Translational studies on APP and ?-amyloid for Alzheimer's disease pathogenesis

https://www.neurodegenerationresearch.eu/survey/translational-studies-on-app-and-amyloid-for-alzheimers-disease-pathogenesis/

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Country

Sweden

Title of project or programme

Translational studies on APP and ?-amyloid for Alzheimer's disease pathogenesis

Source of funding information

Swedish Research Council

Total sum awarded (Euro)

€ 1,088,139

Start date of award

01-01-2013

Total duration of award in years

5

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords
Research Abstract
Recent research advances on Alzheimer's disease (AD) have been translated into new disease-modifying amyloid ? (A?) drug candidates, but these have shown disappointing clinical effects. This may be due to that amyloid precursor protein (APP) processing and A? metabolism is much more complicated than previously believed, with a large number of processing pathways, which may have significance both for disease pathogenesis and development of therapies. We

will use novel techniques to perform true translational studies, where the same processing pathways are studied in preclinical cell- and animal experiments, as well as in clinical neurochemical studies and clinical trials. The specific aims are to: 1) develop novel selected reaction monitoring (SRM)-based techniques for APP isoforms and ?-amyloid (A?) species; 2) use these techniques to study APP and A? in cell culture and animal models with the aim to identify the enzymes regulating their metabolism, and as reference methods for use both as diagnostic and theragnostic markers; 3) develop analytical methods for A? oligomers, ?-secretase processing (Notch-?) and synaptic degeneration, to evaluate the role of these processes in AD pathogenesis, and as diagnostic and theragnostic markers. The aims are to get valid data on the molecular pathogenesis of AD, develop novel diagnostic tools (biomarkers) and theragnostic markers to monitor treatment effects.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
Sweden

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
N/A