

Contribution of TREM2 and neuroinflammation to neurodegeneration and cognitive dysfunction in response to chronic cerebral hypoperfusion

<https://neurodegenerationresearch.eu/survey/contribution-of-trem2-and-neuroinflammation-to-neurodegeneration-and-cognitive-dysfunction-in-response-to-chronic-cerebral-hypoperfusion/>

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Country

United Kingdom

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Contribution of TREM2 and neuroinflammation to neurodegeneration and cognitive dysfunction in response to chronic cerebral hypoperfusion

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Research Abstract

The immune system has many positive effects including protecting us from infection. However, some activities of the immune system can cause damage to the body's own tissues, particularly if this immune activity is started inappropriately or not kept under control. There is some

evidence that loss of immune control in the brain could contribute to the risk of getting dementia. Work in our lab has shown that a protein called TREM2 can influence the activity of the brain's key immune cells, microglia. We think that TREM2 can have an important role in controlling the immune environment of the brain. Recent studies by other groups have shown that variations in the gene encoding TREM2 influence the risk of getting Alzheimer's disease and other dementias. However, it is not known if there is a direct link between TREM2, altered immune activity in the brain and dementia. It is not possible to study this link in humans therefore in this project we will use an animal model that mimics important features of dementia in patients. We will use this model to determine how a deficiency of TREM2 affects immune activity and pathological changes in the brain and cognitive function.

Further information available at:

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