

# Special Issue

## Gut Microbiome Dynamics: Implications for Methane Emissions and Animal Productivity

### Message from the Guest Editors

The rumen microbiome refers to the diverse community of microorganisms residing in the rumen and plays a fundamental role in digestion, nutrient metabolism, and the removal of fatal products such as hydrogen and methane. Original research in the following areas is invited for publication in this Special Issue on *Gut Microbiome Dynamics: Implications for Methane Emissions and Animal Productivity*.

- Impact of diet on the rumen/gut microbial community composition;
- Harnessing the effect of diet on the functional capabilities of rumen/gut microbes;
- Strategies for modulating the rumen/gut microbiota for enhancing productivity and minimizing environmental impacts;
- Diet–microbiota interactions and their implications for metabolic diseases;
- Recent developments in the antimicrobial resistance (AMR) gene in animals and the environment.

In addition to the listed research areas, other relevant research articles, if they hold merit, will also be considered for publication.

---

### Guest Editors

Dr. Pradeep Kumar Malik

Bioenergetics and Environmental Sciences Division, ICAR-National Institute of Animal Nutrition and Physiology, Bengaluru, India

Dr. César S. Pinares-Patiño

International Livestock Research Institute (ILRI), Nairobi, Kenya

---

### Deadline for manuscript submissions

closed (30 September 2024)



Microorganisms

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.2  
CiteScore 7.7  
Indexed in PubMed



[mdpi.com/si/182277](https://mdpi.com/si/182277)

*Microorganisms*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[microorganisms@mdpi.com](mailto:microorganisms@mdpi.com)

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





## Microorganisms

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.2  
CiteScore 7.7  
Indexed in PubMed



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



## 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.

---

### Editor-in-Chief

Dr. Nico Jehmlich

Department of Molecular Toxicology, UFZ-Helmholtz Centre for Environmental Research, 04318 Leipzig, Germany

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, PubAg, CAPlus / SciFinder, AGRIS, and other databases.

#### Journal Rank:

JCR - Q2 (Microbiology) / CiteScore - Q1 (Microbiology (medical))

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 20 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).