

Special Issue

Molecular, Cellular Mechanisms and Pathophysiology of Glioblastoma

Message from the Guest Editor

Glioblastoma multiforme (GBM) remains one of the most aggressive tumours, with a poor prognosis for patients and limited clinical effectiveness of treatment. Standard therapy—based on surgical resection, temozolomide and gamma radiation—has thus far failed, largely due to molecular mechanisms that counteract therapeutic effects. A key factor contributing to the difficulty of treating GBM is its high degree of differentiation, which frequently leads to recurrence, often accompanied by the development of a chemo- and radiation-resistant phenotypes. A deeper understanding of GBM pathophysiology, together with the pivotal molecular and cellular mechanisms involved, may open novel prospects for the development of targeted therapies as components of personalised treatment strategies. At the same time, the existing knowledge concerning the molecular mechanisms underlying glioblastoma resistance could be leveraged in this regard. This Special Issue is dedicated to a broad spectrum of research with the potential to transform glioblastoma therapy, including studies presenting novel formulations of drug carriers—such as liposomes, nanoparticles and polymers—as well as advanced carrier drugs.

Guest Editor

Dr. Agnieszka Rusak

Department of Histology and Embryology, Medical University of Wrocław, 50-367 Wrocław, Poland

Deadline for manuscript submissions

31 July 2026



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/252459

*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



[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)* 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, and molecular biophysics. *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. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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, CAPus / SciFinder, and other databases.

Journal Rank:

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