Title: Settle down now!: Targeting abnormal microglial activation to treat cognitive dysfunction and depression in Parkinson's disease.

Abstract:
Parkinson’s Disease (PD) affects 8-10 million people worldwide, a prevalence projected to more than double by 2030. While classically thought of as a motor disease, non-motor impairments, including cognitive dysfunction (ranging from mild alterations in executive function to dementia) and depression, are also major components of the disease. Despite the fact that these non-motor symptoms are major predictors of quality of life for individuals with PD, however, there are currently no effective treatment strategies for these symptoms. Part of what has stalled effective treatment development to date is uncertainty over the brain mechanisms that may drive the emergence of these impairments in PD. A growing body of evidence suggests that neuroinflammation may be a key player in these processes. Activation of microglia, the resident immune cells of the brain, leads to the release of pro-inflammatory cytokines, activating a molecular cascade that ultimately leads to the death of neurons in key brain regions. Multiple studies have now demonstrated increased levels of activated microglia and other pro-inflammatory mediators in the brains of PD patients, and both cognitive and neuropsychiatric function are known to be particularly sensitive to the effects of neuroinflammation. Thus, targeting aberrant microglial activation may represent a novel therapeutic strategy for these non-motor aspects of Parkinson’s disease.

Biography:
Dr Lyndsey Collins-Praino completed a PhD in behavioural neuroscience at the University of Connecticut in 2011 and a post-doctoral fellowship in cognitive neuroscience at Columbia University in 2014. In March 2014, she moved to the University of Adelaide, where she is currently a Senior Lecturer in the Adelaide Medical School. Lyndsey is Head of the Cognition, Aging and Neurodegenerative Disease Lab (CANDL), where her research focuses on understanding the brain basis of cognitive decline in healthy ageing and in neurodegenerative diseases, such as Alzheimer's and Parkinson's disease. Her work has attracted significant research funding, has appeared in numerous prestigious peer-reviewed journals and media outlets and has been presented at conferences around the world. In addition to her research interests, Dr Collins-Praino also has a strong commitment to teaching and neuroscience outreach in the community. In 2015, she was a finalist for the "Unsung Hero of South Australian Science" award and was recognised with the Executive Dean’s Award for Excellence in Teaching. She is a 2016 South Australia Tall Poppy, a finalist for SA Tall Poppy of the Year, and was awarded the "STEM Educator of the Year" award at the 2016 SA Science Excellence Awards.