

Live cell tracking of amyloidogenic species related to Alzheimer's disease

<https://neurodegenerationresearch.eu/survey/live-cell-tracking-of-amyloidogenic-species-related-to-alzheimer%20s-disease/>

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Contact information of lead PI Country

United Kingdom

Title of project or programme

Live cell tracking of amyloidogenic species related to Alzheimer's disease

Source of funding information

Alzheimer's Research UK

Total sum awarded (Euro)

€ 380,854

Start date of award

01/01/2014

Total duration of award in years

3.5

Keywords

Research Abstract

In our group, we have recently developed a new kind of microscope, a so called optical super-resolution microscope, which is so powerful that it is capable of visualising the shape of amyloid protein aggregates directly in cultured brain cells, which we use as model systems of disease. We were the first researchers to demonstrate that it is possible to obtain 'images' of toxic protein shapes in neurones, and here we propose to use this newly developed tool to shed new light on the mechanisms that lead to the onset and propagation of neurodegenerative diseases.

The aims of our proposed research project are: 1) to identify specific species of A β and tau in

neurones and other cells present in the brain and to relate the shape, and size of these species to the appearance of disease symptoms. 2) to study A β and tau trafficking in and out of cells and to infer on the implications of this on the possible mechanisms of disease progression. 3) to see whether potential inhibitors of protein aggregation and propagation have an effect on what we observe within the cells we study. We will test several promising anti-aggregation and anti-propagation compounds that our collaborators provide.

Further information available at:

Types:

Investments < €500k

Member States:

United Kingdom

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

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