# The role of Prolyl oligopeptidase (POP) and its inhibition on ?-synuclein aggregation and Parkinson’s disease models

https://www.neurodegenerationresearch.eu/survey/the-role-of-prolyl-oligopeptidase-pop-and-its-inhibition-on-synuclein-aggregation-and-parkinson%c2%92s-disease-models/

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The role of Prolyl oligopeptidase (POP) and its inhibition on ?-synuclein aggregation and Parkinson’s disease models

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Parkinson's disease & PD-related disorders

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Parkinson's disease | alpha-synuclein | misfolding proteins | prolyl oligopeptidase

**Research Abstract**
Parkinson’s disease is a neurodegenerative disease with motor problems, where the neurons of locomotor areas of brain are devastated by the unknown reason. Current drug therapies are only not curative, preventative nor do they delay disease progression. Although the ultimate cause of neurodegeneration in PD is not known, one key player seems to be misfolding and aggregation of aSyn on brain dopaminergic neurons. This leads to damaging and death of neurons, and eventually to clinical symptoms of PD. We have earlier shown that prolyl oligopeptidase (POP) enzyme inhibitors are able to block the aggregation and increase the clearance of aggregates after a short-term administration. Moreover, this increased the amount of dopamine in the brain. The aim of this project is to study the role of POP for aSyn aggregation and clearance by silencing the POP protein using different methods. In addition, the effects of POP and its inhibition on brain dopamine levels are studied.

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