

Special Issue on

## Pharmacologically Active Polyphenols: Impact of Recovery Strategies on Their Function against Chronic Diseases

# CALL FOR PAPERS

Polyphenols are among the most studied compounds for their biological properties, being naturally produced by natural matrices such as plants, fungi, and algae. The immense chemical and structural diversity of phenolic compounds is well known and the high correlation with their biological properties has been proved, especially against oxidative stress in the various human body organ systems. The number of active groups such as OH was found to play a crucial role in the antioxidant activity of many phenolic compounds and also the position of such active groups (e.g., *ortho*, *para*, and *meta* positions) that can lead to a more active form of the molecule since it can form intramolecular hydrogen bonding (iHB).

However, many of the recovery procedures used to extract polyphenols from natural matrices can modify the structure of the target molecules. The different factors involved in their extraction can modify molecular characteristics leading to a loss of the pharmacological effect or, in some cases, to an improvement of the bioactive effect. Therefore, it would be of major importance to elucidate the effect of recovery procedures on polyphenol properties against cellular and molecular mechanisms of oxidative stress and furthermore to unravel the impact of polyphenols on oxidative stress related chronic diseases such as cardiovascular diseases, cancer, and immune system dysfunction.

This special issue is designed to improve knowledge concerning how the recovery procedures can affect the bioactive properties of polyphenols against chronic diseases and how they could be integrated into clinical strategies towards the therapy and prevention of such diseases. Submitted manuscripts should report original and relevant *in vitro*, *ex vivo*, or *in vivo* research, especially regarding clinical trials. Review works, preferably focusing on findings from the last 5 years, will also be considered for publication.

Potential topics include but are not limited to the following:

- ▶ Natural sources of polyphenols including plants, fungi, algae, and biowastes (especially byproducts from agroindustry)
- ▶ Extraction techniques: nonconventional (e.g., ultrasound-assisted extraction) and emerging extraction technologies (e.g., supercritical fluids and pulsed ohmic heating)
- ▶ *In vitro*, *ex vivo*, or *in vivo* evaluation of the bioactive properties of polyphenols and their effect against chronic diseases, including antiaging, antineurogenerative, antioxidant, anti-inflammatory, antitumoral, antidiabetic, anticholesteremic, and other bioactivities
- ▶ Structure-activity relationship of polyphenols

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/omcl/papi/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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