Special Issue

Heavy Metal Accumulation and Detoxification in Plants

Message from the Guest Editors

Heavy metals (HMs, element with a density higher than 5g/cm3) 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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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

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