

Research Grants 2026

Stroke | Imaging and Biomarker Signatures of Inflammation in Cerebral Amyloid Angiopathy

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Cerebral amyloid angiopathy (CAA) is a common condition in older adults. CAA is caused by an abnormal protein, amyloid, which builds up in the blood vessels of the brain, making them more fragile. The prevalence of CAA increases with age, and increases the risk of bleeding (intracerebral haemorrhage), cognitive impairment and dementia.

CAA is a progressive disease, and there is currently no treatment that prevents worsening. CAA remains poorly understood – we still do not understand why some people experience bleeding or memory decline while others do not – and doctors currently have no reliable way to identify which patients are most at risk.

Recent evidence suggests that inflammatory processes may be a key driver of vessel damage, and disease progression. This project will investigate signs of inflammation in the brain and in the blood – collecting MRI scans, blood tests, and memory assessments at set time points to see how inflammation changes over time and how it relates to health outcomes – to investigate whether they can help identify who is most at risk.

The specific goals of this project are to find out whether inflammation seen on MRI scans is linked to a higher risk of brain bleeding in people with CAA; to examine whether blood tests which reflect brain cell injury are associated with these inflammatory changes; and to explore whether inflammation is also connected to memory decline.

This research could lead to earlier identification of high-risk patients, better monitoring, and provide the foundations for testing new treatments.

Grant \$54,000