Treatment of ALS based on transplantation of glial restricted progenitors

https://neurodegenerationresearch.eu/survey/treatment-of-als-based-on-transplantation-of-glial-restricted-progenitors/

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Country

USA

Title of project or programme

Treatment of ALS based on transplantation of glial restricted progenitors

Source of funding information

NIH (NINDS)

Total sum awarded (Euro)

€ 1,637,830.28

Start date of award

15/09/2015

Total duration of award in years

4

The project/programme is most relevant to:

Motor neurone diseases

Keywords

Amyotrophic Lateral Sclerosis, progenitor, Transplantation, Neuroglia, Engraftment

Research Abstract

? DESCRIPTION (provided by applicant): Amyotrophic lateral sclerosis (ALS) is a progressive neurodegenerative disorder without a cure. Patients who suffer from ALS typically die within two-

to-five years of diagnosis. Recent progress in regenerative medicine has raised hope for a breakthrough. The significant role of glia for the proper function of motor neurons has been recently reported, and efficient methods to isolate glial-restricted precursors (GRP) have been established. It has been shown in rodent models that GRPs of fetal origin display the highest therapeutic potential among all other sources, because they are characterized by extensive engraftment, differentiation, and robust therapeutic effect. In this project, we propose to use fetl GRPs for the treatment of ALS. The Allografting of GRPs in pigs is particularly attractive, as it will be performed in a clinically relevant setting, including utilization of catheter-based cell delivery, with a clinical MR scanner for cell tracking and assessment of immunogenicity/immunoprotection. The application of the latest developments in neurobiology, interventional neuroradiology, and regenerative medicine should result in a long-awaited cure for ALS.

Lay Summary
PUBLIC HEALTH RELEVANCE Amyotrophic lateral sclerosis (ALS) is a relentlessly progressive neurodegenerative disease, with most patients dying within three-to-five years of diagnosis and effective treatment not available. The application of stem/progenitor cells offers the greatest potential for restoration of lost neurological function. Accordingly, we propose to focus our project on regenerative medicine and the application of glial progenitor cells for the treatment of ALS.

Further information available at:

Types:
Investments > €500k

Member States:
United States of America

Diseases:
Motor neurone diseases

Years:
2016

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