Special Issue

Nano-Biomaterials for Biomedicine and Tissue Regeneration

Message from the Guest Editors

Nano-biomaterials - including nanoparticles, nanofibers, nanotubes, and self-assembling nanostructures exhibit high surface area-to-volume ratios, tunable surface chemistry, and the ability to modulate biological responses at cellular and subcellular levels. This special issue focuses on recent advances in the fabrication, functionalization, and biomedical application of nanobiomaterials for tissue regeneration and therapeutic delivery. Topics include nanostructured scaffolds for guided tissue engineering, stimuli-responsive drug delivery platforms, bioinstructive surfaces for cell modulation, and nanostructured platforms for diagnostic and therapeutic integration. Particular attention is given to material-biology interactions, immune modulation, and the role of nanoscale architecture in directing cellular behavior, angiogenesis, and extracellular matrix remodeling. By consolidating contributions from materials science, regenerative medicine, nanomedicine, and bioengineering, this issue aims to advance nano-biomaterials as key enablers of next-generation regenerative and precision therapies.

Guest Editors

Dr. Silvia Barbon

Section of Human Anatomy, Department of Neuroscience, University of Padova, 35121 Padova, Italy

Dr. Elena Stocco

Consorzio per la Ricerca Sanitaria (CORIS), Padua, Italy

Deadline for manuscript submissions

20 April 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/241101

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)

