

Special Issue

Exploring the Interplay Between Food Components and the Gut: From Mechanisms to Microbiome Interaction

Message from the Guest Editors

The dynamic interplay between food and the intestine is bidirectional: food provides energy and molecular signals, while the intestine—together its vast and diverse microbiota—mediates digestion, nutrient absorption, and communication with the rest of the body. Dietary components can directly influence host physiology and act as health-promoting agents. At the same time, they shape the composition and function of the gut microbiota, which ferments food components and produces beneficial metabolites that affect overall health and disease risk. The objective of this Special Issue is to bring together studies investigating the effects of food components on the gut, long with the molecular mechanisms underlying these effects, at both the enterocyte and microbiome levels. To achieve this goal, we welcome and encourage submissions of research articles and reviews from *in silico*, *in vitro*, and clinical studies. We look forward to receiving your contributions.

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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