



Involvement of Free Radicals in Health and Disease

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Message from the Guest Editor

Among the systems that generate free radicals in living beings, it is worth highlighting the mitochondrial transport chain, the metabolism of fatty acids in peroxisomes, reactions catalyzed by cytochrome P450, and the processes of phagocytic combustion of leukocytes.

The production of free radicals in healthy organisms is relatively balanced by antioxidant defense systems, but when the balance shifts toward the formation of free radicals, oxidative stress is generated, considered an alteration of the balance between prooxidant and antioxidant species, in favor of the former. The action of free radicals on cellular structural constituents produces continuous internal aggression, which threatens the integrity of all biomolecules. The pathological consequences will depend on the type of cellular constituent that is most damaged. Almost all organic or inorganic molecules found in living cells can be considered oxidizable substrates, such as proteins, lipids, carbohydrates and DNA molecules.

Therefore, the study of the effects of free radicals in both health and disease, as well as the mechanisms necessary to combat them, is of great interest.





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Message from the Editor-in-Chief

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