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Approaches in Enhancing Antioxidant Defense in Plants

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Message from the Guest Editors

As a sessile organism, plants always face various abiotic and biotic stresses. In addition to their many detrimental effects, they lead to oxidative stress through the overaccumulation of reactive oxygen species (ROS). A certain steady-state of ROS is maintained by properly balancing the generation and elimination of ROS through finely regulating a defense system in plants. Plants primarily deal with oxidative stress through their own defensive mechanism, which consists of different enzymatic and non-enzymatic antioxidants. Non-enzymatic antioxidants include ascorbic acid (AsA), glutathione (GSH), phenolic compounds, alkaloids, α-tocopherol, non-protein amino acids, etc. These molecules either scavenge or detoxify ROS and confer stress tolerance in plants. In recent decades, plenty of research has focused on the role of different non-enzymatic antioxidants in the mitigation of oxidative stress, and the results of these studies are being applied to crop plants. In this Special Issue, we aim at publishing research articles and reviews on research focused on antioxidant defense, which will serve as a foundation for plant oxidative stress tolerance.

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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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