

Intelligence led drug discovery for the amyloid cascade

<https://neurodegenerationresearch.eu/survey/intelligence-led-drug-discovery-for-the-amyloid-cascade/>

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Country

United Kingdom

Title of project or programme

Intelligence led drug discovery for the amyloid cascade

Source of funding information

Alzheimer's Society

Total sum awarded (Euro)

€ 474,476

Start date of award

01/10/2014

Total duration of award in years

3.1

Keywords

Research Abstract

Drug discovery in Alzheimer's disease has focused on finding compounds to reduce the generation or increase the clearance of amyloid. However, other targets are almost certainly needed if we are to find a successful therapy. We have built on our work of the past ten years or more that has culminated in an understanding of the cascade pathway that links the amyloid that forms plaques with the tangles that cause neurotoxicity to generate a novel drug discovery programme. We have done this using the connectivity map; an informatics driven process that is beginning to transform drug discovery in other fields such as that of cancer. Our aim is first to use the new release of data from the connectivity map to confirm and extend our findings, second to prioritise hit compounds through in vitro screens and third to deliver further evidence

for potential utility through animal studies. Our methodological approach will be to use our comparative gene expression data from experimental studies in proven cell models to interrogate the new release connectivity map. Then we will use our established secondary screens in neurons to establish compound effects on phenotypes relevant to AD including tau phosphorylation and neuronal toxicity. Finally we will use an acute amyloid injection model in the adult rat to determine compound efficacy to prevent AD pathology in vivo. The outcomes will be a portfolio of data for a set of compounds sufficient to progress the critical path for therapeutics for disease modification against AD in man.

Further information available at:

Types:

Investments < €500k

Member States:

United Kingdom

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A