



Oxidative Stress Response in Archaea

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Message from the Guest Editors

Archaea have deep roots in methanogenesis, an oxygen-sensitive form of carbon and energy metabolism yet are best known for their ability to thrive in extreme conditions, including those that promote extensive oxidative damage such as extreme acid, heavy metals, desiccation, UV exposure, and hypersalinity. Not all archaea are extremophiles, including members of the human microbiome and the Earth's largest biome, the ocean. Yet archaea, even in these mild conditions, are battling oxidative stress. While oxygen sensitivity appears deeply rooted in the origins of Archaea through methanogenesis, certain members of this domain of life thrive in some of the most oxidizing conditions on this planet. This apparent array of mechanisms used by Archaea to respond to oxidative stress combined with their evolutionary relationship within the tree of life make the study of Archaea ideal to advance knowledge of the origins and mechanisms of how cells respond to oxidative stress. This Special Issue is dedicated to "Oxidative Stress Responses in Archaea". Colleagues are cordially invited to contribute original research papers or reviews to this Special Issue.





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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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