

Lay Summary

BRAIN UK Ref: 14/003

Studying the role of TUBA8 (tubulin alpha 8) in brain disorders

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Alzheimer's disease (AD) is the most common type of dementia. The nerve cells are abnormal in this disease. Clumps of protein called tangles containing tau form inside the nerve cells and correlate with the severity of dementia. tau has a role in microtubule stability and microtubules are fundamental to cell skeleton and intracellular trafficking. However, surprisingly, little work has been done in the human brain to understand how the microtubules and tubulins are affected in Alzheimer's disease. We have recently identified a mutation in a gene in association with a neurological disorder. This gene is involved in important cellular functions. In this project, we investigated the gene using immunostaining in five AD patients and five age matched controls from BRAIN UK. The results show an interesting difference between the cases and the controls. This is a very important observation and we are going to reproduce, validate and quantify this in a greater sample size.