

Special Issue

Dietary Bioactives and Gut Microbiota: Global Advances in Nutrition, Functionality and Personalized Health

Message from the Guest Editor

Bioactive compounds such as dietary polysaccharides, polyphenols, and prebiotics can shape the composition and activity of the gut microbiota through multiple mechanisms. Microbial polysaccharides (e.g., exopolysaccharides from lactic acid bacteria or β -glucans from yeast) can directly regulate the immune system or serve as prebiotics to support a healthy gut environment. These interactions affect energy metabolism, immune responses, and even brain signaling. This “food–microbiota–host” relationship offers a new perspective for understanding the health benefits of traditional diets and guiding personalized nutrition. This Special Issue highlights three key areas of research: (1) the mechanisms by which dietary bioactive compounds influence microbial metabolism and subsequently regulate host energy balance, immune function, and gut–brain signaling; (2) the development of personalized nutrition approaches through identifying gut microbiota markers that predict individual responses to specific dietary components; and (3) the health-promoting effects of traditional regional diets, such as the Mediterranean diet, mediated through their modulation of the gut microbiome.

Guest Editor

Prof. Dr. Wei Li

College of Food Science and Technology, Nanjing Agricultural University, Nanjing, China

Deadline for manuscript submissions

25 January 2026



Nutrients

an Open Access Journal
by MDPI

Impact Factor 5.0
CiteScore 9.1
Indexed in PubMed



mdpi.com/si/249680

Nutrients
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
nutrients@mdpi.com

[mdpi.com/journal/
nutrients](https://mdpi.com/journal/nutrients)





Nutrients

an Open Access Journal
by MDPI

Impact Factor 5.0
CiteScore 9.1
Indexed in PubMed



[mdpi.com/journal/
nutrients](https://mdpi.com/journal/nutrients)



About the Journal

Message from the Editorial Board

Nutrients is an on-line open access journal that was first published in 2009. *Nutrients* adheres to rigorous peer-review and editorial processes and publishes only high quality manuscripts that address important issues related to the impacts of nutrients on human health. The Impact Factor of *Nutrients* has risen rapidly since its establishment and it is now ranked in the first quartile of journals publishing in the field of nutrition and dietetics research.

Editors-in-Chief

Prof. Dr. Lluís Serra-Majem

1. Centro de Investigación Biomédica en Red Fisiopatología de la Obesidad y la Nutrición (CIBEROBN), Institute of Health Carlos III, 28029 Madrid, Spain
2. Research Institute of Biomedical and Health Sciences (UIBS), University of Las Palmas de Gran Canaria, 35001 Las Palmas, Spain
3. Preventive Medicine Service, Centro Hospitalario Universitario Insular Materno Infantil (CHUIMI), Canarian Health Service, 35016 Las Palmas, Spain

Prof. Dr. Maria Luz Fernandez

Department of Nutritional Sciences, University of Connecticut, Storrs, CT 06269, USA

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Embase, PubAg, AGRIS, and other databases.

Journal Rank:

JCR - Q1 (Nutrition and Dietetics) / CiteScore - Q1 (Nutrition and Dietetics)