

Interaction between microbiota and gut homeostasis

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The mammalian gastrointestinal tract, the site of digestion and nutrient absorption, is home to a microbial ecosystem that enhances resistance to infection, inflammation, allergy, and metabolic diseases. Commensal bacteria are key participants in the digestion of food, and are responsible for the extraction and synthesis of nutrients and other metabolites that are essential for the maintenance of mammalian health. Over the past decade, the connection between various disorders and gut microbiota has become a major focus of biomedical research. Because of the complexity of the microbiota community, however, the underlying molecular mechanisms by which the gut microbiota is associated with diseases remain poorly understood. In this talk, I summarize recent studies that investigate the role of the microbiota in animal models of disease and discuss relevant therapeutic targets for future research.