



Special Issue on **Interrelationship between Parasites, Microbiota, and Immune Responses and the Effect of Medication on This Relationship**

CALL FOR PAPERS

The human intestines are home to trillions of microbes that live in a close relationship with our own cells. Indeed, the composition of the human microbiota is governed by host adaptive and innate immune factors, and the development of immune responses is in turn influenced by the microbiota. Evidence has shown from multiple experimental models that the microbiota composition profoundly influences the type of immune responses directed against pathogens but human studies are scarce.

The human gut is often additionally colonized by parasites such as helminths, especially in tropical regions. It has been demonstrated that these parasites live in a close relationship with the gut microbiota. However, little is known about how the removal of these parasites by anthelmintic drugs (which are regularly used in endemic communities) may influence the composition and richness of this microbiota. Little is also known about how this relationship is affected by other medication such as antibiotics that disturb the composition of the microbiota.

Evidence has also shown that the microbiota influences the development of autoimmune diseases, cardiometabolic diseases, and obesity. It has been shown that some of these diseases may be ameliorated by parasitic helminth infections. To what extent parasites influence the outcome of these metabolic diseases via modification of the gut microbiota is not yet clear.

We call for studies demonstrating the mechanisms underlying the role of the microbiota in the development of immunity, the influence of parasites on the microbiota, and the influence of anthelmintics on microbial populations and their long term consequences on infectious and/or metabolic disorders.

Potential topics include, but are not limited to:

- ▶ The relationship between the microbiota, parasitic infections, and the development of protective immunity
- ▶ The relationship between parasites, microbiota, and metabolic diseases
- ▶ The short and long term effects of anthelmintics on the microbiota
- ▶ Mechanisms underlying the effect of the gut microbiota on the development of infectious and/or metabolic diseases
- ▶ The short and long term effects of antibiotics on the relationship between microbiota and parasites

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

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