

Special Issue on The Impact of Antibiotic Resistance on Food Safety

CALL FOR PAPERS

The escalating global concern surrounding antibiotic resistance has far-reaching implications, extending beyond the realm of healthcare to the very food we consume. The proposed special issue aims to explore the intricate interplay between antibiotic resistance and food safety, a critical and emerging area of interest. As antibiotic use in agriculture and aquaculture increases, concerns have intensified about the potential transfer of resistant strains to the human population through the food chain. This special issue seeks to explore the multifaceted dimensions of this issue, shedding light on the ways in which antibiotic resistance influences food safety from farm to table.

In the contemporary landscape, the food production system is confronted with unprecedented challenges stemming from antibiotic resistance. The indiscriminate use of antibiotics in livestock and aquaculture contributes to the emergence of resistant strains, which pose a direct threat to the safety of the food supply. The transfer of resistance genes between bacteria in the environment, coupled with the persistence of antibiotics in soil and water, further complicates the issue. In addition, the global nature of the food supply chain demands a concerted international effort to address these challenges effectively. Understanding the mechanisms that drive the spread of antibiotic resistance in the context of food safety is essential for developing strategies to mitigate the risks associated with this complex problem.

This Special Issue aims to provide a comprehensive platform for researchers to contribute novel insights, empirical findings, and innovative solutions to the complex relationship between antibiotic resistance and food safety. We invite original research and reviews that explore the dynamics of antibiotic resistance in various food production systems, assess the impact on human health, and propose strategies for sustainable and responsible antibiotic use in agriculture. By assembling a collection of cutting-edge research, this Special Issue aims to catalyze discussions, foster collaborations, and substantively contribute to the evolving discourse on mitigating the impact of antibiotic resistance on global food safety. The scope of this Special Issue is designed to accommodate diverse research perspectives, ranging from molecular studies that elucidate resistance mechanisms to large-scale assessments of antibiotic use in different food production contexts. We believe that the insights garnered from this Special Issue will not only advance our understanding of the intricate relationship between antibiotic resistance and food safety but will also inform crucial policies and practices for safeguarding public health.

Potential topics include but are not limited to the following:

- ▶ Antibiotic residue monitoring in animal products: challenges and innovations
- ▶ One health approach: integrating perspectives on antibiotic resistance in the food chain
- ▶ Genomic characterization of antibiotic resistant strains in foodborne pathogens
- ▶ Evaluation of antibiotic resistance transmission in aquaculture systems
- ▶ Role of probiotics and prebiotics in minimizing antibiotic resistance
- ▶ Technological innovations for sustainable antibiotic use in food production
- ▶ Responsible antibiotic use guidelines: a global framework for agriculture
- ▶ Regulatory approaches to controlling antibiotic use in agriculture
- ▶ Educational initiatives to promote responsible antibiotic use
- ▶ Integration of metagenomic data in unravelling antibiotic-contaminated agricultural systems
- ▶ Microbiome-driven approaches for developing antibiotic alternatives in livestock
- ▶ Machine learning-based prediction models for the development of antibiotic resistance in agriculture

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=104628>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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