



Role of Methionine Oxidation in the Progression of Oxidative Stress and Age-Related Diseases

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Message from the Guest Editor

Oxidative stress in biological systems may lead to the oxidation of methionine of both proteins and of the free amino acid methionine. The resulting methionine sulfoxide (MetO) moiety exists in two enantiomer forms: S-MetO and R-MetO, which can be enzymatically reduced to methionine through the methionine sulfoxide reductase (Msr) system. Oxidation of methionine residues of proteins may cause changes in the structure and function of the targeted proteins. In turn, these changes may foster the development of cellular and extracellular abnormalities that are associated with age-related diseases.

The current Special Issue aims to gather both original and review articles that describe recent advances in scientific knowledge linked to methionine oxidation, such as function of age and conditions of oxidative stress. It is hoped that a better understanding of the physiological involvement of methionine oxidation and reduction in a living cell will foster the development of novel treatments to age and oxidative-stress-associated diseases.





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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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