



Biological Significance of Methionine Oxidation and Reduction

Guest Editor:

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Message from the Guest Editor

Methionine is readily oxidized to methionine sulfoxide by reactive oxygen species (ROS) due to its sulfur-containing nature, which is often associated with malfunction in proteins and pathophysiological conditions under oxidative stress. Methionine sulfoxide is composed of two diastereomers, methionine-S-sulfoxide and methionine-R-sulfoxide, all of which are reduced by MsrA and MsrB. Redox status change of methionine under various conditions has been studied to understand how methionine oxidation is implicated in the incidence of various disorders and the progress of aging or how the reduction of methionine sulfoxides is adopted to regulate protein function.

We invite you to submit your latest research findings or a review article to this Special Issue, which will bring together current research concerning methionine oxidation and reduction. We welcome submissions concerning all manipulation of methionine oxidation in diseases and aging, reversible methionine oxidation/reduction in regulating protein function and metabolism, methionine supplementation in redox signaling, and other methionine oxidation/reduction-related topics.





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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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