

Special Issue on

## Polyphenols and Human Health: What Do We Know and What Do We Still Need to Know?

# CALL FOR PAPERS

Polyphenols have been the focus of major attention over the last years due to their potential effects on human health. Phenolic compounds have been considered responsible for the benefits of plant-based dietary patterns and plant-derived beverages, such as coffee and tea. Due to the impact on general population, it is imperative to define the mechanisms underlying these effects, providing a strong rationale and biological plausibility to the observational evidence from epidemiological studies.

There are a variety of pathways through which polyphenols may act at cellular level. Counteracting oxidative stress and inflammation represents the main target of polyphenol activity and it is undoubtedly the most studied one by far. However, potentially beneficial effects of polyphenols have been hypothesized in a multitude of conditions, including cardiovascular disease, cancer, and neurodegenerative disorders, thus suggesting that specific pathways depending on the organ systems may exist. In particular, the impact of polyphenols on the microbiome as well as the effect of the microbiome on the (bacterial) metabolites of polyphenols and their importance for the bioactivity of many phytochemicals may deserve certain attention. Also the impact of polyphenols on mitochondrial function and biogenesis could be an interesting aspect to cover.

In this special issue we invite researchers to contribute with breakthrough reviews on the most innovative discoveries regarding polyphenols, either dietary intake, biomarkers of consumption, or the role of microbiome in their absorption and modification, as well as on mechanisms of action for individual outcomes, including cardiometabolic diseases, cancer, and neurodegenerative disorders. Researchers may also contribute with original research providing new insights on peculiar pathways and outcomes otherwise poorly investigated.

Potential topics include but are not limited to the following:

- ▶ Role of polyphenols on cardiometabolic health
- ▶ Role of polyphenols on cancer prevention and prognosis
- ▶ Role of polyphenols on neurodegenerative disorders
- ▶ Mechanisms of action related to oxidative stress and inflammation in various organ systems
- ▶ Alternative mechanisms of action other than oxidative stress and inflammation (i.e., mitochondrial function and biogenesis)
- ▶ The relation between polyphenols and microbiome

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

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