

Special Issue

Genetic Mechanisms and Functional Insights in Microbiome Research

Message from the Guest Editor

Mechanistic and functional microbiome studies delve into how microbial communities interact among themselves and with their hosts at the molecular level, aiming to uncover the interconnectedness and causal relationships that govern environmental conditions and human health. These studies go beyond cataloging microbial species to characterize the biochemical pathways, metabolites, and host and community responses of microbiota. By integrating tools from genomics, metabolomics, and systems biology, researchers can dissect how specific microbes influence environmental changes and, on the host side, health and disease. This Special Issue calls for papers reporting both *in vivo* and *in vitro* studies that provide insights into the mechanistic and functional roles of microbiome in the environment and hosts (human or model animals).

Guest Editor

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Deadline for manuscript submissions

25 April 2026

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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?

Editor-in-Chief

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