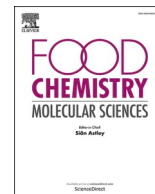


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# Food Chemistry: Molecular Sciences

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## Special Issue: Polyphenols in the development of functional foods and impact on health and nutrition in South and Central Americas'

### Editorial:

Phenolic compounds are products of the secondary metabolism of plants, such as fruits, vegetables, and flowers, and are mainly synthesized as a defense against aggressive agents. For many years, phenolic compounds have been recognized as anti-nutritional factors, interfering, for example, with the bioaccessibility of proteins and minerals. However, in recent years, the understanding of the effects of phenolic compounds on organisms and health has changed. When consumed by humans, these compounds can act against oxidative stress and decrease the risk of non-communicable diseases (NCDs), including cancer and cardiovascular disease. Significantly, in addition to controlling oxidative stress, many of these compounds can modulate signaling along various metabolic pathways, impacting health and disease.

Sources of phenolic compounds vary and are distributed across the most diverse biomes and plant tissues. Color in plant foods is one indicator of the presence of these compounds, which can be extracted from peels, pulp, seeds, leaves, stems, and roots. In this special issue, we emphasize the rich biodiversity of South and Central America as sources of polyphenols and their potential in human health and nutrition.

The development of functional foods that value and preserve local richness and biodiversity and promote health is of increasing interest globally. The rising incidence of NCDs worldwide is a concern and has

aroused interest in the search for foods and ingredients that can contribute to healthy aging. In addition to searching for new ingredients, this special issue describes the importance of knowing the fate of bioactive compounds, their bioaccessibility, and their effects on microbiota and health.

This special issue invited articles exploring the potential of source matrices of phenolic compounds from Central and South America for extraction and application in functional foods. The objective was to gather information about little-explored and often unknown foods, methods for obtaining these compounds, the application of these compounds to promote health and prevent the development of diseases, and most importantly, give credit to the excellent food and nutrition science undertaken in the region.

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