

Dr Helen Murray



**AUT BRAIN HEALTH
RESEARCH INSTITUTE**



Positions

Senior Research Fellow - UoA

Contact info

h.murray@auckland.ac.nz

Research focus

Helen is a Senior Research Fellow and neuroanatomist at the University of Auckland, where she leads the Brain Injury and Neurodegeneration Lab at the Centre for Brain Research. Her research focuses on the neuropathology of chronic traumatic encephalopathy (CTE) and other neurodegenerative diseases associated with repetitive head injury. Using advanced techniques such as multiplex immunohistochemistry, she investigates the cellular and molecular changes underlying these conditions to better understand and protect long-term brain health. She is also exploring a novel line of research using headbutting rams as a natural model of repeated head injury.

Current projects

1. Neuropathology of chronic traumatic encephalopathy (CTE)
2. Ram-ifications of Repeated Head Impacts: Linking In Vivo Biomarkers to Neuropathology

Examples of recent work

D. Hamlin, C. Ryall, C. Turner, R. L. M. Faull, **H. C. Murray**, & M. A. Curtis (2024). Characterisation of Neurofibrillary Tangle Maturity in Alzheimer's disease using Tau Immunophenotype Signatures. *Alzheimer's and Dementia: Journal of The Alzheimer's Association*. 20(7) 4803-4817 <https://doi.org/10.1002/alz.13922>

Osterman, C., Hamlin, D., Suter, C. M., Affleck, A. J., Gloss, B. S., Turner, C. P., ... & **Murray, H. C.** (2025). Perivascular glial reactivity is a feature of phosphorylated tau lesions in chronic traumatic encephalopathy. *Acta Neuropathologica*, 149(1), 1-19.