Special Issue

Thioredoxin and Glutaredoxin Systems

Message from the Guest Editors

The thioredoxin and glutaredoxin systems are the two key regulators of the redox status of the cell. Most organisms contain several genes coding for thioredoxin or glutaredoxin. Recent developments in the study of these redox systems concern the requirement for glutaredoxin in some steps of iron sulfur centers assembly and the mechanisms of aging in various biological organisms. Of particular interest, the combination of mutations on several of these genes leads to lethal phenotypes in many organisms and some genetic diseases result from similar mutations. This Special Issue welcomes papers to expand our understanding and perspective on all aspects linked to redox homeostasis via the thioredoxin and glutaredoxin systems. Special interests include structure function analysis of the components of these systems, the roles of glutaredoxins in iron sulfur assembly, the role of thioredoxin in aging, the generation and use of redox fluorescent probes and of knock-out mutants of selected targets. Studies concerning thioredoxin or glutaredoxin-dependent enzymes are also most welcome as well as phylogenetic studies concerning these systems and their development.

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About the Journal

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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