

EDITORIAL

Dietary Polyphenols: Well beyond the Antioxidant Capacity (Part I)

In the last decades epidemiological studies and associated meta-analyses have strongly suggested that long term consumption of plant foods (fruits, vegetables, cereals, dry legumes, and beverages like wine, coffee and tea) offers protection against development of oxidative stress related pathologies, such as cancers, cardiovascular diseases, diabetes, osteoporosis and neurodegenerative diseases [1, 2]. These results have prompted research to study polyphenols, following the discovery of their antioxidant and radical scavenger activities [3]. So, the antioxidant properties of polyphenols have been widely studied from the mid- 1990s, but the latest research indicates that the mechanisms of action of polyphenols go beyond the modulation of oxidative stress [3]. Polyphenols protective activity can be ascribed to their capacity of interact with cellular functions at different levels, such as affecting gene expression, protein synthesis and enzyme activities, binding to membrane or nuclear receptors as either an elective ligand or a ligand mimic. Recently, it has been also demonstrated the antibacterial activity of some polyphenols against multidrug-resistant bacteria [4].

The goal of this special issue is to present novel results about dietary polyphenols healthy properties, with particular attention to their mechanisms of action.

On behalf of all authors, we hope that this issue of *Current Pharmaceutical Biotechnology* will promote novel ideas and provide prospects for their scientific activity. Finally, we would like to thanks all the contributors and reviewer for their precious and valuable contribution in this issue.

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