

1. PROJECT:

Therapeutic targeting of ferroptotic cell death in MND

Only recently, a unique cellular pathway that regulates the life of a cell, called ferroptosis, was found to be involved in instructing motor neurons to die. The aim of this fellowship is to investigate if modulating the ferroptosis pathway has therapeutic potential for MND. Investigators in Dr Wang's team aim to block ferroptosis in MND models using genetic tools and drugs that specifically target aspects of this pathway. They will assess how effectively their agents block ferroptosis, and whether they can delay the onset and progression of MND-like symptoms and pathology. Successful outcomes will provide a strong case for progressing agents that modulate the ferroptosis pathway through the pipeline towards clinical trials for MND.

PROJECT LEAD:

Dr Taide Wang
The University of Melbourne, VIC

KEY HIGHLIGHTS:

Dr Wang was the inaugural recipient of the Angie Cunningham PhD Scholarship and Grant in Aid in 2019. This study is exploring a novel mechanism and cause of MND and may uncover new agents with promise for treating MND.

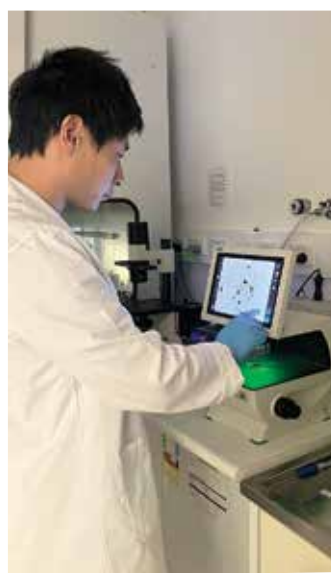
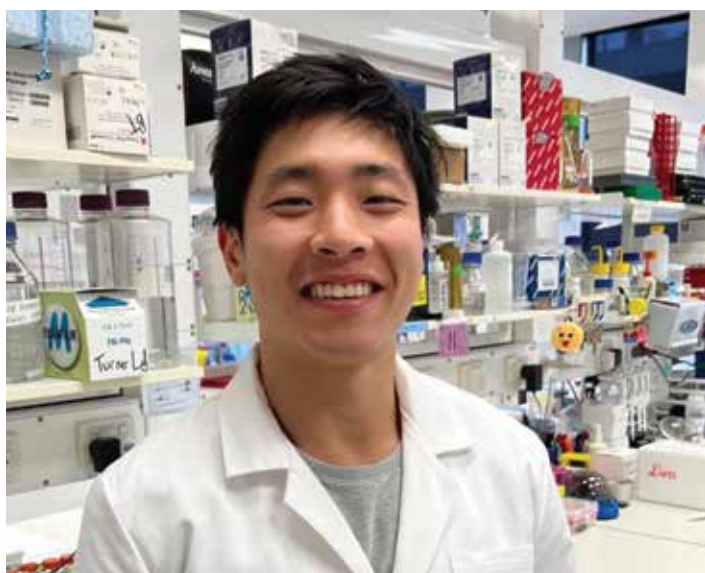
AMOUNT INVESTED BY FIGHTMND IN THIS EARLY-CAREER RESEARCH FELLOWSHIP:

\$573,366

Q&A:

Why is this important and how will it benefit patients?

So far, there is no effective treatment for MND. This study will lead to a greater understanding of how motor neurons are lost in ALS. In addition, our selenocompound study may also provide effective and non-invasive suitable drug candidates for clinical testing.



Left: Dr Taide Wang | Right: Dr Taide Wang using the microscope to observe motor neurons in spinal cord

“The most exciting part of the study lies in the fact that the compounds are safe and orally bio-available. Thus, they may be an effective yet non-invasive therapeutic strategy for treating MND.” – Dr Taide Wang