



## The Roles of Environmental Factors in Regulation of Oxidative Stress in Plants

Guest Editor:

### **Dr. Ky Young Park**

Department of Biomedical  
Sciences, Suncheon National  
University, Suncheon, Republic of  
Korea

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### **Message from the Guest Editor**

Chloroplasts play pivotal roles in biotic and abiotic stress responses, which involve changes in the cellular reduction–oxidation state. Levels of the nonexpressor of pathogenesis-related genes 1 (NPR1) protein are markedly elevated in chloroplasts under salinity stress. Chloroplast-targeted NPR1 overexpression enhances stress tolerance and photosynthetic capacity. These functions are related to chloroplast NPR1 acting not only as a scavenger of stress-damaged proteins such as RuBisCo large subunit (RbcL), but also as a chaperone for chloroplast proteostasis. Taken together, these findings indicate that chloroplast NPR1 translocates to the nucleus, realizing a retrograde signalling process that transmits chloroplast information to the nucleus to elicit an adaptive response to stress. ROS-sensitive NPR1 proteins that oxidize cysteine residues function as redox switches in response to abiotic and biotic stresses. Papers regarding environmental factors in the regulation of oxidative stress in plants are welcome in this Special Issue.





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## Editor-in-Chief

**Prof. Dr. Alessandra  
Napolitano**

Department of Chemical  
Sciences, University of Naples  
"Federico II", Via Cintia 4, I-80126  
Naples, Italy

## 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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*Antioxidants* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

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