

Special Issue

The Interactions Between Nutrients and Microbiota

Message from the Guest Editors

Diet profoundly impacts health, rapidly altering gut microbiota composition. While extensively studied, data remain insufficient for precision nutrition plans that use microbiota data to guide dietary choices. Such strategies must consider individual microbiota profiles and the bidirectional nutrient-microbiota relationship. Gut microbes process nutrients into diverse bioactive substances, including well-known short-chain fatty acids and B vitamins, plus recently identified neurotransmitters (e.g., GABA, serotonin), bacteriocins, and secondary bile acids. Via these compounds and other mechanisms, microbiota can influence vitamin and mineral bioavailability. Additionally, the energy derived from macronutrients varies with gut microbial composition. Nutrient-microbiota interactions and their health impacts remain a vital, ongoing research area.

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"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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