

CALL FOR PAPERS

In the recent years, culture independent techniques and especially new generation sequencing approaches have revealed a new field of data regarding the symbiosis between microorganisms and the homeostasis of a specific ecosystem. The intestinal microbiome has long been recognized as a signalling hub that integrates environmental inputs (e.g., diet) with genetic and immune signals to affect the host's metabolism, immunity, and response to infection. Disturbances in the communication between the immune system and the gut microbiota might contribute to complex diseases.

The importance of microbiome in shaping the immune response in health and disease has been largely recognized. The innate immune cells recognize the microorganisms or their metabolic products through receptors, essentially the pattern recognition receptors (PRRs), and translate the signals into host physiological responses and regulation of microbial ecology. In different situations, the innate immune system provides the causal link between disease-related microbial alterations and the pathophysiological mechanisms of the host.

This intricate bilateral interaction between the host and microbiota has a key role in human health. The understanding of microbiome-immune system interactions may help in developing novel therapeutic approaches for inflammatory diseases.

The purpose of this special issue is to publish high-quality research papers as well as review articles addressing recent advances on the interdependence between microbiome and immune response in specific ecosystems.

Potential topics include but are not limited to the following:

- Physiological functions and mechanisms mediating the crosstalk between microbiota-immune cells
- Microbiome and inflammation (autoimmunity, cancer)
- Microbiome and central nervous system disorders
- Effects of colonization, infections, environmental input, genetic factors, and therapeutic interventions on microbiome-immune system interactions

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/mi/mir/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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