



Antioxidant Capability and Physical Exercise in Neurobiology: A Focus in Neurodegeneration

Guest Editor:

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Message from the Guest Editor

Neurodegenerative processes have been linked not only to genetic factors but also to environmental ones. Among these, a pivotal role has been largely attributed to oxidative stress. Regular exercise is an important preventive and therapeutic tool in neurodegeneration and cerebrovascular diseases. In addition to a reduction in oxidative damage, the effects of exercise seem to be intricate, including an increase in neurogenesis and capillarization and an enhanced proteolytic degradation of toxic oligomers that characterize aging and neurodegenerative processes. These data highlight the link between neurodegeneration, oxidative stress, and physical exercise.

This Special Issue aims to provide an overview of the current knowledge on the physiological, metabolic, and epigenetic modifications in response to physical activity and its final effects on brain functionality, both in physiological and in pathological conditions.

Studies of the cellular and molecular mechanisms associated with oxidative stress in neurodegenerative diseases; Clinical or preclinical studies showing physical exercise properties in brain functionality.





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Message from the Editor-in-Chief

It has been recognized in medical sciences that in order to prevent adverse effects of "oxidative stress" a balance exists between prooxidants and antioxidants in living systems. Imbalances are found in a variety of diseases and chronic health situations. Our journal *Antioxidants* serves as an authoritative source of information on current topics of research in the area of oxidative stress and antioxidant defense systems. The future is bright for antioxidant research and since 2012, *Antioxidants* has become a key forum for researchers to bring their findings to the forefront.

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