

## Special Issue

# Nanoparticles and Biomaterials: Pioneering Innovations in Biomedical Device Engineering

### Message from the Guest Editor

The upcoming Special Issue of Biomedicine, entitled “Nanoparticles and Biomaterials: Pioneering Innovations in Biomedical Device Engineering”, will focus on the integration of nanoparticles NPs and biomaterials with innovative approaches for the treatment of degenerative disorders, targeting disease treatments and tissue regeneration. Additionally, we will concentrate on the antimicrobial activity of nanoparticles and prospects for the future.

As alternatives to antibiotics, nanoparticles (NPs) are increasingly being employed to target bacteria. The application of NPs in antimicrobial coatings for biomedical devices is one such example; others include the use of antibiotic delivery methods to treat illness, the application of bacterial detection systems to produce microbial diagnostics, the administration of antibacterial vaccinations to prevent bacterial infections, and the design of pharmaceutical materials to prevent infection and encourage wound healing. This Special Issue focuses on NPs' antibacterial activity, oxidative stress induction, metal ion release, and non-oxidative mechanisms.

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### Guest Editor

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### Deadline for manuscript submissions

30 November 2025



## Biomedicines

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## About the Journal

### Message from the Editor-in-Chief

*Biomedicines* (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

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### Editor-in-Chief

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