

## **Lay Summary**

**BRAIN UK Ref: 12/001**

### **Pilot study to identify mast cells and basophils in brain**

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Particular cell types in the central nervous system called mast cells and basophils are involved in the normal immune response to inflammation caused by processes such as infection, traumatic injury and inflammatory diseases processes such as multiple sclerosis (MS). Mast cells act at the interface between two arms of the immune system (the simple innate system and more complex acquired system) and act by co-ordinating and directing a normal immune response. Basophils are involved in the immune response to allergens and parasites and again aid in the co-ordination of an immune response by increasing blood flow to an affected area of the body.

This study aims to apply specific staining methods of mast cells and basophils in different neuroinflammatory conditions to compare their distribution with those of microglia as well as to ensure that the staining methods used are optimised for extension to other related studies.