



Role of Heme Oxygenase in Human Disease

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Message from the Guest Editor

Heme is essential for the maintenance of cellular homeostasis by sensing or using oxygen, however, an excess amount of free heme is deleterious, since it acts as a potent pro-oxidant, leading to the generation of reactive oxygen species (ROS). Physiological heme degradation is catalyzed by heme oxygenase (HO), which is a rate-limiting enzyme in heme catabolism, yielding CO, iron, and biliverdin IX α . Earlier studies have shown that expression of the inducible isoform of HO (HO-1) is increased in response to a large variety of environmental changes, including disease states, providing cytoprotective effects. On the other hand, several lines of evidence suggest that HO-1 may facilitate tumor growth, providing a basis for potential benefits through the targeting and reduction of HO-1 activity using specific inhibitors.

This Special Issue aims to cover up-to-date information concerning the physiological role of HO, shedding light on the treatment of various disorders. Submissions on all aspects related HO are welcome.





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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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