

## Special Issue

# Nutrition from Cereal Foods: Molecular Insights into Nutrition, Metabolism and Health Regulation

### Message from the Guest Editor

This Special Issue primarily explores the dynamic interplay between cereal-derived components and human physiology, emphasizing how molecular science deciphers their nutritional, metabolic, and health-modulating roles. By integrating advanced analytical techniques with molecular insights, the research compiled here advances strategies to optimize cereal-based diets for disease prevention and wellness. Specifically, contributions will dissect the molecular mechanisms of dietary fiber (e.g.,  $\beta$ -glucans, arabinoxylans), phenolic acids, and alkylresorcinols in modulating gut microbiota, inflammation, and metabolic pathways. Innovative studies employ metabolomics and proteomics to trace how dietary fiber and phenolic compounds are transformed in the gastrointestinal tract by the microbiota and the resulting health functions, such as epigenetic modulation of antioxidant genes. Additionally, innovations in genetic engineering for tailoring cereal crops, fermentation technology by harnessing microbial activity, and enzyme-assisted processing to degrade anti-nutritional factors will all be considered in this Special Issue.

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### Guest Editor

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## International Journal of Molecular Sciences

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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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