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KEY GENETIC SIMILARITIES AND DIFFERENCES BETWEEN ALZHEIMER'S DISEASE AND PARKINSON DISEASE

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Abstract
Recent research point to several similarities between Alzheimer's disease and Parkinson disease. Given that the major difference between the two diseases is the fact that Parkinson disease mainly exhibit motor impairments and only secondarly cognitive decline and Alzheimer's disease hallmark is cognitive loss, we tried to evidentiate several key molecular differences and similarities. In this way, we found that Alzheimer's disease is also characterized by mild motor decline which is exhibited before any cognitive symptoms and that several genetic hallmarks may be actually common in these two diseases. Also, it was suggested that the molecular hallmarks of Alzheimer's disease may equally contribute to cognitive and motor decline. Furthermore, evidence regarding the overlapping genetic traits were presented and discussed alongside the description of Parkinson's disease genetic loci.

Abbreviations: AD – Alzheimer's disease, APP – amyloid protein precursor, βAP - beta-amyloid peptide; MAPT – microtubule associated protein tau; NFT – neurofibrillary tangles; PD – Parkinson disease, Swe/Ind – Sweedish/Indian mutations; Swe/Lon – Sweedish/London mutations.

Key words*:* Polymorphism, motor deficiencies, cognitive deficiencies, punctiform mutation, neurodegeneration.