UNSW Sydney, Australia.
23. Mohan A. District-Wide approach to FND – Proposal. Presented to SESLHD Executives; 13 Feb 2024.
24. Mohan A. FND - Innovation Story. Presented to SESLHD Board; 28 Feb 2024.
25. Mohan A. Mindgardens FND Clinic overview. Presented at a Mindgardens philanthropic event; 24 Apr 2024.
26. Mohan A. FND treatment. Presented at the Royal North Shore Hospital Pain Management and Research Centre; 23 May 2024.
27. Mohan A. Mindgardens FND Clinic overview. Presented to the Occupational Therapists at Prince of Wales Hospital, Sydney, NSW, Australia; 28 Aug 2024.
28. Mohan A. Consultation Psychiatry – Advance training of FND & overview of Mindgardens Clinic. Presented to Senior Psychiatry trainees, College of Psychiatry; 28 Aug 2024.
29. Mohan A. FND teaching & overview of Mindgardens Clinic. Presented to psychiatrists and allied health staff. 29 Aug 2024; Concord Hospital, Sydney, NSW, Australia.
30. Mohan A. Psychiatry training course on FND & overview of Mindgardens Clinic. Presented to psychiatry trainees. 5 Sep 2024; Brain and Mind Research Institute, Sydney, NSW, Australia.
31. Mohan A. FND teaching & overview of Mindgardens Clinic. Presented to physiotherapists. Prince of Wales Hospital, Sydney, NSW, Australia; 18 Sep 2024.
32. Mohan A. Mindgardens FND Clinic – baseline & outcome data. Presented to consultant neurologists. 30 Sep 2024; Prince of Wales Hospital, Sydney, NSW, Australia.
33. Mohan A. AMD Brain School lecture series. Presented to Advanced Trainees in Neurology. RACP; 9 Oct 2024.
34. Mohan A. FND and the use of narrative as a tool at CHeBA. Presented at the Eastern Suburbs Older Persons Mental Health Service; 4 Dec 2024.
35. Numbers KT. Invited talk. Preventing Dementia and Enhancing Brain Health. Dec 2024; Waverton Hub, Sydney, NSW, Australia.
36. Numbers KT, Wesson J. Occupational Therapy essentials when assessing functional cognition in older adults. *Occupational Therapy Australia – Monthly Practice Spotlight Webinar*; Dec 2024.

37. Numbers KT. Invited talk. Preventing Dementia and Enhancing Brain Health. North Sydney Sunrise Rotary Club. Sep 2024; Sydney, NSW, Australia.
38. Numbers KT. Strategies for Age Inclusivity and Mental Health Support for Older Australian Workers. *WayAhead Workplaces Annual Member Forum*. 20 Aug 2024; Sydney, NSW, Australia.
39. Numbers KT, Wesson J. Functional Cognition: What it is, how to measure it, and why it matters. *Occupational Therapy Australia – Monthly Practice Spotlight Webinar*. Aug 2024.
40. Numbers KT. Invited talk. A New Computerised Tool to Assess Functional Ability: The C-STAM. Presented at St George Hospital; May 2024; Sydney, NSW, Australia.
41. Numbers KT. Invited talk. The Memory & Ageing Study (MAS). *Your Brain. Your Life Forum*. Mar 2024; Sydney, NSW, Australia.
42. Numbers KT. Invited talk. Preventing Dementia and Enhancing Brain Health. City North Men's Shed; May 2024; Sydney, NSW, Australia.
43. Powell A. Traumatic brain injuries and cognition in older adults. Presented at the Royal North Shore Hospital Aged Care Department, St Leonards, NSW, Australia; 13 Sep 2024.
44. Powell A. Ageing brains and cognitive resilience. Presented at the Grand Rounds, Royal North Shore Hospital, St Leonards, NSW, Australia; 12 Oct 2024.
45. Powell A. How old is too old (to be president)? Masterclass: Diseases of the ageing brain. Case presentation. *Australasian Cognitive Neurology Association Conference*. 7 Sep 2024; Brisbane, QLD, Australia.
46. Reppermund S. Invited Speaker. Social determinants of health in ageing and dementia – an overview of current research directions. *Australian Dementia Network (ADNeT) webinar on Dementia and Social Cognition*. Mar 2024.
47. Reppermund S. Developing an innovative computerised assessment of instrumental activities of daily living. Invited Speaker. *St George and Sutherland Shire Dementia Alliance Dementia Alliance*. Apr 2024; Sydney, NSW, Australia.
48. Reppermund S, Numbers K, Lin PH, Delbaere K, Wesson J, Clemson L, Ginige JA, Trollor J, Draper B, Brodaty H. Developing an innovative computerised assessment of instrumental activities of daily living in older adults with and without cognitive impairment. *Ageing Futures Institute Research Symposium*. 30 Oct 2024; UNSW Sydney, Australia.
49. Sachdev P. Invited Speaker. Toward a global epidemiology of cognitive ageing and dementia: the COSMIC collaboration. Online webinar hosted by the Discipline of Psychiatry and Mental Health. 24 Apr 2024; UNSW Sydney, Australia.
50. Samtani S, Reppermund S. Dementia and social cognition. Webinar hosted by the *Australian Dementia Network (ADNeT)*. 21 Mar 2024.

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