

# Research Grants 2026

## **Stroke | Early identification of delayed cerebral ischaemia in aneurysmal subarachnoid haemorrhage**

### **Doctor Tom Richardson**

Subarachnoid haemorrhage from aneurysm rupture is the third most common cause of stroke worldwide, disproportionately affecting women and the young compared to other forms of stroke.

Despite significant research effort, there remains an unacceptably high 30-day mortality and a significant disease burden for the Australian community. A major contributor to the poor outcomes in aneurysmal subarachnoid haemorrhage (aSAH) is the development of delayed cerebral ischaemia (DCI).

Prompt diagnosis of DCI is paramount for optimal care, however, remains challenging. Reduced consciousness is common and there is no standardised tool to assess and monitor focal neurological function. One approach to address this is to use radiological studies as a surrogate to identify DCI. Computer tomography (CT) perfusion scans have been shown to have high sensitivity for identifying DCI, however, validated quantitative thresholds for diagnosis remain elusive.

This project aims to improve the diagnosis of DCI in aSAH through early radiological detection. We will develop a novel CT perfusion protocol and conduct a prospective cohort study to assess CT perfusion utility in identification of DCI. Significantly, opening the possibility for therapeutic intervention before irreversible ischaemia develops and potentially improving neurological outcomes in this devastating condition.

**Grant \$30,000**