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Antioxidants and Antioxidant Enzymes in Higher Plants

Guest Editor:

Dr. Viviana Maresca

Department of Biology, University
of Naples “Federico II”, 80126
Naples, Italy

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Message from the Guest Editor

Dear Colleagues,

Reactive oxygen species (ROS) within a cell can be produced at different cellular levels, as a result of various metabolic processes. In physiological conditions, the production and removal of reactive species are finely controlled processes that maintain the balance of the redox state. However, this balance can be disrupted when ROS are synthesized in excess, e.g., in stressful scenarios. The defense systems that cells possess can be non-enzymatic and enzymatic. Among the non-enzymatic components, certain molecules are of great importance, including ascorbate, glutathione, tocopherol, carotenoids and phenolic compounds. The ability of plants to modulate ROS production in the presence or absence of stress is also due to the activity of enzymes that use ROS as substrates. The aim of this Special Issue is to present advances in the research on enzymatic and non-enzymatic antioxidant responses and defense mechanisms of plants to oxidative stress, bringing together high-quality original research papers, brief communications and reviews by leading scientists in this field of research.



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Special Issue



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Prof. Dr. Dilantha Fernando

Department of Plant Science,
University of Manitoba, Winnipeg,
MB R3T 2N2, Canada

Message from the Editor-in-Chief

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Plants Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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