

Special Issue

Emerging Perspectives and Innovations in Gut-Microbiome Research

Message from the Guest Editor

The gut microbiome has emerged as a pivotal regulator of health across species, influencing host physiology, immunity, metabolism and disease susceptibility. This Special Issue welcomes cutting-edge studies exploring gut microbiota in humans, livestock, companion animals and wildlife. We invite research on (1) novel multi-omics approaches characterizing gut-microbial communities and their functional roles; (2) mechanistic studies of microbial metabolites (SCFAs, indoles, TMAO) and host-microbe interactions; (3) longitudinal analyses of microbiome dynamics and dysbiosis in health/disease; (4) innovative therapeutic strategies including probiotics, prebiotics, synbiotics, bacteriophages and fecal-microbiota transplantation; and (5) One Health perspectives connecting gut microbiomes across species through environmental/food pathways (manure, fertilizers, soil microbiomes, plant phyllospheres, wildlife transmission). Particularly welcome are studies bridging human and veterinary microbiome research, investigating how gut communities recirculate through agricultural systems and shared environments and exploring resilience-based interventions to maintain healthy microbial ecosystems....

Guest Editor

Dr. Wessam Galia
Laboratory of Microbial Ecology of Lyon, VetAgro Sup, 69280 Lyon, France

Deadline for manuscript submissions

20 July 2026



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/264508

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)