

## Special Issue

# Nanomaterials in Oral Health: Novel Antimicrobial Treatments in Dentistry

### Message from the Guest Editors

The rise in antimicrobial resistance poses a significant challenge to oral healthcare, necessitating the development of innovative treatment strategies. Nanomaterials have emerged as promising agents in dentistry due to their unique physicochemical properties and potential to prevent biofilm formation and infections. This Special Issue focuses on the integration of nanotechnology into oral health, with a particular emphasis on the genotoxicity of nanomaterials. We aim to explore the molecular and cellular mechanisms underlying the interaction between nanomaterials and human cells, their impact on oral microbiota, and their safety profiles. This Special Issue seeks to balance the promise of nanomaterials as effective antimicrobial agents with rigorous assessments of their potential risks. In this Special Issue, original research articles and reviews are welcome. Topics of interest include, but are not limited to, the following:

- Design and functionalization of nanomaterials for oral applications.
- Molecular mechanisms of genotoxicity and cytotoxicity of nanomaterials.
- Interactions of nanomaterials with oral microbiota.
- Clinical applications and regulatory considerations.

### Guest Editors

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### Deadline for manuscript submissions

15 September 2025



## Antibiotics

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## About the Journal

### Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciplines are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

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### Editor-in-Chief

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