



Heme Oxygenase in Health and Disease: New Insights and Future Directions

Guest Editor:

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Message from the Guest Editor

This issue aims to present new findings on the enzymatic processes and biological implications of HO and related enzyme systems, as well as their products, including oxidative stress response, ferroptosis, inflammation, cancer, and cellular protection. We invite researchers to submit their latest findings on HO-related topics, such as the following:

Deadline for manuscript submissions:

30 April 2025

- Mechanisms of HO-1 and HO-2 regulation and expression, as well as enzyme activities;
- HO's role in cellular defence mechanisms against oxidative stress;
- Therapeutic potential of HO modulation in diseases like cardiovascular, neurodegenerative, and inflammatory disorders;
- HO's involvement in immune response and cancer biology;
- The role of HO in ferroptosis and its implications for disease treatment;
- Biological effects of HO-derived products: biliverdin, bilirubin, and carbon monoxide (CO);
- The antioxidative and antiinflammatory role of biliverdin and bilirubin, including its functions in the lipid metabolism;
- Signalling functions of CO and other biatomic gases (such as nitric oxide) involving heme proteins, and their potential therapeutic application.





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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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