

## Special Issue

# Gut Microbiota in Disease and Health

### Message from the Guest Editors

The gut microbiota is composed by trillions of microorganisms that have coevolved with humans for a mutually beneficial coexistence. Thus, alterations in gut microbiota composition and functions have been implicated in the onset of many diseases. The advent of high-throughput next-generation sequencing platforms has accelerated the rate at which we obtain knowledge about the composition of the gut microbial communities. However, their functions and how they interact with the host is not fully known, and this is an interesting point since most bacteria are physically separated of the host by a mucus layer. In addition, host–microbiota interactions are bidirectional, although most studies have focused on the effect of microbiota on host metabolism. By contrast, host factors shaping the microbiota are not clear. The identification of molecular mechanisms by which the microbiota impacts systemically and distally on the host, and how the host could modulate gut microbiota, would enable us to better control many diseases, and to identify new ways to manipulate the microbiome, opening new opportunities for personalized medicine.

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