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Embankment of Oxidative Stress on Neurodegeneration

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Abstract

Introduction: Excessive oxidative stress is responsible for several changes in the homeostasis of our body. Between others, one of the most dangerous is its effect on neurological system both at central and peripheral sites. Many of the neurodegenerative diseases, i.e. Parkinson's disease, Huntington's disorders, amyotrophic lateral sclerosis, cognitive decline, Alzheimer's disease, are consequent to neurodegenerative processes. For all of them, the common denominators are inflammatory responses and oxidative stress. The prevalence of these neurodegenerative problems is increasing, and the old therapies have resulted inefficacious. This poster will synthetically report of the new proposals to stem the dramatical increase of neurodegenerative diseases.

Methods: A systematic revision of the publications of the last 5 years, reporting of new therapeutic proposals on oxidative stress reduction, has been performed. All the relevant publications were selected and analyzed.

Results: The scientific literature of the last 5 years reports on 24 extracted or recombinant products, and on 18 natural pharmaceutical substances, which were used against the oxidative stress, inflammation and neurodegeneration. All of them have shown encouraging results. After presenting some of the basic mechanisms responsible for the neuronal losses, we will report on the most recent results obtained with the use of the substances recently used in the attempt to find a multimodal therapy able to counteract the oxidative stress at the basis of the neurodegenerative diseases.

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Abstract
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