

## Special Issue

# Molecular Advances in Antimicrobial Nanoparticles

### Message from the Guest Editors

The global rise in antimicrobial resistance represents one of the most critical public health challenges of our time. Traditional antibiotics are increasingly ineffective against multidrug-resistant bacteria, viruses, and fungi, driving the urgent need for alternative strategies. This Special Issue will focus on recent advances in the **design, synthesis, and application of AMNPs** aimed at preventing and treating infections caused by resistant pathogens. We welcome contributions related to nanoparticle systems that **enhance antimicrobial efficacy, reduce toxicity, and overcome resistance mechanisms**. Emphasis will be placed on innovations such as **stimuli-responsive nanoparticles, bio-inspired nanomaterials, and surface-functionalized platforms capable of selective targeting or sustained release**. Submissions exploring the integration of AMNPs in **medical devices, wound care, coatings, or food packaging** are also encouraged. This Special Issue aims to gather the latest research in this fast-evolving and interdisciplinary field, offering insights into how nanotechnology is transforming antimicrobial strategies for clinical and industrial applications.

### Guest Editors

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### Deadline for manuscript submissions

30 October 2025



## International Journal of Molecular Sciences

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Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



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*International Journal of  
Molecular Sciences*  
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### 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.

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### Editor-in-Chief

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