

2. MID-CAREER RESEARCH FELLOWSHIP

PROJECT:

Reversing TDP-43 pathology and neuronal loss in sporadic MND

PROJECT LEAD:

Dr Rachel Tan
The University of Sydney, NSW

“This project in a large cohort of patients with different disease presentations and trajectories will enable us to uncover significant insights into the pathobiological underpinnings that give rise to sporadic MND.” – Dr Rachel Tan



Although misbehaving TDP-43 protein occurs in almost all MND cases, there are additional related proteins in motor neurons that may also contribute to the disease, and to MND's high variability. During this fellowship Dr Tan will study the expression of these proteins in brain tissue from a large group of MND patients who were followed clinically over the course of their disease. The study aims to establish if relationships exist between these proteins and the age of MND onset, speed of disease progression, and the length of disease. The study will advance current knowledge on the molecular proteins involved in MND pathology. It may also uncover new cellular targets and molecular pathways with the potential to overcome these pathologies and fast-track the development of successful drug interventions for MND.

KEY HIGHLIGHTS:

This study is examining the expression of MND-related proteins in brains from a large group of MND patients who were clinically followed over the course of disease. Dr Tan is a first-time recipient of research funding from FightMND. This 4-year Mid-Career Fellowship will help strengthen Dr Tan's independent research programs and research team.

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

\$679,970

Q&A:

Why is this important and how will it benefit patients?
A better understanding of the underlying disease pathogenesis is needed to accelerate the discovery of successful disease-modifying treatments for patients and their families.



Above: Dr Rachel Tan | Below: Dr Rachel Tan analysing staining data from patient motor neurons