



## Principal Investigator Grant

### Project

Jason Greenwald

“Structure Activity Relationship of the Parkinson’ disease polymorph of alpha-synuclein”

**Granted amount** CHF 300'000

**Starting date** 1.2.2024

**Duration** 36 months



### Main applicant

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### Structure Activity Relationship of the Parkinson’ disease polymorph of alpha-synuclein

Parkinson's disease, like Alzheimer's disease, is a neurodegenerative disease. The protein alphasynuclein together with an unknown cofactor aggregates/clumps in the brain of Parkinson's patients into so-called amyloids, which can grow like one-dimensional crystals and thus multiply further from nerve cell to nerve cell.

It is the aim of this research proposal to identify the unknown cofactor, because it could provide insights into the disease process and cause. In addition, it will be studied in vitro and in cells how and if (partial) inhibition of its synthesis could possibly stop the disease. If successful, these studies would point to a new avenue for drug therapy.

Identification of the cofactor would also allow reconstruction of the disease-relevant aggregates at the atomic level both in the test tube and in a cell system, an achievement that would permit much faster and simpler experiments on the aggregation of alpha-synuclein than is currently possible in animal experiments.