

## Special Issue

# Host Genetics Shapes the Gut Microbiome: From Genes to Microbiota

### Message from the Guest Editor

The gut microbiome is a complex ecosystem that plays a crucial role in human health and disease. There is growing evidence that suggests host genetics play a pivotal role in shaping the composition and function of the gut microbiota. However, further research is needed to identify the specific genes and mechanisms involved in this intricate process. It is imperative to comprehend the relationship between host genetic variation and the microbiome to advance the development of personalized medicine and innovative therapeutic approaches. This Special Issue aims to bring together the latest research highlighting the impact of host genetics on the gut microbiome. We welcome submissions of high-quality original research articles and comprehensive reviews that address the following areas, though we encourage submissions that fall outside of these areas as well: genome-wide association studies (GWAS) of the microbiome, the role of specific host genes in modulating microbial communities, the functional consequences of gene-microbiota interactions, metabolomics, transcriptomics, multi-omics, and the development of novel bioinformatic methods for multi-omics data integration.

### Guest Editor

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### Deadline for manuscript submissions

25 February 2026

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## Genes

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### Message from the Editor-in-Chief

*Genes* is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised. Why not consider *Genes* for your next genetics paper?

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### Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan  
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