

Immune genes impact on development of a-synucleinopathy

<https://neurodegenerationresearch.eu/survey/immune-genes-impact-on-development-of-a-synucleinopathy/>

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Country

Denmark

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Immune genes impact on development of a-synucleinopathy

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3

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Research Abstract

Despite recent progress in understanding the pathogenesis of Parkinson's disease and Lewy Body dementia no curative treatments are available. Dysfunctional autophagy has been associated with these diseases causing accumulation of aggregation prone proteins, a common feature of many age-related neurodegenerative diseases. We have found if interferon (IFN)- β and/or its receptor IFN-A/B receptor is knockout (Ifnb $^{-/-}$, Ifnar $^{-/-}$ respectively) mice display spontaneous neurodegeneration, motor-coordination and cognitive deficits resembling Parkinson's disease dementia and Dementia with Lewy Bodies, and our recent data strongly suggest that this is caused by dysfunctional autophagy. The research aims for the PhD program are to uncover underlining molecular mechanisms of how IFN- β signaling regulates a)

autophagy with specific emphasis on the PI3K/Akt1/FoxO1 pathway, b) trafficking of autophagosomes along the microtubule network and c) IFN- β 's therapeutic potential via autophagy regulation.

Further information available at:

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Investments < €500k

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Denmark

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