Nurr1 as a Genetic Target for Treating Levodopa-induced Dyskinesias (LIDs) in Parkinson's Disease

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Technology description

Executive Summary

Patients afflicted with Parkinson’ s disease often develop severely debilitating movement disorders as side effects from currently available treatment options. Researchers at MSU propose to use a new gene therapy approach that will both reduce these side effects and prolong the effectiveness of treatment by targeted gene silencing.

Description of Technology

L-Dopa induced dyskinesia (LID) is a side effect of prolonged chronic use of L-Dopa medication. A hyper-expression of Nurr1 protein in affected brain areas might underlie these side effects. Local injection of vectors encoding target genes in affected striatum can directly prevent the hyper-expression allowing for potentially improved fine-tuned response for motor control.

Application area

Treatment of LID in patients with Parkinson’ s disease

Potentially useful in the treatment of other movement disorders

Advantages

Improved quality of life for Parkinson’ s patients

Improved and prolonged benefit for movement disorders

Institution

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