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# The Control of Gut Microbiota: Antibiotics Alternatives and Fecal Microbiota Transplantation

Guest Editor:

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Deadline for manuscript submissions: closed (30 June 2024)



mdpi.com/si/163549

### Message from the Guest Editor

The gut microbiota plays a fundamental role in the health of living organisms due to its involvement in digestive metabolism, the immune system, brain function, etc. This implies that altering the gut microbiota, for example, through the use of antibiotics, leads to dysbiosis, which can trigger diseases or contribute to worsening pathophysiological conditions.

Antibiotics are the standard treatment of choice to combat bacterial infections, but they kill both harmful and beneficial bacteria, which can lead to a loss of microbial diversity and an imbalance between bacterial communities and those of other microorganisms present in the gastrointestinal tract (e.g., fungi, archaea, protists, algae, viruses).

There are several potential approaches to control and restore a healthy gut microbiota, including the use of probiotics, prebiotics, postbiotics, and fecal transplantation of microorganisms.

The aim of this Special Issue is to update and compile all the scientific knowledge that currently exists on alternatives to antibiotic treatments and the control of gut microbiota.

Prof. Dr. Beatriz Vázquez Belda







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## **Editor-in-Chief**

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## Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supragovernmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciples are all key. Antibiotics is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

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