Reprogramming neurons for nervous system repair.

https://neurodegenerationresearch.eu/survey/reprogramming-neurons-for-nervous-system-repair/

Name of Fellow

Dr Tony Southall

Institution
Funder

Wellcome Trust

Contact information of fellow
Country

United Kingdom

Title of project/programme

Reprogramming neurons for nervous system repair.

Source of funding information

Wellcome Trust

Total sum awarded (Euro)

€ 1,487,111

Start date of award

01/03/15

Total duration of award in years

5.0

The project/programme is most relevant to:

Neurodegenerative disease in general

Keywords

Neurodegen

Research Abstract
A long term goal of regenerative medicine and stem cell research is to possess the knowledge
to convert cells from one type to another, for repairing of damaged or diseased tissues. Exciting

progress has been made in recent years, with the discovery that expression of specific transcription factors (proteins that regulate gene expression) can reprogram differentiated cells back into stem cells or into an alternative differentiated state. To use these methods for curing neurodegenerative diseases and repairing damaged nerves, much more needs to be learnt about how transcription factors normally control genes to specify neuronal cell fate. Neurotransmitters are a key property of neurons, allowing neurons to communicate with each other. This research project involves investigating how neurotransmitter properties of neurons are specified at the gene regulatory level. Cutting edge technology will be used to identify the repertoire of transcription factors expressed in cells with specific neurotransmitter properties. The role of candidate transcription factors in neurotransmitter specification will be investigated, as well as their potential to reprogram the properties of neurons in a living organism. A future aim is to perform parallel experiments in vertebrate systems, bringing the prospect of focused nervous system regeneration, that one step closer.

Types:
Fellowships

Member States:
United Kingdom

Diseases:
Neurodegenerative disease in general

Years:
2016

Database Categories:
N/A

Database Tags:
N/A