Editorial
Quality of Phenolic Compounds: Occurrence, Health Benefits, and Applications in Food Industry

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Phenolic compounds are widespread phytochemicals in nature. This means that these compounds cannot be synthesized in the human body and are mainly taken from food and medicinal herbs. Over the past years, plant extracts rich in phenolic compounds have shown increasingly interest to enhance food quality. Moreover, their therapeutic use as functional ingredients has been the basis of numerous studies. Nonetheless, there is still much work to do. In this special issue, the published studies give new insights into how processing affects the phenolic composition of foods and the bioactivity of nanoencapsulated phenolics on cancer cells.

Olives and olive oil are a natural source of polyphenols. Their health effects are closely related to their phenolic compounds and their antioxidant activities. However, the table olive industry requires reducing the bitterness of olive phenolic compounds when looking for tasteful products. In this case, processing methods, including acid, base, and/or enzymatic hydrolysis, have been revised as well as the novel technologies that aim to face environmental sustainability challenges. In another context, centrifugation, storage, and filtration can have an impact on the content of minority compounds in olive oil, including phenolic compounds. This has been evaluated and related to olive oil quality.

Cereals, especially whole grains, are important sources of dietary polyphenols. Physicochemical processing may influence the phenolic composition of grains, and this has been summarized in this special issue in order to provide the basis for promoting the development and utilization of cereals.

In the case of blackberry fruits, the effect of some organic fertilization treatments along with harvest date and storage time has been evaluated on two blackberry cultivars. It has been shown that different physicochemical and antioxidant properties of the fruits could potentially provide different shelf-lives during their commercialization in the market as fresh products.

Nanoparticle delivery systems have successfully been used to encapsulate bioactive compounds and deliver them to intended targets. In this sense, this special issue includes a study on nanoencapsulated phenolics from Callistemon citrinus extract, berberine, and combination of both that enhanced their bioactivity against three breast cancer cell lines by nearly 2-fold.

We are pleased to present this special issue, which includes the aforementioned studies with interesting results concerning the relationship of the trinomial food processing, phenolic compounds, and quality.

Conflicts of Interest
The editors declare that they have no conflicts of interest.
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