Special Issue

Mechanism and Genes for Heavy Metal Tolerance and Accumulation in Plants

Message from the Guest Editor

Heavy metal is very important in plants, as it is easily absorbed through essential element transporters to plants, and finally enters humans. Heavy metals are very toxic to plants, however, plants have been evolving to improve their metal tolerance capacity to survive in environments contaminated with heavy metals. Plants have developed diverse metal tolerance strategies, including lower accumulation (lower uptake and higher export), vacuolar sequestration, chelation, root to shoot translocation (xylem loading), reduction of metal-induced oxidative stress, chemical conversion to a less toxic form, etc. We have also learned novel mechanisms from metal hyper-accumulator and hyper-tolerant plants. We have been trying to identify new components involved in various plant stategies and to understand how these different strategies are interconnected. Our knowledge will contribute to the development of metal hypoaccumulating crops and phytoremediators, and thus to human health and well-being.

Guest Editor

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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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