



Interactions between Probiotics, the Gut Microbiome, and Immunity

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Message from the Guest Editor

Probiotics modulate the immune system from the gut-associated lymphoid tissue. In the intestinal microenvironment, dendritic cells recognize the probiotic and thus secrete cytokines with the ability to induce the polarization of naive T cells toward the population of Treg cells secreting IL-10. Both Treg cells and the secretion of anti-inflammatory IL-10 are driven to lymphoid tissue in distant organs to attenuate the pro-inflammatory response. Probiotic-rich foods in the diet or taking probiotic supplements can promote a healthy and balanced intestinal microbiota, reduce the colonization of antibiotic-resistant bacterial populations, and modulate the immune system. In that regard, the investigation of the bacterial population in the gut microbiota is critical to understanding the influence of intestinal dysbiosis on inflammatory chronic disease. Thus, new studies addressing both the action mechanisms of probiotic agents on the immune response and the evaluation of the gut microbiota are necessary. The present Special Issue welcomes authors to submit studies that address the following topics: Chronic inflammatory diseases, the gut microbiota, and the immune response.





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