Special Issue

Metals in Microorganisms: From Cellular Mechanisms to Microbial Communities

Message from the Guest Editors

Metals play significant roles in cellular systems. They are critical for the structural stability and the activity of approximately one-third of all proteins and are thus essential for many cellular reactions. Although they are essential, an excess of metal ions can be harmful for the cell. In order to adapt to various metal concentrations, cells have developed diverse mechanisms to regulate metal contents, including transport and signalization. On the other hand, non-essential metals with unknown biological functions can be toxic, even at very low concentrations.

The aim of this Special Issue is to highlight current studies and knowledge regarding the molecular and cellular mechanisms of metal acquisition, regulation, biotransformation, and resistance carried out by microorganisms. This Special Issue also deals with the impact of metal at a higher biological scale of complexity since metals drive microbial community composition and dynamics. Studies on the role of metals in community structuration and the capacity of microbial communities to transform, sequester, and detoxify ecosystems are also welcome.

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Deadline for manuscript submissions

closed (30 November 2022)

Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed

mdpi.com/si/98474

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About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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