SIESTA 2024 Newsletter

Synergise, Integrate, and Enhance Sleep Research to Transform Brain Ageing





Dear SIESTA Network,

In 2024, we officially launched SIESTA: "Synergise, Integrate, and Enhance Sleep Research to Transform Brain Ageing". With the support of a \$5M NHMRC-funded Synergy Grant over five years, SIESTA is bringing together experts from various disciplines and institutions to pioneer solutions for sleep disturbances and their impact on brain ageing. SIESTA draws on expertise from across the University of Sydney, Macquarie University, Murdoch University, the University of Birmingham, and the CSIRO. Core collaborators within our network are partners

from the Florey Institute, the University of Queensland, and the University of NSW. Please visit our <u>SIESTA website</u> for an overview of our team and partners.

This first newsletter provides an overview of our plans for the program and key committees we have established and introduces you to our new team of students and early career researchers. From leveraging existing cohorts to investigate the links between sleep and cognitive health, to exploring digital health technology for improved sleep management, we're making steady strides toward each area of SIESTA's mission.

At the heart of SIESTA's mission are three key streams of research, each aimed at transforming how we understand, treat, and manage sleep disturbances in ageing populations. Here's a look at how each stream will drive our work forward:

The SIESTA Vision: Three Key Research Streams

STREAM 1: Understanding Sleep and Cognitive Health via Cohorts

In this stream, we're leveraging data from well-established cohorts to investigate the pathophysiological connections between sleep disturbances and cognitive decline. By utilising these existing cohorts, we can more efficiently explore the key role sleep has in the development of cognitive decline longitudinally. This work also focuses on understanding the role of the brain's locus coeruleus in regulating sleep, and the potential role of brain glymphatics in optimising brain health, shedding light on how these mechanisms contribute to cognitive health over time.

STREAM 2: Clinical Trials and Innovative Treatments for Sleep Disorders

Utilising our expertise in clinical trial design, sleep disorder management, neuropsychology, and biomarker research, we are expanding and designing new therapeutic approaches. Our goal is to

find effective treatments that can address and manage sleep disturbances, helping improve quality of life for older adults at risk for dementia.

STREAM 3: Digital Health for Community Impact

We're bringing sleep research to community and clinical settings through digital health technologies. By testing, validating, and implementing these tools, SIESTA aims to enhance the screening, monitoring, and management of sleep disturbances at a broader scale, making impactful health innovations accessible to all. Our plan is to test the use and feasibility of various wearable technologies for older people with cognitive impairment to identify the most effective options for tracking and managing sleep disturbances in real-world settings.

Building on the Legacy of CogSleep CRE

As SIESTA takes the baton from our highly successful Centre of Research Excellence to Optimise Sleep in Brain Ageing and Neurodegeneration (CogSleep CRE), we're building on a strong foundation. The CogSleep CRE officially concluded in October 2024, but its achievements and resources remain available on the CogSleep website. Be on the lookout for the CogSleep end-of-project report, which will be available on the site soon.

Thank you for your ongoing support and interest in SIESTA's mission. We're excited to continue this journey with you into 2025, as we strive to make transformative advances in sleep research and brain health.

Read on to discover more about the achievements and progress our team has made this year!

Warm regards,

Sharon Naismith SIESTA Chief Investigator

New Additions to the SIESTA Team

In 2024, we welcomed new postdocs, Dr Brandon Munn and Dr Matthew Rahimi. We thank Dr Gabriel Wainstein for his contribution to the SIESTA program. Finally, we welcome two international PhD students, Victor Vidal and Clara Tan.



Dr Brandon Munn

Brandon is a Postdoctoral Research Fellow at the University of Sydney, working with A/Prof Mac Shine in the <u>Shine Lab</u>. He is contributing to Stream 1 of SIESTA, focusing on complex imaging studies to deepen understanding of the brain's locus coeruleus and glymphatic system and their roles in sleep and brain health.

Dr Gabriel Wainstein

Dr Gabriel Wainstein has been working with us throughout 2024 as a postdoctoral fellow. He has taken a leading role in advancing our research on the brain's locus coeruleus (LC) and has been instrumental in driving forward this initiative. In January, he will be travelling to Boston for 6 months to build upon our collaboration with A/Prof Heidi Jacobs.





Dr Matthew Rahimih

Dr. Matthew Rahimi, a Postdoctoral Research Fellow from the Woolcock Institute of Medical Research and Macquarie University, has joined SIESTA to contribute to Stream 3, focusing on digital health technologies. Working alongside Associate Professor Chris Gordon, Dr. Rahimi is currently scoping wearable devices to enhance research and outcomes in this innovative field.

Victor Vidal

We welcome Victor, our newest PhD student! Victor is a medical technologist specialising in MRI, with eight years of experience in imaging acquisition and processing. During his Master's in Neuroscience, he researched white matter lesions and subcortical nuclei, leading to publications in Alzheimer's and Dementia and Scientific Reports. He now aims to investigate the interplay between neurodegeneration and sleep, specifically focusing on how subcortical nuclei contribute to this relationship.





Clara Tan

We also welcome Clara, our new PhD student. Clara graduated with a Master of Science in Psychology (Research-based) from Sunway University in Malaysia. She has also been a lecturer at HELP University since 2022. Her project will involve exploring lifestyle determinants and social interaction and their associations with sleep quality and sleep-dependent memory consolidation among people diagnosed with mild cognitive impairment.

SIESTArs Committee: Nurturing Our Rising Stars

This year marked the official launch of the SIESTArs (SIESTA Rising Stars) committee, which aims to support and empower early career researchers (ECRs) within the SIESTA network.

Our committee comprises eight executive members, including:

- Dr Aaron Lam (Chair) The University of Sydney and The Woolcock Institute of Medical Research, NSW
- Dr Mahnoosh Kholgi CSIRO, QLD
- Dr Shaun Eslick Macquarie University, NSW
- Isabella Orlando The University of Sydney, NSW
- Louise Pivac Murdoch University, WA
- Dr Zoe Menczel Schrire The University of Sydney, NSW
- Victor Vidal The University of Sydney, NSW
- Dr Rhearne Ryan The Woolcock Institute of Medical Research, NSW

Our extended mailing list now includes an impressive **76 members** across Australia. Over the past year, we've 'starlighted' ECR profiles on our social media, expanding our community to over 900 followers.



We were thrilled to host a highly successful workshop designed to support our ECRs in submitting NHMRC Investigator Grant EL1 applications, featuring insights from SIESTA CI speaker and NHMRC Fellow A/Prof Stephanie Rainey-Smith. Best of luck to all our applicants!

In addition, we organised a lively in-person networking breakfast, which brought together approximately 15 ECR researchers from the Brain and Mind Centre and The Woolcock Institute of Medical Research (see picture to the left). Finally, our ECR showcase celebrated the remarkable work, innovative ideas, and expertise of our ECRs, reinforcing the vibrant and collaborative spirit of the SIESTA community.

EOI | NHMRC Investigator Grant EL1 and EL2 rounds 2025

The SIESTA Rising Stars Committee is excited to support researchers for the upcoming NHMRC Investigator (Emerging Leadership, EL, 1 and 2) grant rounds.

We invite **expressions of interest** from researchers who would like to participate in **weekly or fortnightly writing sessions** with peers applying for the same grant round. These sessions will provide opportunities for peer reviewing, collaborative support to refine applications and emotional and practical encouragement.

This initiative is a valuable opportunity to strengthen your application and improve your chances of success.

If you're interested in participating, please let us know by **30 January 2025**. We will contact you shortly after this deadline with further details.

Submit your expression of interest via this link.

Workshop Highlights

This year, we hosted several engaging workshops that brought together researchers and experts in neurodegenerative and sleep research. We kicked off in August 2023 with an introductory workshop featuring all SIESTA Chief Investigators and Associate Investigators.

In June 2024, we welcomed nearly 100 attendees — 45 in person and 51 online — to the *International Guest Lectures in Neurodegenerative Diseases*, a joint event with the Brain and Mind Centre's Alzheimer's team. The lineup featured Professor Stephen Salloway from Brown University, who shared insights into the development and clinical application of amyloid-lowering therapies for Alzheimer's disease. There was much interest in hearing also from Associate Professor Heidi Jacobs from Massachusetts General Hospital and Harvard Medical School who, discussed the locus coeruleus as a promising early biomarker for Alzheimer's risk, as well as the key role of the LC in sleep-wake functions. Building on this, we hosted a dedicated workshop on the locus coeruleus, featuring presentations from Yuhong Fu, Gabriel Wainstein, Claire O'Callaghan, Shawn Kong, and Brandon Munn.



Our August 2024 workshop at The Woolcock Institute of Medical Research featured keynote talks from Dr Rick Wassing and Associate Professor Laura Jacobson, with lively sessions including a debate on whether treating obstructive sleep apnea can prevent cognitive decline by Dr Aaron Lam and Dr Julia Chapman. The event saw strong participation with 41 attendees in person and 7 online, reflecting the enthusiasm and commitment within our community to advancing this crucial research.

As chair, Diana Trickett provided an overview of the SIESTA Lived Experience Advisory Panel (SLEAP), and Dr Nathan Cross discussed Stream 1 and glymphatic future directions. Updates were presented by Dr Aaron Lam (HBA), A/Prof Stephanie Rainey-Smith (SIS), Dr Gabriel Wainstein (LC study), and Dr Matthew Rahimi (digital health technologies). The session concluded with the SIESTArs ECR Rapid Fire Showcase, featuring Dr Mahnoosh Kholghi, Isabella Orlando, Dr Matthew Rahimi, and Louise Pivac.



International Highlights: Showcasing SIESTA on the Global Stage

Our SIESTA team has been actively engaged this year, connecting with international audiences and presenting our cutting-edge research. Prof Sharon Naismith presented the SIESTA program at the Centre for Circadian Biology in San Diego and shared insights on clinical trials targeting sleep in ageing at both the International Controversies in Neurology (London) the European Sleep and (Seville, Association Spain). She also concluded her term as Chair of the Alzheimer's Association Sleep and Circadian **Rhythms** Professional Interest Area. Excitingly, she also led the development of consensus measures for assessing sleep across the spectrum of pathological ageing, with outcomes to be released soon.



Other team members have also been making waves internationally. At the 27th Conference of the European Sleep Research Society (Seville, Spain), Dr Camilla Hoyos showcased her work on a

randomised, placebo-controlled clinical trial exploring cannabidiol use for short-term insomnia. Associate Professor Christopher Gordon presented research on sleep state misperception and slow-wave dissipation in insomnia, as well as the state of sleep education across the health profession spectrum while Dr Aaron Lam presented findings on white matter microarchitectural alterations in older adults at risk for dementia with and without obstructive sleep apnoea. Finally, Professor Naismith discussed the landscape of clinical trials targeting sleep in ageing and Alzheimer's disease. Meanwhile, at the *Alzheimer's Association International Conference 2024* (Philadelphia, US, pictured above), Dr. Shawn Kong shared progress on validating the CogSleep Screener in older adults at a memory and cognition clinic.

These global contributions highlight the SIESTA team's dedication to advancing sleep research and fostering collaborations on the international stage. Stay tuned for more impactful updates!

Grants, Awards, & Leadership

This year, our team has been honoured with several recent awards and grants. Prof Sharon Naismith was recognised with the Distinguished Neuropsychology Researcher Award from the NSW College of Clinical Neuropsychologists and A/Prof Christopher Gordon received the Best Poster award at the 27th Conference of the European Sleep Research Society.

Congratulations to A/Prof Mac Shine and Dr Claire O'Callaghan for being awarded an

ARC Discovery project to explore compositional cognition.



Also congratulations to Dr Camilla Hoyos who is the Conference Chair on the board of the Australasian Sleep Association. She will play a key role in the coordination of Sleep DownUnder 2025!

In a collaborative achievement, Professor Sharon Naismith, A/Prof Mac Shine, and Dr Shawn Kong secured the University of Sydney Equipment Grant. This funding will support the acquisition of the EyeLink 1000 Plus, one of the world's most advanced eye trackers, which will help us accurately measure LC function within our SIESTA cohorts, and significantly enhance our research capabilities.

Amongst our ECR SIESTrs networks;

- Isobel Laendar, supervised by Dr Camilla Hoyos, won the 2024 New Investigator Award for excellence in the conduct and presentation of research at Sleep DownUnder.
- Dr Johannes Michaelian won the Brain and Mind Centre Research Excellence and Impact Award as well as the Sydney Dementia Network Future Research Leader Award.
- Dr Shawn Kong won the 2024 Alzheimer's Association International Conference Sleep and Circadian Rhythms Professional Interest Area Data Blitz Award.
- Dr Anastasia Suraev received the Faculty of Science Prize for Outstanding PhD Thesis.

 Dr Simone Simonetti won the 2024 Faculty of Science Professional and Technical Award for Project Excellence (Individual).

In the media

30 April 2024 | Dr Aaron Lam | <u>Doctor reveals how to reduce your risk of getting dementia - and the one early symptom you should never ignore</u> | Daily Mail

10 August 2024 | Dr Nathan Cross | <u>Ever wondered what a dream is and why we do it? You're not alone</u> | 9honey

12 September 2024 | Dr Anastasia Suraev | <u>Harnessing the power of sleep for healthy brain ageing</u> | Sleep Health Foundation and Australian Health & Aged Care Resource Guide

25 October 2024 | A/Prof Mac Shine | <u>Integrating neuroscience with fMRI, collaboration, and the importance of dumb questions</u> | BJKS Podcast

7 November 2024 | Dr Brandon Munn | <u>How do brains coordinate activity? From fruit flies to monkeys, we discovered this universal principle</u> | The Conversation

17 November 2024 | Prof Sharon Naismith | <u>Thriving in menopause: Conquering menopausal sleep demons: Thriving in Menopause (Season 11, Episode 6)</u> | Prevention Australia

Resources

The CogSleep Screener (pictured right)

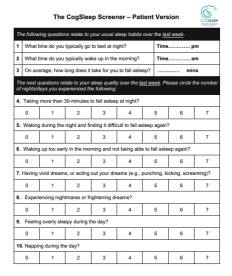
The CogSleep screener has been developed as a simple, brief self-report questionnaire for use within memory and cognition clinics. It incorporates many facets of sleep disturbance older people experience and has been specifically validated for the MCI and dementia population.

<u>CogSleep Questionnaire</u> (pictured below)

The CogSleep semi-structured interview was designed to guide people working in ageing or aged care to assess older people for sleep-wake problems. It was designed for use along with the <u>Sleep Matters Training course developed by Dementia Training Australia</u>.

<u>CogSleep and Sleep Health Foundation Guide for Older</u> <u>Adults and People Living with Cognitive Decline</u>

This brief, accessible, and thorough resource on dementia and sleep is designed for people living with dementia, their carers and all adults wanting to optimise their cognitive health.



NHMRC Centre of Research Excellence to Optimise Sleep in Brain Ageing and Neurodegeneration (CogSleep CRE) Semi-Structured Sleep-Wake Interview for Older Adults



Client name:				
DOB:MRN:				
	patient/client but file notes, care	njunction with training provided by the Dementia Training A staff, family and other health professionals may provide		
PART 1: BACKGROUND INFORMATION (from file, or interview)			
	Gender	BMI:		
Age:	☐ Male ☐ Female		Height: Weight:	
Cognitive or dementia diagnosis?	□ No □ Yes	If yes, please specify: Mild cognitive impairment Vascular cognitive impairment Alzheimer's disease Dementia with Lewy Bodies Parkinson's Disease Dementia Frontotemporal dementia Stroke-related cognitive impairment Other, please specify:	Cognitive screen scores if known: MMSE: MoCA:	
Prior history of major depression	□ No □ Yes	If yes, when was this? year If yes, was it treated with antidepressants? .	If yes, when was this? year If yes, was it treated with antidepressants? N/Y	
Assessment for current depression?	□ No □ Yes	If yes, please provide details including score	If yes, please provide details including score:	

Publications

It has been a busy year for the SIESTA Chief Investigators and other personnel. Check out just some of their publications below.

A comparison of two obesity-related hypoventilation disorders: Impact on sleep, quality of life and neurocognitive outcomes and the effects of positive airway pressure therapy. Yizhong Zheng, Brendon J Yee, Keith Wong, Ronald R Grunstein, Amanda J Piper.

<u>A new role for chatbots: automation of a sleep-dependent memory task.</u> David Ireland, Aaron Lam, DanaKai Bradford, Sharon Naismith.

A systematic review on adherence to continuous positive airway pressure (CPAP) treatment for obstructive sleep apnoea (OSA) in individuals with mild cognitive impairment and Alzheimer's disease dementia. Cerys Oliver, Haoxuan Li, Bijetri Biswas, David Woodstoke, Jonathan Blackman, Anneka Butters, Cheney Drew, Victoria Gabb, Sam Harding, Camilla M Hoyos, Adrian Kendrick, Sarah Rudd, Nicholas Turner, Elizabeth Coulthard.

Abnormal higher-order network interactions in Parkinson's disease visual hallucinations. Joshua B Tan, Eli J Müller, Isabella F Orlando, Natasha L Taylor, Daniel S Margulies, Jennifer Szeto, Simon JG Lewis, James M Shine, Claire O'Callaghan.

Alterations in sleep-activity cycles and clock gene expression across the synucleinopathy spectrum. Maria Comas Soberats, Xavier Vidal, Oliver Rawashdeh, Ronald Grunstein, Simon Lewis, Elie Matar.

Assessing sleep architecture and cognition in older adults with depressive symptoms attending a memory clinic. Andrea Ricciardiello, Andrew C McKinnon, Loren Mowszowski, Haley M LaMonica, Zoe Menczel Schrire, Carla Haroutonian, Aaron Lam, Ian B Hickie, Angela D'Rozario, Sharon L Naismith.

Association of basal forebrain atrophy with cognitive decline in early Alzheimer Disease. Ying Xia, Vincent Dore, Jurgen Fripp, Pierrick Bourgeat, Simon M Laws, Christopher J Fowler, Stephanie R Rainey-Smith, Ralph N Martins, Christopher Rowe, Colin L Masters, Elizabeth J Coulson, Paul Maruff.

Associations of high-sensitivity C-reactive protein with neuropsychological outcomes and cerebral white matter hyperintensities in older adults at risk of dementia. Rachael Yu, Shawn Kong, Catriona Ireland, Genevieve Z Steiner-Lim, Kimberley Bassett, Hannes Almgren, Dongang Wang, Chenyu Wang, Johannes C Michaelian, Sharon L Naismith.

<u>Cardio-metabolic health effects of CPAP treatment for sleep apnoea during weight loss: A randomised controlled pilot trial.</u> Camilla M Hoyos, Elizabeth A Machan, Brendon J Yee, Svetlana Postnova, Nathaniel S Marshall, Tania Markovic, Stephen M Twigg, Ronald R Grunstein, Craig L Phillips.

<u>Change begins with awareness: a greater need to understand awareness of sleepiness in vulnerable drivers.</u> Clare Anderson.

Comparative short-term safety and efficacy of hypnotics: A quantitative risk-benefit analysis. Janet MY Cheung, Hannah Scott, Alexandria Muench, Ronald R Grunstein, Andrew D Krystal, Dieter Riemann, Michael Perlis.

Comparison of awake respiratory control versus sleep obstructive sleep apnea endotypes. David Wang, Rodrigo T Martins, Luke Rowsell, Keith K Wong, Brendon J Yee, Ronald R Grunstein, Danny J Eckert.

<u>Current and emerging sleep interventions for older adults with or without mild cognitive impairment</u>. Anastasia A Suraev, Shawn D Kong, Zoe M Schrire, Bonnie A Tran, Nathan Cross, Elie Matar, Sharon L Naismith.

Dementia diagnostic and treatment services in the Western Pacific: challenges, preparedness and opportunities in the face of amyloid-targeting therapies. Claire O'Callaghan, Johannes C Michaelian, Yoko Aihara, Veeda Michaelie Anlacan, Christopher Chen, Gary Cheung, Etuini Ma'u, Tuan Anh Nguyen, Ming-Chyi Pai, Anna Palagyi, Maw Pin Tan, Shyh Poh Teo, Yuda Turana, Huali Wang, Gloria Wong, Sharon L Naismith.

<u>Detection and staging of Alzheimer's disease by plasma pTau217 on a high throughput immunoassay platform.</u> Azadeh Feizpour, James David Doecke, Vincent Doré, Natasha Krishnadas, Kun Huang, Pierrick Bourgeat, Simon Matthew Laws, Christopher Fowler, Joanne Robertson, Lucy Mackintosh, Scott Ayton, Ralph Martins, Stephanie Ruth Rainey-Smith, Kevin Taddei, Larry Ward, Eddie Stage, Anthony Wilson Bannon, Colin Louis Masters, Jurgen Fripp, Victor Luis Villemagne, Christopher Cleon Rowe.

Detection of $\Delta 9$ -tetrahydrocannabinol (THC) in oral fluid using two point-of-collection testing devices following oral administration of a THC and cannabidiol containing oil. Anastasia Suraev, Danielle McCartney, Richard Kevin, Rebecca Gordon, Ronald R Grunstein, Camilla M Hoyos, Iain S McGregor.

<u>Developing, implementing, and evaluating the effectiveness of a sleep health educational module for pharmacy students.</u> Mariam M Basheti, Jocelyn Bussing, Ronald Grunstein, Christopher Gordon, Bandana Saini.

<u>Different heart rate variability profile during sleep in mid-later life adults with remitted early-onset versus late-onset depression</u>. Shawn DX Kong, Nicole Espinosa, Andrew McKinnon, Christopher J Gordon, Rick Wassing, Camilla M Hoyos, Ian B Hickie, Sharon L Naismith.

<u>Electroencephalographic slowing during REM sleep in older adults with subjective cognitive impairment and mild cognitive impairment</u>. Aaron Kin Fu Lam, James Carrick, Chien-Hui Kao, Craig L Phillips, Yi Zhong Zheng, Brendon J Yee, Jong Won Kim, Ronald R Grunstein, Sharon L Naismith, Angela L D'Rozario.

<u>Evaluating possible 'next day' impairment in insomnia patients administered an oral medicinal cannabis product by night: a pilot randomized controlled trial</u>. Anastasia Suraev, Danielle McCartney, Nathaniel S Marshall, Christopher Irwin, Ryan Vandrey, Ronald R Grunstein, Angela L D'Rozario, Christopher Gordon, Delwyn Bartlett, Camilla M Hoyos, Iain S McGregor.

<u>Exploring the pharmacist role in insomnia management and care provision: A scoping review.</u> Mariam M Basheti, Christopher Gordon, Ronald Grunstein, Bandana Saini.

<u>Hypoxemia during rapid eye movement sleep mediates memory impairment in older adults at risk for dementia via CA1 hippocampal volume loss</u>. Aaron Lam, Angela L D'Rozario, Jake R Palmer, Andrew McKinnon, Marshall R Dalton, Nicole Espinosa, Loren Mowszowski, Craig L Phillips, Ronald R Grunstein, Sharon L Naismith.

Implementation of cognitive (neuropsychological) interventions for older adults in clinical or community settings: a scoping review. Kerryn E Pike, Lily Li, Sharon L Naismith, Alex Bahar-Fuchs, Alessandra Lee, Inga Mehrani, Adam Bentvelzen, Nicola T Lautenschlager, Megan E O'Connell, Irene Blackberry, Loren Mowszowski.

Insights from a 10-year Australasian idiopathic hypersomnia patient data registry study. Jack Anderson, Brendon J Yee, Ronald Grunstein, Elie Matar, Michelle Chadwick, Elizabeth Machan, Julia Chapman, Jian Tai, Bandana Saini, Sheila Sivam.

Integrating digital behavioural therapy for insomnia into primary care: A feasibility mixed-methods study. Christopher J. Gordon, Janet M. Y. Cheung, Zoe Menzel Schrire, Matthew Rahimi, Melissa Aji, Helena Salomon, Iliana Doggett, Nick Glozier, Keith K. H. Wong, Nathaniel S. Marshall, Delwyn J. Bartlett, Ron R. Grunstein.

<u>Multiscale organization of neuronal activity unifies scale-dependent theories of brain function</u>. Brandon R Munn, Eli J Müller, Itia Favre-Bulle, Ethan Scott, Joseph T Li000000000000zier, Michael Breakspear, James M Shine.

Obstructive sleep apnoea in obesity: a review. Jian E Tai, Craig L Phillips, Brendon J Yee, Ronald R Grunstein.

Orexin and sleep sisturbances in alpha-synucleinopathies: a systematic review. Kausar Raheel, Qi Rui See, Veronica Munday, Basma Fakhroo, Olga Ivanenko, Marcello Luigi Salvatelli, Carlotta Mutti, Peter J Goadsby, Alessio Delogu, Sharon L Naismith, Phil Holland, Liborio Parrino, K Ray Chaudhuri, Ivana Rosenzweig.

Oxidative stress in Alzheimer's Disease: the shortcomings of antioxidant therapies. Miguel A Pappolla, Ralph N Martins, Burkhard Poeggeler, Rawhi A Omar, George Perry.

Predicting neurodegeneration from sleep related biofluid changes. Yue Yang, Woojin Scott Kim,

Johannes C Michaelian, Simon JG Lewis, Craig L Phillips, Angela L D'Rozario, Pratishtha Chatterjee, Ralph N Martins, Ron Grunstein, Glenda M Halliday, Sharon L Naismith.

<u>Preliminary results from a Phase 1 study of ALKS 2680, an orexin-2 receptor agonist, in healthy participants and patients with narcolepsy or idiopathic hypersomnia</u>. B Yee, J Chapman, R Grunstein, C Argent, A D'Rozario, C Hopkinson, J Ramos, I Landry, S Yagoda, B Rege.

Randomised controlled decentralised feasibility trial of a fixed low-dose combination antihypertensive drug strategy to attenuate cognitive decline in high-risk adults. Cheryl Carcel, Lauren Clancy, Katie Harris, Ruth Peters, Aisling Byrne, Kimberley Bassett, Ruth Freed, Camilla M Hoyos, Anthony Rodgers, Richard Lindley, John Chalmers, Ying Xu, Mark Woodward, Menglu Ouyang, Sharon L Naismith, Craig Anderson.

Recent advances in understanding of sleep disorders and disturbances for dementia risk and prevention. Aaron Lam, Shawn Kong, Sharon L Naismith.

<u>REducing Sleep Apnoea for the PrEvention of Dementia (REShAPED): Protocol for a multi-site feasibility randomised controlled trial.</u> Camilla M Hoyos, Craig L Phillips, Nathaniel S Marshall, Kristine Yaffe, Ralph Martins, Jim Lagopoulos, Melinda L Jackson, Loren Mowszowski, Ronald R Grunstein, Sharon L Naismith.

Screening for obstructive sleep apnea in the memory clinic: A comparison of questionnaires, pulse oximetry, and polysomnography. Aaron Lam, Angela L D'Rozario, Shawn Kong, Catriona Ireland, Loren Mowszowski, Haley M LaMonica, Craig L Phillips, Camilla M Hoyos, Ronald R Grunstein, Sharon L Naismith.

<u>Sleep discrepancy and cognitive function in community-dwelling older adults</u>. Nadia Soh, Stepanie Rainey-Smith, James D Doecke, Rodrigo Canovas, Romola S Bucks, Melissa Ree, Michael Weinborn.

<u>Sleep discrepancy and brain glucose metabolism in community-dwelling older adults.</u> Nadia Soh, Michael Weinborn, James D Doecke, Rodrigo Canovas, Vincent Doré, Ying Xia, Jurgen Fripp, Kevin Taddei, Romola S Bucks, Hamid R Sohrabi, Ralph N Martins, Melissa Ree, Stephanie R Rainey-Smith.

<u>Sleep disturbances and disorders–a risk factor for cognitive decline and dementia</u>. Aaron Lam, Camilla Hoyos, Craig Phillips, Sharon L Naismith.

<u>Sleep spindle architecture associated with distinct clinical phenotypes in older adults at risk for dementia</u>. Isabella F Orlando, Claire O'Callaghan, Aaron Lam, Andrew C McKinnon, Joshua BC Tan, Johannes C Michaelian, Shawn DX Kong, Angela L D'Rozario, Sharon L Naismith.

Suboptimal self-reported sleep efficiency and duration are associated with faster accumulation of brain amyloid beta in cognitively unimpaired older adults. Louise N Pivac, Belinda M Brown, Kelsey R Sewell, James D Doecke, Victor L Villemagne, Vincent Doré, Michael Weinborn, Hamid R Sohrabi, Samantha L Gardener, Romola S Bucks, Simon M Laws, Kevin Taddei, Paul Maruff, Colin L Masters, Christopher Rowe, Ralph N Martins, Stephanie Rainey-Smith.

The AUstralian multidomain Approach to Reduce dementia Risk by prOtecting brain health With lifestyle intervention study (AU-ARROW): a study protocol for a single-blind, multi-site, randomized controlled trial. Samantha L Gardener, Stephanie J Fuller, Sharon L Naismith, Laura Baker, Miia Kivipelto, Victor L Villemagne, Stuart M Grieve, Paul Yates, Stephanie R Rainey-Smith, Juliana

Chen, Belinda Thompson, Nicola J Armstrong, Malika G Fernando, Carolina Blagojevic Castro, Silochna Meghwar, Rema Raman, Andrew Gleason, Catriona Ireland, Roger Clarnette, Kaarin J Anstey, Kevin Taddei, Manohar Garg, Hamid R Sohrabi, Ralph N Martins.

The crosstalk between amyloid-β, retina, and sleep for the early diagnosis of Alzheimer's Disease: a narrative review. Isaiah-Lorenzo De Guia, Shaun Eslick, Sharon L Naismith, Swathi Kanduri, Tejal M Shah, Ralph N Martins.

The effect of restricted and free-living conditions on light exposure and sleep in older adults. Teha B Pun, Matthew Rahimi, Rick Wassing, Craig L Phillips, Nathaniel S Marshall, Maria Comas, Angela L D'Rozario, Camilla M Hoyos, Ron R Grunstein, Christopher J Gordon.

<u>The McCusker Subjective Cognitive Impairment Inventory (McSCI): a novel measure of perceived cognitive decline</u>. Hamid R Sohrabi, Brandon E Gavett, Michael Weinborn, Craig P Speelman, Romola S Bucks, Ralph N Martins.

<u>Tirzepatide for the treatment of obstructive sleep apnea and obesity.</u> Atul Malhotra, Ronald R Grunstein, Ingo Fietze, Terri E Weaver, Susan Redline, Ali Azarbarzin, Scott A Sands, Richard J Schwab, Julia P Dunn, Sujatro Chakladar, Mathijs C Bunck, Josef Bednarik.

<u>Turning the tide on dementia: Prevention, diagnosis, treatment and quality of care</u>. Sharon Naismith.

<u>Using cannabis and CBD to sleep: an updated review.</u> Isobel Lavender, Grace Garden, Ronald R. Grunstein, Brendon J. Yee, Camilla M. Hoyos.

<u>Validating the CogSleep screener in older adults at a memory and cognition clinic</u>. Shawn D Kong, Zoe M Schrire, Ping H Lin, Simone Simonetti, Nathan Cross, Loren Mowszowski, Catriona Ireland, Ivana Rosenzweig, Sharon L Naismith.

National Presentations

Australian Dementia Research Forum 2024

Prof Sharon Naismith | Oral | Co-designing and Implementing a Virtual Memory Clinic for Regional and Rural Australia

USYD Sleep-Circadian Seminar 2024

Prof Sharon Naismith | Oral | Introduction and SIESTA overview

Dr Gabriel Wainstein | Oral | Locus coeruleus neuroimaging study

Dr Aaron Lam | Oral | Healthy Brain Ageing clinic sleep-related overview

Dr Shawn Kong | Oral | Cogsleep Screener

Dr Johannes Michaelian | Oral | Blood-based biomarkers overview and sleep-related results

Nicole Espinosa | Oral | SUCCEED and RESHAPED clinical trials

Dr Nathan Cross | Oral | Electroencephalogram analyses pipeline and sleep-dependent memory consolidation

NSW Science & Research Breakfast Seminar Series

Prof Sharon Naismith | Oral | Optimising Brain Health for Dementia Prevention – Current Landscape and Future Pathways

Community Oral Presentations

- 14 August 2024 | Dr Anastasia Suraev | Stanton Library | *Unlocking the potential of medicinal cannabis*
- 19 August 2024 | Louise Pivac | South of Perth Forum | Good Sleep, Healthy Ageing
- 18 September 2024 | Dr Anastasia Suraev, Dr Nathan Cross, and Nicole Espinosa | Canada Bay RSL | *Brain Health Ageing Dementia Action Week*
- 3 October 2024 | Dr Zoe Menczel Schrire | City of Sydney's "Teaching an old brain new tricks" | The power of NeuroMusic
- 3 October 2024 | Dr Shawn Kong | City of Sydney's "Teaching an old brain new tricks" | *Brain health*
- 3 October 2024 | Nicole Espinosa | City of Sydney's "Teaching an old brain new tricks" | *The REShAPED trial*
- 16 October 2024 | Dr Nathan Cross | Stanton Library | How sleep impacts memory in later life
- 16 October 2024 | Nicole Espinosa | Leichhardt Town Hall | *Mental wellbeing and dementia prevention*
- 23 October 2024 | Dr Anastasia Suraev | Healthy Food Pro Guide's Big Breakfast | *Sleep: the unsung hero of brain health and eating rhythms*
- 30 October 2024 | Alessandra Lee | Stanton Library | Cognitive brain training
- 31 October 2024 | Dr Aaron Lam, Dr Catriona Ireland, and Dr Zoe Menczel Schrire| Older Women's Network NSW | *HBA Research Program and NeuroMusic*

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