

Neural transplantation in the treatment of patients with Parkinson's disease (TRANSEURO)

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Title of project or programme

Neural transplantation in the treatment of patients with Parkinson's disease (TRANSEURO)

Principal Investigators of project/programme grant

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Source of funding information

European Commission

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11994095

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01-01-2010

Total duration of award in months

60

The project/programme is most relevant to

- Parkinson's disease

Keywords

Research abstract in English

There are currently no cures for Parkinson's disease (PD) but one of the most effective reparative therapies in patients to date has been with allo-transplants of dopamine (DA) neuroblasts obtained from fetal ventral mesencephalic (VM) tissue. However, this cell transplantation approach has given inconsistent results, with some patients doing extremely well and coming off anti-PD medication for years, whilst others have shown no or only modest clinical improvements, and in some cases also developed severe, off-state graft-induced dyskinesias (GIDs).

The reasons behind this heterogeneity of outcomes, and the emergence of GIDs in particular, need to be better understood, not least in the perspective of the rapid advances that are now being made in the development of stem-cell based therapies. There is therefore an urgent need to revisit the trials that have already been done with fetal VM tissue in PD patients, with the expectation that a critical reassessment can form the basis for an optimized and more standardized procedure that will translate into more consistently efficacious transplants with minimal side-effects.

Over the last two years a group of international experts, including the key investigators of the previous European and North American trials, has been re-examining the outcome of these trials as well as reviewing the results obtained from recent and ongoing animal experimental studies, and identified a number of weaknesses that may explain the inconsistent outcome in previous trials. As a result of these discussions, the group has agreed to join forces in a new round of experimental work and cell therapy trials in PD, based on a new jointly developed protocol where all these factors are taken into account. In the first instance fetal VM tissue containing mesencephalic DA neuroblasts will be used, with the expectation that this will pave the way for bigger trials using dopaminergic neurons derived from stem cells.

Lay Summary