A biological resource for metagenomic studies of dementia

https://neurodegenerationresearch.eu/survey/a-biological-resource-for-metagenomic-studies-of-dementia/

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Country

United Kingdom

Title of project or programme

A biological resource for metagenomic studies of dementia

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Alzheimer's Research UK

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Research Abstract
The bacterial composition of the gut (the micobiome) plays an important role in human health. The microbiome is stable complex system existing in a mutually beneficial relationship with its human host. The intestinal bacteria breakdown indigestible food products to produce micronutrients and stimulate the host's immune system which in turn regulates the bacterial composition. Changes in the microbiome have been found to occur not only in disorders of the digestive system such as irritable bowel syndrome and colorectal cancer but also disease such as Type II diabetes and obesity. The complexity of this composition in terms of the number of different kinds of bacteria is usually regarded as relatively stable throughout adulthood but with ageing this complexity is reduced. Aging, diabetes, obesity and are well established risk factors

for Alzheimer's disease associated with low level inflammation and are themselves associated with changes in the intestinal microbiome but there have been no studies examining the microbiome and their metabolites in dementia or Alzheimer's disease. We hypothesise that changes in the intestinal microbiome influences risk for Alzheimer's disease. We propose therefore to collect detailed clincial information and biological samples from elderly individuals with and without dementia to address this hypothesis.

Further information available at:

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