



Heavy Metal Accumulation and Detoxification in Plants

Guest Editors:

Prof. Dr. Gangrong Shi

College of Life Sciences, Huaibei
Normal University, Huaibei
235000, China

Prof. Dr. Giovanni DalCorso

Department of Biotechnology,
University of Verona, 37134
Verona, Italy

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Message from the Guest Editors

Heavy metals (HMs, element with a density higher than 5g/cm^3) are widely present in rock formations and can be released via anthropical intervention. HM pollution is a major environmental stress affecting plant growth and development. Indeed, HMs inhibit various physiological processes in plants, including plant growth, photosynthesis, and antioxidation. As sessile organisms, plants counteract HM stresses through morphological and physiological adaptations, which are imparted by well-coordinated molecular mechanisms. Although such intricate mechanisms and the underlying genetics have been extensively studied, more detailed information is still unknown. Recently, new approaches, including transcriptomics, genomics, proteomics, and metabolomics analyses, have shed light on the molecular mechanisms involved in plants' adaptive responses to HM stress. Understanding the mechanisms of HM detoxification and heavy metal uptake, transport, sequestration, and accumulation in plants is of great importance for avoiding human health risks. Thus, this Special Issue aims to stimulate comprehensive research on the detoxification, uptake, transport, sequestration, and accumulation of HMs.





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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, Grosspeteranlage 5
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