Special Issue

Purine Signaling as a Therapeutic Target in Human Diseases

Message from the Guest Editor

It is well known that adenosine and ATP play a dual role within the purinergic system. They mediate both energy storage and release through ATP and its phosphate hydrolysis to ADP and AMP, thereby meeting cellular energy demands and facilitating nucleotide assembly. Additionally, they serve as signaling molecules. Purine molecules bind to extracellular purinergic receptors. stimulate signaling pathways, and exert specific functions. Purinergic signaling interacts with other signal molecules in a complex network, regulating a wide variety of cellular processes. The pathological dysregulation of purinergic signaling has been observed in aging, as well as in the development of different diseases, including inflammation, neurodegeneration, and tumors. A deeper understanding of the molecular mechanisms behind purinergic signaling could lead to new and exciting perspectives on the treatment of human diseases. We invite the submission of original papers on purinergic signaling in human diseases, as well as narrative reviews, meta-analyses, and systematic reviews, for this Special Issue.

Guest Editor

Dr. Aránzazu Mediero

Bone and Joint Research Unit, IIS-Fundación Jiménez Díaz UAM, Madrid, Spain

Deadline for manuscript submissions

31 August 2025



International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed



mdpi.com/si/232375

International Journal of Molecular Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 ijms@mdpi.com

mdpi.com/journal/ ijms





International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9 CiteScore 9.0 Indexed in PubMed





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.

Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences, Sez-Biochimica, Faculty of Medicine, Università Politecnica delle Marche, Via Ranieri 65, 60100 Ancona, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

