

## Special Issue

# The Role and Metabolism of Metals in Cancer

### Message from the Guest Editor

Metals play a crucial role in cancer biology, influencing both tumorigenesis and cancer progression through various biochemical pathways. Essential trace elements such as zinc, copper, and iron are involved in key cellular processes, including DNA synthesis, cell division, and oxidative stress regulation. However, an imbalance in metal homeostasis can contribute to cancer development.

Metals also participate in the metabolism of cancer cells, often enhancing their growth and survival during hypoxia and nutrient deprivation. Cancer cells often exhibit altered metal uptake and efflux mechanisms, which support their rapid proliferation and resistance to therapeutic agents. Moreover, certain metals, such as manganese, can activate oncogenic signaling pathways, promoting tumor growth and resistance to apoptosis.

Understanding the complex interactions between metals and cancer metabolism provides potential avenues for novel therapeutic strategies, including metal chelation therapies and metal-targeting drugs, for disrupting the metal-dependent pathways that sustain tumor growth and progression.

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### Guest Editor

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## Biomolecules

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*Biomolecules* is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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