

Special Issue

Gene Expression Regulation in Microorganisms: Molecular Mechanisms, Systems and Synthetic Approaches

Message from the Guest Editor

In last few decades a substantial progress has been made in the understanding of mechanisms of gene expression regulation at the molecular level. Gene expression regulation is now considered a multidimensional process involving signaling pathways and epigenetics along with transcriptional, post-transcriptional and translational regulation. Systems biology enables to represent large sets of components and their interactions as a network. This information then can be utilized to design and engineer biological systems for synthetic biology applications. However, whereas genomics, transcriptomics, proteomics, and metabolomics data allows to build and explore metabolic and some signaling networks, the knowledge of gene expression regulatory components and their functions is still far from complete. This limits the development and availability of comprehensive gene regulatory networks and overall understanding of gene expression regulation.

We invite authors to submit both original research, and review articles that focusses on molecular mechanisms controlling gene expression, as well as use and applications of systems and synthetic approaches for exploring gene regulation.

Guest Editor

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Deadline for manuscript submissions

closed (31 March 2022)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/67638

*International Journal of
Molecular Sciences*
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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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