

Using C. elegans to understand seeding and spreading of tau aggregation

<https://neurodegenerationresearch.eu/survey/using-c-elegans-to-understand-seeding-and-spreading-of-tau-aggregation-2/>

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Multiple

Contact information of lead PI Country

United Kingdom|Germany

Title of project or programme

Using C. elegans to understand seeding and spreading of tau aggregation

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CoEN

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€ 364,481

Start date of award

01/06/2018

Total duration of award in years

2

Keywords

Research Abstract

With age, people become susceptible to multiple neurodegenerative diseases, such as Alzheimer's and Parkinson's diseases. These disorders are caused by an accumulation of proteins that are incorrectly folded, leading neurons to malfunction and die. We are interested in why these proteins misfold with age, and how misfolded proteins might spread through the brain, leading to an increase in disease symptoms over time.

This project focuses on one of these disease-causing misfolded proteins, called tau, which is associated with several neurodegenerative diseases, including Alzheimer's disease. We aim to find out whether other proteins that misfold as cells get older lead tau to misfold. We then aim to

use a species of nematode worm, *C. elegans*, as a model for tau-related disease, creating worms that produce tau in different cells so that we can observe how tau misfolds and spreads from cell to cell in a living organism. We will then use these *C. elegans* models to manipulate genes that produce proteins we believe cause tau to misfold and spread, to see whether this affects disease symptoms in these animals.

Together, these studies will help us to understand why neurodegenerative diseases involving tau begin and develop, and suggest new therapeutic approaches to address them.

Further information available at:

Types:

Investments < €500k

Member States:

Germany, United Kingdom

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A