

## Professor Melinda Fitzgerald

BSc Hons., PhD  
Professor of Neurotrauma



**Research specialisation:** Neurotrauma, understanding pathology, testing therapies

**Experience:** Melinda Fitzgerald is Professor of Neurotrauma and the Leader of the Australian Mission for Traumatic Brain Injury, a Medical Research Future Fund initiative providing \$50 million in Federal Government funding over 10 years. She is Deputy Director of the Curtin Health Innovation Research Institute, Curtin University, and jointly appointed by the Perron Institute for Neurological and Translational Science.

Her research goal is to improve outcomes for patients who have experienced traumatic injury to their central nervous system. She leads her pre-clinical research team in studies to understand how damage spreads following neurotrauma and uses findings from these fundamental studies to design and test treatment strategies. She is working with her collaborators and clinical research team to facilitate translation of her pre-clinical findings, focussing on prediction of persisting post-concussion symptoms, in order to identify suitable patients for treatment. The work is part of a broader nationwide strategy to predict and improve outcomes following traumatic brain injury of all severities.

**Research overview:** Prof Fitzgerald has published over 80 scientific papers, including in discipline leading journals such as *J Neuroscience*, *Nature Nano*, *ACS Nano*, and *Biomaterials*. She is regularly invited to speak at national and international scientific meetings and has been awarded \$8.4 million in funding to support her research. She is a Handling Editor for the *Journal of Neurochemistry*, the Australian representative for the Asia Pacific Regional Committee for IBRO and serves on grant review panels and scientific advisory committees.

**Research publications:** Halstrom, A., MacDonald, E., Neil, C., Arendts, G., Fatovich, D. and **Fitzgerald, M.** (2017) Elevation of Oxidative Stress Indicators in Plasma Following Traumatic Brain Injury. *J Clin Neurosci*. 35: 104-108  
 Yates, N.J., Lydiard, S., Fehily, B., Bartlett, C.A. and **Fitzgerald, M.** Repeated Mild Traumatic Brain Injury in Female Rats Increases Lipid Peroxidation in Neurons (2017) *Experimental Brain Research*. 235(7), 2133-2149.  
 Giacci, M.K., Bartlett, C.A., Smith, N.M., Iyer, K.S., Jiang, H., Guagliardo, P., Kilburn, M.R., and **Fitzgerald, M.** (2018) Oligodendroglia are particularly vulnerable to oxidative damage after neurotrauma in vivo. *J Neurosci* 38 (29): 6491-6504  
 Smith, N.M., Giacci, M.K., Gough, A., Bailey, C., McGonigle, T., Black, A.M.B., Clarke, T.O., Bartlett, C.A., Iyer, K.S., Dunlop, S.A., **Fitzgerald, M.** (2018) Inflammation and blood brain barrier breach remote from the primary injury following neurotrauma *J Neuroinflammation* 15(1): 201  
 Ho, D., Norret, M., Nguyen, M., Vedere, J-P., Jiang, H., Munshi, A., Blythe, A.J., Saunders, M., Archer, M., **Fitzgerald, M.**, Keelan, J.A., Bond, C.S., Hurley, L.H., Kilburn, M.\*, Smith, N.M.\*, and Iyer, K.S.\* (2018) Intracellular speciation of gold nanorods alter the conformational dynamics of genomic DNA *Nature Nano* 13(12):1148-1153  
 Mao, Y., Black, A.M.B., Milbourn, H.R., Krakonja, S., Nesbit, M., Bartlett, C.A., Fehily, B., Takechi, R., Yates, N.J. and **Fitzgerald, M.** (2018) The effects of a combination of ion channel inhibitors in female rats following repeated mild traumatic brain injury *International Journal of Molecular Sciences* 19(11). pii: E3408. doi: 10.3390/ijms19113408  
 Fehily, B., Bartlett, C.A., Lydiard, S., Archer, M., Milbourn, H., Majimbi, M., Hemmi, J.M., Dunlop, S.A., Yates, N.J. and **Fitzgerald, M.** (2019) Differential responses to increasing numbers of mild traumatic brain injury in a rodent closed head injury model. *In Press J Neurochemistry*



**Melinda Fitzgerald (PhD)**  
 Professor of Neurotrauma  
 Deputy Director, Curtin Health Innovation  
 Research Institute,  
 Curtin University and the Perron Institute  
 for Neurological and Translational Science  
 Australia  
 M: + 61 08 6457 0514  
 E: [lindy.fitzgerald@curtin.edu.au](mailto:lindy.fitzgerald@curtin.edu.au)

