

Of Molecules, Mice and Men: exposing and understanding apolipoprotein E effects across the lifespan

<https://www.neurodegenerationresearch.eu/survey/of-molecules-mice-and-men-exposing-and-understanding-apolipoprotein-e-effects-across-the-lifespan/>

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Contact information of lead PI Country

United Kingdom

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Of Molecules, Mice and Men: exposing and understanding apolipoprotein E effects across the lifespan

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4

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Research Abstract

Alzheimer's disease (AD) can be both familial and sporadic. In sporadic AD, the major risk factor after age is the isoform of ApoE, with carriers of the ApoE4 isoform having a 4-10 fold increased risk of AD. Although research has pointed to roles for ApoE isoforms in amyloid-beta (Abeta) generation and clearance, the precise time frame and mechanism by which ApoE increases likelihood of AD is unclear. Paradoxically, ApoE4 may have positive effects on

cognition in younger people, so the impact of ApoE4 differs across the lifespan. This doctoral programme aims to link studies comparing young and mid-age adult ApoE4 and ApoE3 individuals and their cognition, with studies exploring genetic and molecular mechanisms of neuronal function and differences in susceptibility to Abeta induced neurotoxicity. The programme incorporates expertise from seven research groups, each led by leaders in the fields of psychology, biochemistry and drug discovery. It brings together a multidisciplinary team to understand the lifespan effects of ApoE4 leading to late-life AD, and provides a broad based interdisciplinary training programme for postgraduate students. This work will provide advances in understanding mechanisms of AD and to identify novel targets and approaches for therapy.

Further information available at:

Types:

Investments < €500k

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United Kingdom

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