

Dr Eddy Roccati (nee Hill)

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Education:

- 2008 Higher School Certificate, (UAI: 90.55) having studied: *Mathematics Adv., Physics, English Adv., Visual Arts, Geography, Software Design*
- 2012 Summer course, Human Brain and The Senses, Oxford University
- 2013 B.A., Sociology, Minor in Developmental Studies, University of Melbourne
- 2015 BSc., Neuroscience, University of Melbourne
- 2016 BSc. (Hons), University of Melbourne & Royal Melbourne Hospital
- 2020 Doctor of Philosophy, Australian Catholic University (Australian Postgraduate Award scholarship recipient)

Employment History:

University of Tasmania: Research Fellow

Date: September 2019 – current

Duties: Post-doctoral position located at the Wicking Dementia Research & Education Centre. Research focused role investigating modifiable lifestyle factors for cognitive decline utilising data as collected via the longitudinal epidemiological cohort; Tasmanian Healthy Brain Project.

Tasmanian Department of Health: Epidemiologist

Date: November 2021 – current

Duties: Epidemiologist within the Public Health Emergency Operations Centre (PHEOC). Responsibilities included situation summary reports, genomic sequencing, outbreak management, vaccination status, demographics and statistical analysis. Internal outbreak summary reports and collaboration with wider PHEOC.

University of Melbourne: Honorary Research Fellow

Date: November 2017 – current

Duties: Fellow within Medicine – Royal Melbourne Hospital to facilitate research within the Healthy Ageing Program.

Monash University: Research Assistant

Date: January 2019 – August 2019

Duties: Working within Monash Neuroscience and Alfred Hospital Neurology departments. Conducting neuropsychological

examinations on participants enrolled in clinical trials for the treatment/prevention of dementia, mild cognitive impairment and Alzheimer's and other neurodegenerative conditions

Central Queensland University: Research Assistant

Date: August 2018 – December 2018

Duties: Methodological design and data collection for two projects: a cognitive maze test and phone interview regarding transport usage and community engagement

Australian Catholic University: Healthy Brain Initiative (HBI) Website Assistant

Date: June 2018 – March 2019

Duties: Content creator and monitor of HBI's online presence. Producing recruitment materials, infographics and writing code for conducting assessments & publishing material online.

Australian Catholic University: Biology/Physiology/Anatomy Tutor

Date: April 2017 – November 2018

Duties: University practical/tutorial coordinator for groups of first and second year university students in Human Body in Health & Disease

Institute for Health & Ageing: Research Assistant

Date: October 2016 – January 2017

Duties: Interrogating longitudinal and cross-sectional data, data cleaning and data analysis to support research into ageing health

Melbourne Neuropsychiatry Centre: Volunteer Research Assistant

Date: August 2015 – October 2015

Duties: Neuropsychological assessments, MRI, fMRI, data entry

Credentials & Awards:

- B.A. WAM – 74, BSc. WAM – 73, BSC. WAM – 89
 - Advanced Microsoft Excel/Word/PowerPoint skills, advanced software development skills (Visual Basic & Swift)
 - Advanced Adobe Photoshop skills for data visualization
 - Advanced statistical analysis skills in R, SPSS, STATA
 - Intermediate command-line based skills in Python, Visual Basic
 - Research Higher Degree Representative for WHAP (2016 – 2017)
 - Australian Postgraduate Award (2017 – 2019)
 - ISTAART Student Volunteer at Alzheimer's Association, London (2017)
 - Student Representative and council member for the Australasian Epidemiological Association (2017 – 2019)
 - Dementia Centre for Research Collaboration, Travel Grant (2019)
 - Australian Society for Medical Research Early Career Researcher Award Finalist (2021)
 - Wicking Dementia Research and Education Centre Wispa Award (2022)
 - First prize, Patient Value and Clinical Impact, Alzheimer's Disease Data Initiative Neurotoolkit Data Hackathon, presented at AAIC 2022 (2022)
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References:

- Prof James Vickers – Director, Wicking – (03) 6226 4808
 - Prof Cassandra Szoeki – Director, WHAP/HBI – (03) 8344 1835
 - Dr Karen Banda – Manager, Epidemiology, PHEOC – 0491 963 941
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Scientific Publications:

- **Edward Hill**, Peter Clifton, Alicia M. Goodwill, Lorraine Dennerstein, Stephen Campbell & Cassandra Szoeki (2018). Dietary patterns and β -amyloid deposition in aging Australian women. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*. 4, 535-541.
- **Edward Hill**, Cassandra Szoeki, Lorraine Dennerstein, Stephen Campbell & Peter Clifton (2018). Adherence to the Mediterranean Diet is not related to Beta-Amyloid Deposition: Data from the Women's Healthy Ageing Project. *The Journal of Prevention of Alzheimer's Disease*. 5(2), 137-141.
- **Edward Hill**, Alicia M. Goodwill & Cassandra Szoeki (2018). Diet and biomarkers of Alzheimer's disease: a systematic review. *Alzheimer's & Dementia*. 14, 269-270.
- Cassandra Szoeki, Alicia M. Goodwill, Alexandra Gorelik, Lorraine Dennerstein, Karen Caeyenberghs, Steven Simpson Jr, **Edward Hill** & Stephen Campbell. Apolipoprotein E4 Mediates the Association Between Midlife Dyslipidemia and Cerebral Amyloid in Aging Women. *Journal of Alzheimer's Disease*. 68(1), 105-114.
- **Edward Hill**, Allison Hodge, Peter Clifton, Nitin Shivappa, James R Hebert, Lorraine Dennerstein, Stephen Campbell & Cassandra Szoeki (2019). Longitudinal nutritional changes in an ageing Australian female population. *Asia Pacific Journal of Clinical Nutrition*. 28(1), 139-149.
- **Edward Hill**, Alicia M. Goodwill, Alexandra Gorelik, & Cassandra Szoeki (2019). Diet and biomarkers of Alzheimer's disease: a systematic review and meta-analysis. *Neurobiology of Aging*. 76, 45-52.
- **Edward Hill**, Alexandra Gorelik, Michael W. Weiner, John Hopper, John Gleeson, Ronald C. Petersen, Barbara Riegel, Michael McClung, Tiny Jaarsma, Sandra Jones, Derek Jones & Cassandra Szoeki (2019). The Australian Brain Health Registry-Healthy Brain Initiative. *Alzheimer's & Dementia*. 15, 477.
- Xianwen Shang, Wei Peng, **Edward Hill**, Cassandra Szoeki & He Mingguang (2019). Incidence of medication-treated depression and anxiety associated with long-term cancer, cardiovascular disease, diabetes and osteoarthritis in community-dwelling women and men. *The Lancet E Clinical Medicine*. 15(1), 23-32.
- Xianwen Shang, Wei Peng, **Edward Hill**, Cassandra Szoeki, Mingguang He & Lei Zhang. Incidence, progression, and patterns of multimorbidity in community-dwelling middle-aged men and women. *Frontiers in Public Health*. 8(404), 1-12

- **Edward Hill** (2020). Preventive potential of diet in the pre-clinical phase of Alzheimer's disease symptomatology. PhD Thesis. ACU Research Bank.
- Larissa Bartlett, Kathleen Doherty, Maree Farrow, Aidan Bindoff, Sarang Kim, Claire Eccleston, **Edward Hill**, Jane Alty, Anna King & James Vickers (2020). The Island Study Linking Ageing and Neurodegenerative Disease (ISLAND): A longitudinal public health research program targeting dementia risk reduction. *Alzheimer's & Dementia*. *Alzheimer's & Dementia*, e045539
- **Edward Hill**, Aidan Bindoff, Larissa Bartlett, Mathew Summers & James Vickers (2020). Exploring uptake of a university-level educational intervention to prevent cognitive decline and reduce dementia risk: the Tasmanian Healthy Brain Project. *Alzheimer's & Dementia* 16, e045477
- Xianwen Shang, Allison Hodge, **Edward Hill** & Mingguang He (2020). Associations of Dietary Pattern and Sleep Duration with Cognitive Decline in Community-Dwelling Older Adults: A Seven-Year Follow-Up Cohort Study. *Journal of Alzheimer's Disease*. 82(4), 1559-1571.
- **Edward Hill**, Jessica Collins, Aidan Bindoff, Anna King, Jane Alty, Mathew Summers & James Vickers (2021). Association Between Components of Cognitive Reserve and Serum BDNF in Healthy Older Adults. *Frontiers in Aging Neuroscience*.
- **Edward Hill**, Jessica Collins, Aidan Bindoff, Anna King, Jane Alty, Mathew Summers & James Vickers. Increased age and higher levels of cognitive reserve are associated with lower serum BDNF levels in healthy older adults. *Australian Dementia Forum* 2021.
- Aidan Bindoff, Mathew J Summers, **Edward Hill**, Jane Alty & James Vickers (2021). Studying at university in later life slows cognitive decline: a long-term prospective study. *Alzheimer's & Dementia: Translational Research and Clinical Trials*. 7(1), e12207.
- Xianwen Shang, **Edward Hill**, Yanping Li, Mingguang He (2021). Energy and macronutrient intake at breakfast and cognitive decline in community-dwelling older adults: a nine-year follow-up cohort study. *The American Journal of Clinical Nutrition*. 133(5), 1093-1103
- Xianwen Shang, **Edward Hill**, Zhuoting Zhu, Jiahao Liu, Zongyuan Ge, Wei Wang, and Mingguang He. The association of age at diagnosis of hypertension with brain structure and incident dementia in the UK Biobank. *Hypertension*. 78(5), 1463-1474.
- **Edward Hill**, Larissa Bartlett, Jane Alty, Lyn Goldberg, Soonja Yeom, Mira Park & James Vickers. Automated analysis of propositional idea density in older adults. *Cortex*. 145. 264-272.
- Alty, Jane, Quan Bai, Rebecca J. St George, Aiden Bindoff, Renjie Li, Katherine Lawler, **Edward Hill**, Saurabh Garg, Larissa Bartlett, Anna King & James Vickers (2021). TasTest: Moving towards a digital screening test for pre-clinical Alzheimer's disease. *Alzheimer's & Dementia*. 17, e058732.
- Renjie Li, Rebecca J. St George, Xinyi Wang, Katherine Lawler, **Edward Hill**, Saurabh Garg, Stefan Williams, Samuel Renton, David Hogg, Quan Bai & Jane Alty (2021). Moving Towards Intelligent Telemedicine: Computer Vision Measurement of Human Movement. SSRN 3979578.

- Xianwen Shang, **Edward Hill**, Zhuoting Zhu, Jiahao Liu, Zongyuan Ge, Wei Wang & Mingguang He (2022). Macronutrient Intake and Risk of Dementia in Community-Dwelling Older Adults: A Nine-Year Follow-Up Cohort Study. *Journal of Alzheimer's Disease*. 85 (2), 791-804.
- Larissa Bartlett, Kathleen Doherty, Maree Farrow, Sarang Kim, **Edward Hill**, Anna King, Jane Alty, Claire Eccleston, Alex Kitsos, Aidan Bindoff & James Vickers (2022). Island Study Linking Aging and Neurodegenerative Disease (ISLAND) Targeting Dementia Risk Reduction: Protocol for a Prospective Web-Based Cohort Study. *JMIR Research Protocols*. 11(3), e34688.
- Jane Alty, Quan Bai, Renjie Li, Katherine Lawler, Rebecca St George, **Edward Hill**, Aidan Bindoff, Saurabh Garg, Xinyi Wang, Guan Huang, Kaining Zhang, Kaylee D. Rudd, Larissa Bartlett, Lynette Goldberg, Jessica Collins, Mark Hinder, Sharon Naismith, David Hogg, Anna King & James Vickers. The TAS Test project: a prospective longitudinal validation of new online motor-cognitive tests to detect preclinical Alzheimer's disease and estimate 5-year risks of cognitive decline and dementia. *BMC Neurol* 22, 266 (2022). <https://doi.org/10.1186/s12883-022-02772-5>

Conference Presentations:

- 2016: Primary Health Care Research Conference, Canberra, Australia: Relationship between alcohol consumption and amyloid accrual in women (Poster presentation)
- 2017: The 13th International Conference on Alzheimer's & Parkinson's Disease, Vienna, Austria: The Role of Individual Mediterranean Diet Components on Beta-Amyloid Deposition in Ageing Australian Women (Poster presentation)
- 2017: International Convention of Psychological Science, Vienna, Austria: The Role of Mediterranean Diet Adherence on Cognitive Function (Poster presentation)
- 2017: Alzheimer's Association International Conference, London, UK: Family History of Dementia Impacts Dietary Inflammatory Index Scores in Healthy Ageing Australian Women – a Case of Reverse Causality? (Platform presentation)
- 2018: Alzheimer's Association International Conference, Chicago, USA: Biomarkers of Alzheimer's disease and diet: A systematic review (Poster presentation)
- 2018: Alzheimer's Disease International, Chicago, USA: Dietary patterns and beta-amyloid deposition in ageing Australian women (Platform presentation)
- 2018: Australasian Epidemiological Association Annual Scientific Meeting, Perth, Australia: BrainyApp: A Smartphone intervention application for lifestyle modification (Platform presentation)
- 2019: Research Bazaar, University of Melbourne (Poster presentation)
- 2019: Alzheimer's Association International Conference, Los Angeles, USA: The Australian Brain Health Registry-Healthy Brain Initiative (Poster presentation)

- 2019: Australasian Epidemiological Association Annual Scientific Meeting, Brisbane, Australia: Collecting Data Online: Diet & Cognition in the Healthy Brain Initiative (Poster presentation)
- 2020: Alzheimer's Association International Conference: Exploring uptake of a university-level educational intervention to prevent cognitive decline and reduce dementia risk: the Tasmanian Healthy Brain Project (Poster presentation)
- 2020: Alzheimer's Association International Conference: The Island Study Linking Ageing and Neurodegenerative Disease (ISLAND): A longitudinal public health research program targeting dementia risk reduction (Poster presentation)
- 2020: Wicking Webinar Series. Presentation on modifiable risk factors for dementia to general population. Over 200 attendees. Format was presentations from Dr Hill and Dr Farrow, followed by questions from the audience. (Oral presentation)
- 2021: Australian Dementia Forum. Increased age and higher levels of cognitive reserve are associated with lower serum BDNF levels in healthy older adults (Poster presentation)
- 2021: Australian Dementia Forum. Serum NFL is non-linearly associated with cognitive function in unimpaired older adults (Poster presentation)
- 2021: Australian Dementia Forum. The prevalence of modifiable risk factors for dementia among immigrants and refugees and asylum seekers: A systematic review (Poster presentation)
- 2021: Australian Dementia Forum. Education in later life slows cognitive decline: a prospective cohort study with comparison group (Oral presentation by co-author)
- 2021: Australian Society for Medical Research Tasmania Virtual Scientific Symposium. Increased age and higher levels of cognitive reserve are associated with lower serum BDNF in healthy older adults (Oral presentation)
- 2021: Alzheimer's Association Neuroscience Next. TasTest: Moving towards a digital screening test for pre-clinical Alzheimer's disease (Oral presentation by co-author)
- 2022: Alzheimer's Disease International. TasTest: Developing an online screening test for pre-clinical Alzheimer's disease (Oral presentation by co-author)

Invited reviewer

2020- Alzheimer's & Dementia
 2020- The Gerontologist
 2020- Biochemical Genetics
 2021- Journal of Nutrition, Health and Ageing
 2021- Experimental Gerontology
 2022- Neuropsychiatric Disease and Treatment
 2022- Journal of Geriatric Psychiatry and Neurology

Funding

- 2021-2025 Chief Investigator, NHMRC Ideas, The future in our hands: Screening for preclinical Alzheimer's disease by analysing hand movements (\$899,792)
- 2022-2024 Chief Investigator, Royal Hobart Hospital Research Foundation, Development of a non-invasive screening test to detect risk of Alzheimer's disease pathology (\$446,957)

Engagement

- 2021- RUN for the ISLAND Initiative: A community engagement initiative to raise awareness for dementia risk reduction. 480km run along Tasmanian Trail.
- 2021- Men's Health Week. Oral presentation at the Botanical Gardens, Hobart.
- 2021- Men's Shed Annual General Meeting. Modifiable Risk Factors for Dementia. (Oral presentation)
- 2022- Food for thought: How does diet impact brain health? (Oral presentation)
- 2022- U3A: Education to prevent dementia (Oral presentation)
- 2022- Live Long Live Well Presentation: Understanding and Preventing Dementia. West Winds Community Centre

Membership

- 2017- Australasian Epidemiological Association
- 2017- Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART)
- 2018- ISTAART Student Member
- 2019- NHMRC National Institute for Dementia Research (NNIDR)
- 2019- Dementia Centre for Research Collaboration (DCRC)
- 2019- International Research Network for Dementia Prevention (IRNDP)
- 2020 ECR Organising committee for World Congress of Epidemiology 2021
- 2021- Australian Society for Medical Research
- 2022- Research Australia Early Middle Career Researcher Working Group
- 2022- Wicking Research Committee

Training:

- 2019 Johns Hopkins University: Propensity Score Methods for Estimating Causal Effects in Non-Experimental Settings
- 2021- Level 1 First Aid
- 2021- Phlebotomy in the research environment
- 2021 Biomarkers in Neurodegenerative Disease (University of Gothenburg/UCL)
- 2022 Larry Marlow's Health and Medical Research Leadership Development Program
- 2022 Outbreak Management Course (UTAS CAM637)
- 2022- Good Clinical Practice Certified
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