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Metal Transport and Metabolism in Plants

Guest Editor:

Dr. Anna Barabasz

University of Warsaw, Faculty of
Biology, Institute of Experimental
Plant Biology and Biotechnology,
Miecznikowa Street 1, 02-096
Warszawa, Poland

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Message from the Guest Editor

To absorb and maintain a balance of mineral nutrient and toxic metals, plants utilize mechanisms involving a large number of membrane transporters and organic ligands. Membrane transporters and ligands, however, do not have full substrate specificity for individual metals but are characterized by the ability to transport/bind different metals with different affinity. The efficiency of transport/binding depends, inter alia, on their biochemical specificity and the mutual concentration of metals. The abovementioned properties are the reason why in the deficiency condition of one metal, other ones are excessively accumulated. On the other hand, with an excess of one, uptake and/or translocation of another can be inhibited. Today, despite significant progress in the identification of genes related to metal homeostasis, we are still far from understanding the mechanisms controlling metal utilization efficiency and distribution at organ, tissue, and subcellular level.

The objective of this Special Issue is to present review, mini-review, and research articles focusing on mechanisms regulating metal uptake, distribution, compartmentalization, and utilization efficiency.



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Special Issue



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Editor-in-Chief

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
4052 Basel, Switzerland

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