Special Issue

The Role of Hypoxia, Normoxia and Hyperoxia in Cancer Initiation and Propagation

Message from the Guest Editor

The role of the tumor microenvironment for cancer initiation and propagation cannot be overemphasized. Normoxia is a state with normal oxygen levels of 20–21% in tissues; however, normal organ tissue oxygen concentrations away from the lung are usually much lower, and the term physoxia with a 5% oxygen level reflects this discordance. Hypoxia favors glycolysis with its end products ultimately leading to a lowering of pH and the promotion of tumorigenesis. Furthermore, hypoxia increases an established tumor's potential to become metastatic. In contrast, hyperoxia creates a tumor microenvironment that supports the body's immune system defense against cancer; however, the associated inflammation can cause 'protumor inflammation' mediated by IL-1*B* and is associated with local tissue damage. This Special Issue of *IJMS*, 'The Role of Hypoxia, Normoxia and Hyperoxia in Cancer Initiation and Propagation', led by , aims to engage the scientific community in a conversation about oxygen concentration and its effect on cancer.

Guest Editor

Dr. Mary M. Salvatore

Department of Radiology, NewYork-Presbyterian, Columbia University Irving Medical Center, New York, NY 10032, USA

Deadline for manuscript submissions

closed (20 March 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/195696

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

MDPI

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

MDPI

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)