Role of Novel Neurotrophic factors CDNF and MANF in genetic models of amyotrophic lateral sclerosis

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Role of Novel Neurotrophic factors CDNF and MANF in genetic models of amyotrophic lateral sclerosis

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Parkinson's disease & PD-related disorders

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Research Abstract
Amyotrophic lateral sclerosis (ALS) is a neurodegenerative disease, characterized by the selective degeneration of motoneurons. The prevalence of ALS is 0.05% of the population. There is currently no effective therapy for ALS. Since several neurotrophic factors promote the survival of motoneurons in vitro and in vivo they are promising drug candidates for ALS. Particularly, CDNF and MANF are interesting to study in the ALS model since our present understanding of their mechanism implicate that they are expressed in muscle tissue and rescue only injured neurons. Importantly, in the pilot study both CDNF and MANF slow down disease progression in SOD1 mouse model of ALS. In this project the role of CDNF and MANF in ALS and the regulation of CDNF and MANF expression in transgenic mice model of ALS will be studied. In addition, the neurorestorative effects of CDNF and MANF protein delivery, as well as gene therapy will be studied.

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