# NOTES ON THE RELATIONSHIP OF NEUROGLOBIN AND VDAC IN NEURODEGENERATIVE DISEASES.

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## ABSTRACT

Scientific and technological advances have achieved a substantial increment in life expectancy. Unfortunately, the life extension is associated with the presence of neurodegenerative diseases. Interestingly, a common cause of these pathologies is associated with the development of abnormal proteins that induce voltage-gated anionic channel (VDAC) blocking, with a subsequent decrease in their conductance, mitochondrial dysfunction and finally neuronal apoptosis. Neuroglobin, a metalloprotein with antioxidant and antiapoptotic properties can sterically prevent their blockade and partially counteract the production of reactive species,another common cause shared by neurodegenerative pathologies. Subtle mutations of neuroglobin have been documented at advanced age, therefore neuroglobin replacement therapy was conceived as a neuroprotective therapeutic tool. In this review, we discuss the most recent findings regarding the relationship neuroglobin/VDAC in Alzheimer's disease, Huntington's disease, amyotrophic lateral sclerosis and Parkinson's disease. Finally, we discuss some future alternatives to study the neuroglobine and VDAC interaction.

**Keywords**: Neuroglobin, VDAC, Alzheimer´s disease, Parkinson´s disease, Huntington's disease, amyotrophic lateral sclerosis.