Stem cell therapy for stroke and other neurodegenerative diseases

https://www.neurodegenerationresearch.eu/survey/stem-cell-therapy-for-stroke-and-other-neurodegenerative-diseases/

Principal Investigators

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Country

Sweden

Title of project or programme

Stem cell therapy for stroke and other neurodegenerative diseases

Source of funding information

Swedish Research Council

Total sum awarded (Euro)

€ 652,884

Start date of award

01-01-2013

Total duration of award in years

4.0

The project/programme is most relevant to:

Parkinson's disease & PD-related disorders

Keywords
Research Abstract

Background: We have previously shown restoration of function in damaged human brain by neural transplantation. Also that human neural stem cells survive transplantation and improve deficits in the stroke-damaged rodent brain, and that the adult brain tries to repair itself after stroke by producing new neurons from its own neural stem cells. Objectives: (1) To develop new strategies to repair the brain and improve functional recovery after stroke by neuronal

replacement from endogenous or grafted neural stem/progenitor cells or reprogrammed somatic cells; (2) To determine and optimize the actions of inflammation and immune cells on neurogenesis from grafted and endogenous cells and on the functional restoration after stroke; (3) To continue to develop a clinically effective cell replacement therapy in Parkinson?s disease using stem cell-derived dopamine neurons. Methods: (i) In vitro systems for neural stem/progenitor cells; (ii) Cell sorting and transplantation techniques; (iii) Disease models in rats and mice; (iv) Gene transfer techniques and transgenic mice; (v) Microarray; (vi) Immunocytochemistry, stereology and anatomical tracing; (vii) Electron microscopy; (viii) Patch-clamp technique; (ix) Behavioral test battery; (x) Clinical assessment of patients, MRI and PET imaging. Significance: This translational research may lead to novel therapeutic strategies to restore and preserve function in human neurodegenerative disorders.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
Sweden

Diseases:
Parkinson's disease & PD-related disorders

Years:
2016

Database Categories:
N/A

Database Tags:
N/A