

Special Issue

Bioinformatics of Gene Regulations and Structure–2025

Message from the Guest Editors

In the research perspectives part of this Special Issue, we will focus on bioinformatics and systems biology approaches to genomics and biotechnology problems. The central problems include the analysis of the molecular mechanisms of gene expression regulation, analysis of transcription regulation by protein transcription factors (TFs), regulatory gene network interaction analysis, and applications of modern AI tools in bioinformatics. Topics of interest for this Special Issue include the following:

- Analysis of gene expression regulation;
- Applications of bioinformatics to omics technologies;
- Non-coding RNA in gene expression regulation
- Gene networks and associative networks analysis;
- Protein structure analysis and biophysical models;
- Interdisciplinary research in computational genomics of model organisms—plants, animals, and bacteria;
- Systems biology approaches for gene expression analysis, including machine learning and AI.

Guest Editors

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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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