

## Special Issue

# Advances in Nano-Based Drug Delivery and Theranostic Systems

### Message from the Guest Editors

Recent advancements in nano-engineered materials have revolutionized drug delivery and theranostics in healthcare, enabling precision medicine with improved efficacy and reduced side effects. Lipid-based, polymeric, and inorganic nanoparticles facilitate the delivery of a wide range of therapeutics, including chemotherapy agents, RNA-based treatments, and biologics. Hybrid nanoparticles, engineered with dual functionality, enhance disease detection while ensuring precise treatment. Novel innovations integrate therapy with real-time diagnostics where nanoparticles are engineered to be functionalized with imaging agents, such as fluorophores, quantum dots, or magnetic nanoparticles, allowing simultaneous drug delivery and disease monitoring in various disease conditions. Additionally, stimuli-responsive nanoparticles facilitate the systemic release of drugs in response to physiological conditions, such as pH, temperature, or enzymes, thereby optimizing therapeutic outcomes. As nanotechnology advances, personalized medicine and targeted drug delivery systems will continue to evolve, revolutionizing healthcare with more effective treatments and improved patient outcomes.

### Guest Editors

Dr. Mukesh Meher

Institute for Quantitative Health Science and Engineering (IQ), Michigan State University, East Lansing, MI 48824, USA

Dr. Yapei Zhang

Institute for Quantitative Health Science & Engineering (IQ), Michigan State University, East Lansing, MI 48824, USA

### Deadline for manuscript submissions

31 October 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/241032](https://mdpi.com/si/241032)

*International Journal of  
Molecular Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto: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/](https://mdpi.com/journal/ijms)

[ijms](https://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)