NeuroTraffic: Orientated neuronal networks for investigating mechanisms of tau propagation

https://neurodegenerationresearch.eu/survey/neurotraffic-orientated-neuronal-networks-for-investigating-mechanisms-of-tau-propagation/

Principal Investigators

Katrin Deinhardt

Institution

University of Southampton

Contact information of lead PI
Country

United Kingdom

Title of project or programme

NeuroTraffic: Orientated neuronal networks for investigating mechanisms of tau propagation

Source of funding information

Alzheimer's Research UK

Total sum awarded (Euro)

€ 81,816

Start date of award

25/09/2014

Total duration of award in years

3

Keywords
Research Abstract

The brain controls our daily activities, such as seeing, talking and moving, and also our emotions and behaviour. Within the brain, individual nerve cells connect to form large networks that process, propagate and store all the information required to perform these various tasks. Unfortunately, toxic agents such as viruses and bacterial toxins can exploit these nerve cell “highways” to spread throughout the brain. The proposed project addresses if protein aggregates such as tangles, a hall mark of many neurodegenerative diseases, also directly travel along nerve cell networks to spread to other areas of the brain, and if so, what mode of transport they take. To address this question, we will use an innovative microchip that allows

direct access to individual connected nerve cells and thus recreates the small nerve cell highways that can be individually tested. We will film, in real-time, the spread of these tangles to understand their movement. This experimental platform will also be useful to screen drugs for their ability to stop traffic of toxic material along nerve cells. A better understanding of how damaging materials move through the brain and enters nerve cells will aid the development of more effective therapies for the treatment of dementia.

Further information available at:

Types:
Investments < €500k

Member States:
United Kingdom

Diseases:
N/A

Years:
2016

Database Categories:
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Database Tags:
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