



Contents lists available at ScienceDirect

Food Chemistry: Molecular Sciences

journal homepage: www.sciencedirect.com/journal/food-chemistry-molecular-sciences

Editorial

Editorial special issue food bioactive in human health and nutrition



ARTICLE INFO

Keywords

Bioactive compounds
Fatty acids
Polyphenols
Nutrition
Health

Food quality and safety remain as much a concern for consumers who are looking for health and wellness as those wanting to satisfy taste at an affordable price and ensure sustainable food production. Therefore, understanding the influence of bioactive compounds on food quality, safety, nutrition and human health is of high importance.

Bioactive compounds are defined as low molecular weight compounds with biological activities that are present in foods naturally, produced during processing and storage, or added to foods to enhance functionality (e.g., extend shelf-life). These bioactive compounds add value by retaining quality, acting as natural antimicrobials, antioxidants, and flavour retention agents.

Ethnic and traditional foods, as well as plant-based proteins as alternatives to meat, are becoming more common, having a great impact on consumption patterns and nutrient intake of bioactives, including prebiotics and probiotics. These characteristics and properties influence human microbiome, inflammatory and immunomodulatory processes. This might increase gut microbial diversity, improve endothelial function and, potentially, cognitive function, reduce bone loss or other health-related risk. Consequently, it is important not only to characterise bioactive compounds, but also their interactions and impacts in human health and nutrition.

This Special Issue reported recent advances and novel applications on the analysis, separation, processing and utilization of bioactive compounds derived from fruits and vegetables by authors from Australia

(1), Brazil (2), India (2), Mexico (2), Philippines (3), Spain (1) and USA (1).

Five studies were dedicated to report advances and new developments on the isolation, separation, and purification, processing and industrial applications of different bioactive compounds from cultivated and natural plant resources. Three studies reported the effect of bioactive compound mainly sourced from native plants and their effect on the inflammation and glucose homeostasis of cells, the effect of ketogenic diets supplemented with bioactive compounds on body weight and blood glucose, and the viability of cancer cells in the intestine and liver. The effect of fermentation on the antioxidant and anti-nutritional properties of bamboo shoots and the in-vitro digestibility of resistant starch in brown rice was also reported.

Consequently, several interesting applications have been described in this Special Issue showing innovative and emerging approaches on the utilization and processing of bioactive compounds from different fields and regions.

Daniel Cozzolino

Centre for Nutrition and Food Sciences, Queensland Alliance for Agriculture and Food Innovation, The University of Queensland, St Lucia 4072,

Queensland, Australia

E-mail address: d.cozzolino@uq.edu.au.

<https://doi.org/10.1016/j.fochms.2022.100108>

Available online 1 April 2022

2666-5662/© 2022 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).