

Phenotyping the immune response in Alzheimer's disease by flow cytometry

<https://neurodegenerationresearch.eu/survey/phenotyping-the-immune-response-in-alzheimer%c2%92s-disease-by-flow-cytometry/>

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United Kingdom

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Phenotyping the immune response in Alzheimer's disease by flow cytometry

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1

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Research Abstract

The activation and proliferation of the brain's resident immune cells, the microglia, are hallmarks of Alzheimer's disease. These cells are influenced by the body's inflammatory tone, and clinical evidence suggests a role of the immune system in the onset and progression of dementia. However, the mechanisms, relative contribution and importance of specific peripheral immune cells (e.g. T-cells, B-cells, macrophages) vs brain macrophages (microglia, perivascular or meningeal macrophages) are poorly characterised and need to be investigated in detail. This is best achieved by using complementary techniques that inform about the type, number and function of the cells in Alzheimer's disease, combining expertise from the neuroscience and

immunology fields. We here request support to fund a benchtop Flow Cytometry system, which allows the characterisation of individual cells, phenotypically and functionally. The combination of these parameters with imaging or behavioural techniques already setup in our laboratory will be a powerful way to dissect the contribution of specific cell types in experimental models of dementia and, ultimately human studies.

Further information available at:

Types:

Investments < €500k

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United Kingdom

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