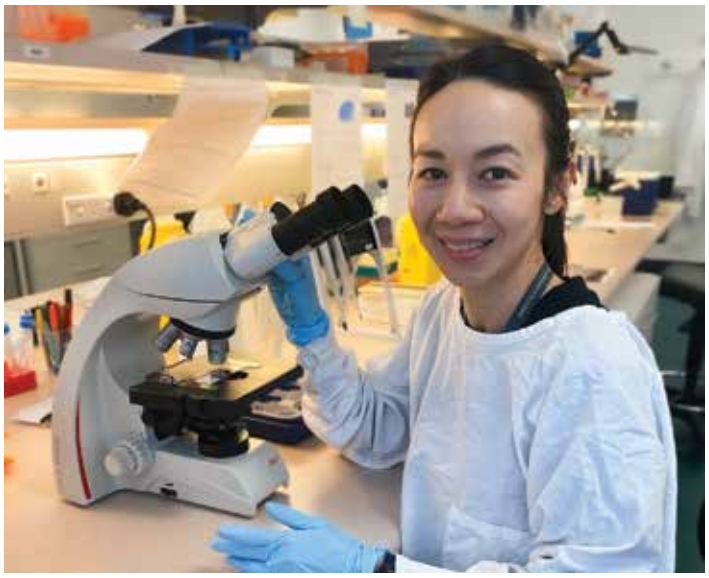
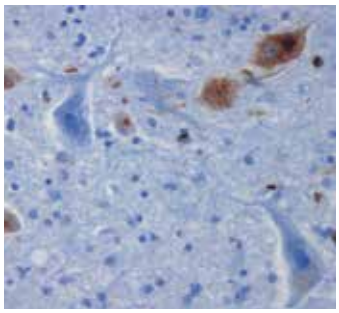
6. PAUL FISHER IMPACT GRANT – DISEASE HETEROGENEITY

PROJECT:
RNA-binding proteins involved in the pathogenesis and disease heterogeneity of sporadic MND

PROJECT LEAD:
Dr Rachel Tan
The University of Sydney, NSW





Above: Dr Rachel Tan in the lab at the University of Sydney
Below left: TDP-43 (brown) in the motor neurons of a patient with MND

Below right: Dr Rachel Tan examining a slide of a patient neuron

High variability in MND, including the age of onset, type and speed of disease progression between people, is a barrier to the discovery of better treatments. This project will study the brains of people that lived with MND. Investigators will search for the location of proteins recently linked to MND to determine if their distribution patterns can be used to define different types of MND. A successful outcome will be to identify new protein targets for treating specific subtypes of MND.

KEY HIGHLIGHTS:
Dr Tan is a first-time recipient of FightMND funding and was awarded a FightMND Mid-Career Research Fellowship in 2022. Identifying patterns of protein expression in the brain of people that lived with MND may help identify novel targets for treating specific subtypes of MND.

AMOUNT INVESTED BY FIGHTMND IN THIS RESEARCH PROJECT:
$208,826

Q&A:
What problem are you trying to solve with this project?
In 90% of patients, MND occurs sporadically and there is still so much that is unknown about the underlying biological pathways affected, and how these cause targeted breakdown of motor neuronal networks.

***"Studying brain tissue from patients with different clinical symptoms and disease trajectories will significantly advance knowledge on the molecular proteins involved in the pathogenesis of MND."* – Dr Rachel Tan**