

2. MND BRAIN IMAGING INITIATIVE

PROJECT:

AMII: Asia-pacific MND Imaging Initiative

PROJECT LEAD:

Dr Sicong Tu
The University of Sydney, NSW

The location and spread of MND can be assessed by clinicians using imaging techniques such as Magnetic Resonance Imaging or MRI. These techniques are now capable of detecting loss of motor neurons from the earliest stage of disease and even before the onset of clinical symptoms. However, there are several barriers preventing imaging from being used to detect and monitor MND in the clinic. This collaborative project aims to overcome these barriers. Researchers will substantially increase the number of patient samples analysed across Australia, to validate that current imaging techniques are suitable for MND. They will also establish a platform that matches patient imaging data with their clinical assessments, enabling a comprehensive analysis of both disease stage and the effectiveness of treatments.

KEY HIGHLIGHTS:

Dr Sicong Tu is a first-time recipient of research support from FightMND. The Asia-pacific MND Imaging Initiative will create a national network that validates current imaging techniques as biomarkers for MND and tools for measuring the effectiveness of treatments for the disease.

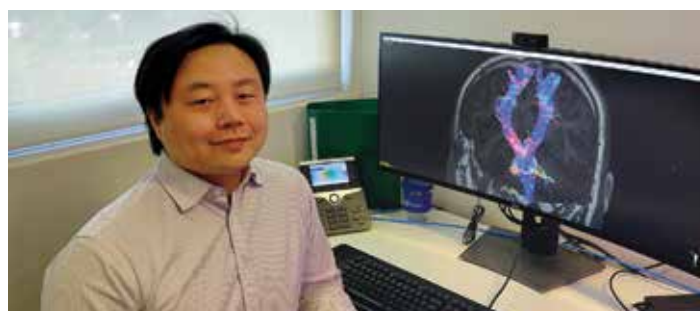
AMOUNT INVESTED BY FIGHTMND IN THIS RESEARCH PROJECT:

\$499,720

Q&A:

What excites you about your research project?

The most exciting prospect is our focus on bridging the gap and connecting leading Australian imaging researchers with leading MND clinicians to create a new national resource, through the Brain and Mind Centre, to enhance Australian MND imaging biomarkers. To achieve this, we will be working closely with industry leaders in medical imaging (GE; SIEMENS) and specialist AI-engineers.



Above: Dr Sicong Tu | Below: Dr Sicong Tu examining fine-grained microstructural integrity of primary motor pathways in the MND brain

“Accurate modelling of dynamic brain changes will add another dimension to enhance Australian clinical trial outcomes to deliver new treatment options for patients.”
– Dr Sicong Tu