



Zinc and Manganese in Human Health and Disease

Guest Editor:

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Deadline for manuscript
submissions:

closed (30 November 2023)

Message from the Guest Editor

Dear Colleagues,

Metal ion homeostasis is fundamental for life. Fe, Mn and Zn play a pivotal role in mitochondrial metabolism, energy generation, anti-oxidation defense, transcriptional regulation, etc. The misregulation of expression or mutations in ion carriers and corresponding changes in Mn^{2+} and Zn^{2+} levels suggest that these ions play a pivotal role in cancer progression. Coordinated changes in Mn^{2+} and Zn^{2+} ion carriers have been detected in cancers, suggesting that particular mechanisms influenced by both ions might be required for growth of cancer cells, metastasis, and immune evasion. Mechanistically, Zn and Mn effects converge on mitochondria-induced apoptosis, transcriptional regulation, and immune response regulation by the cGAS-STING signaling pathway. Zn and Mn all influence cancer progression and treatment efficacy in animal models and clinical trials.

In this Special Issue, we invite papers covering all aspects of Zn- and Mn-related biology, such as biosensor development, enzyme kinetics, drug development, biomarker research, clinical applications, interaction with other transition metals (Fe, Mg), Ca and Mg homeostasis and signaling.





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Message from the Editor-in-Chief

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