Transferring NOn autonomous cell degeneration models between EU and USA for development of effective therapies for Motor Neuron Diseases (MND).

https://neurodegenerationresearch.eu/survey/transferring-non-autonomous-cell-degeneration-models-between-eu-and-usa-for-development-of-effective-therapies-for-motor-neuron-diseases-mnd/

Name of Fellow
Institution
Funder

European Commission FP7-Seventh Framework Programme

Contact information of fellow
Country

EC

Title of project/programme

Transferring NOn autonomous cell degeneration models between EU and USA for development of effective therapies for Motor Neuron Diseases (MND).

Source of funding information

European Commission FP7-Seventh Framework Programme

Total sum awarded (Euro)

€ 375,900

Start date of award

01/02/14

Total duration of award in years

4.0

The project/programme is most relevant to:

Motor neurone diseases

Keywords

Motor Neuron Diseases | non autonomous cell degeneration models | astrocytes mediated

toxicity | induced pluripotent stem cells | cell therapy | Amyotrophic Lateral Sclerosis | Spinal Muscular Atrophy.

Research Abstract
Amyotrophic lateral sclerosis (ALS) and Spinal Muscular Atrophy (SMA) are fatal diseases characterized by selective degeneration of motor neurons without any effective treatment. Non-neuronal cells like astrocytes play a key role in the pathogenesis of ALS and SMA. Understanding the mechanisms of cell death caused by non-neuronal cells is a major research target and it has been proposed that transplantation of non-neuronal cells can represent a new therapeutic strategy for these disorders. The proposed NO-MND project addresses scientific issues related to “non autonomous cell death” in motor neuron disorders, by strengthening research partnerships through staff exchanges and networking activities between 2 European research organizations from Italy, Greece and 1 organization from the USA. The program is focused on: 1) development of in vitro disease models to investigate molecular interactions between non-neuronal cells and motor neurons using cell reprogramming technology; 2) investigation of potential therapeutic efficacy of non-neuronal cells transplantation in motor neuron disease models. The project is based on a 4 year coordinated joint program of exchange of researchers. The three groups have a long standing experience in motor neuron disease field, in cellular and in vivo models, non cell autonomous diseases mechanism and cell replacement therapy. Their ongoing research is supported by multiple grants. Four topics have been identified as most relevant for all partners involved in the joint program: Astrocytes reprogrammed from fibroblasts of ALS (1) and SMA (2) patients in a cellular model to study the pathogeneses of these diseases and their use in therapeutic approaches for ALS (3) and SMA (4) using in vivo models. The IRSES scheme provides a unique opportunity to integrate past collaboration activities into a coherent program addressing an issue of high priority for public health agendas of the EU and USA.

Types:
Fellowships

Member States:
N/A

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Motor neurone diseases

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