Special Issue

Network Analysis of Microbiome and Metabolome in Health and Disease

Message from the Guest Editors

Microbial communities in the gut and airway microbiota evolve and exert their ecological dynamics by establishing interactions within and among communities. These interactions can be highlighted by associations, correlations, and fused data-based models. The Special Issue will focus on the mechanisms of neonatal microbiota maturation in neonatal life; on the correlations between gut and saliva microbiota during early life; and on the interaction between metabolite production and microbiota species selection under effect of probiotic administration. Moreover, network-based interactions will be reported to highlight lung and gut microbiota in respiratory diseases, including cancer. Models based on interaction between ecological and metabolomics data will be generated and interpreted to provide microbiome functional models and to identify disease-associated biomarkers in the personalised medicine of major multifactorial diseases such as inflammatory bowel diseases, autism spectrum disorders, and lung cancer.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.2 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).

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