

Special Issue

Biochemical, Physiological, and Molecular Aspects of Human Nutrition: Molecular Perspectives

Message from the Guest Editor

Nutrition plays a fundamental role in shaping biochemical pathways, physiological responses, and molecular adaptations that ultimately influence human health and disease. Advances in genomics, transcriptomics, proteomics, metabolomics, and microbiome analysis are providing unprecedented insights into how nutrients and bioactive compounds interact with cellular and molecular systems. These integrative approaches are opening new perspectives for personalized nutrition and precision medicine. This Special Issue aims to gather high-quality original research and critical reviews on the molecular mechanisms underlying human nutrition. We particularly encourage contributions that explore signaling pathways (such as PI3K/AKT/mTOR, AMPK, and MAPK), gene–nutrient interactions, nutrigenomics, epigenetic regulation, and the role of non-coding RNAs. Other topics may also include microbiota–host molecular crosstalk, bioactive phytochemicals (e.g., polyphenols), and innovative methodologies including 3D/organ-on-chip models and AI-driven data analysis.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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