Neural Transplantation for Treating Neurological Disease

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Technology description

Summary

The technology comprises a method of improving the motor skills of an individual with Huntington's disease. Using hNT neuron cells from an immortalized culture, cells are implanted into the corpus striatum of an individual with Huntington's disease. These cells, derived from a human teratocarcinoma, have been shown to assist in regeneration of neural tissue in stroke patients. Cells were implanted in 12 stroke patients in 2000. Twelve-month follow up in 2001 was positive, with no adverse effects and some recovery of faculties in the patients.While there are drugs on the market and in the pipeline from other companies to treat symptoms of HD, this technology provides a solution to slow or reverse the disease such that the motor skills of the individual with Huntington's disease are improved. Cell therapy has shown to improve conditions in Parkinson’ s Disease patients using fetal cell tissue. Because this technology utilizes an immortalized cell culture, social and ethical concerns surrounding use of fetal tissue are avoided, as well as immunological issues. Effectiveness of the immortalized cell line used for this invention has been demonstrated in animal models of HD, resulting in improved physical performance.

Advantages

This technology provides a method of providing cell therapy for HD, using a replenishable and reliable cell line, which avoids problems such as graft rejection, intense intracerebral inflammation, and tumor formation.

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