

Special Issue

New Insights into the Molecular Pathogenesis of Myeloproliferative Neoplasms

Message from the Guest Editor

Myeloproliferative neoplasms represent a heterogeneous group of chronic hematological malignancies that includes polycythemia vera, essential thrombocythemia, and myelofibrosis, characterized by excessive myeloproliferation and chronic systemic inflammation.

At the molecular level, most of these diseases show a hyperactivation of the JAK/STAT signaling pathway as a consequence of driver mutations in genes such as JAK2, CALR, or MPL. Although progress has been made in characterizing the molecular basis of these diseases, there is still a need to identify more effective personalized treatments. This Special Issue aims to collect original research or review articles focusing on the new advances in the molecular mechanisms underlying the development and progression of these diseases. Subjects such as the development of new potential treatments or combination strategies, genetic and epigenetic factors involved in MPN progression, identification of new biomarkers for early diagnosis, response and resistance to therapy, and the impact of inflammation and the microenvironment on MPN pathogenesis are welcome.

Guest Editor

Dr. Laura Georgiana Necula

Department of Cellular and Molecular Pathology, Stefan S. Nicolau
Institute of Virology, 030304 Bucharest, Romania

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/234527

*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](https://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



[mdpi.com/journal/
ijms](https://mdpi.com/journal/ijms)



About the Journal

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)