

Editorial

# Nutraceuticals in Human Health

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**Abstract:** The combined and concerted action of nutrient and biologically active compounds is flagged as an indicator of a “possible beneficial role” for health. The use and applications of bioactive components cover a wide range of fields, in particular the nutraceuticals. In this context, the Special Issue entitled “Nutraceuticals in Human Health” is focused on the all aspects around the nutraceuticals, ranging from analytical aspects to clinical trials, from efficacy studies to beneficial effects on health status.

**Keywords:** nutraceuticals; bioactive compounds; medicinal food; safety; health; regulation; clinical tests; efficacy; analysis; formulation

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## Introduction

The combined and concerted action of nutrient components and biologically active compounds is flagged as indicator of a “possible beneficial role” for health. The use and applications of bioactive components cover a large range of fields, in particular nutraceuticals ones [1–3].

Nutraceuticals are obtained from foods of vegetal or animal origin, and the current interest and ongoing worldwide research aims to shed light and fully clarify their mechanism of action, their safety and efficacy by substantiating their role by means of clinical data [4,5]. An effort to clarify their mechanism of action will in fact open a door to a next generation of therapeutic agents that do not propose themselves as an alternative to drugs, but, instead, can be helpful to: (i) prevent a cluster of conditions that could occur together (metabolic syndrome), e.g. heart disease, stroke, and type 2 diabetes; (ii) to complement a pharmacological therapiespecially for those individuals who do not qualify for a conventional pharmacological therapy [6,7].

This Special Issue is dedicated to the role and perspectives of nutraceuticals in human health, examined from different angles, ranging from analytical aspects to clinical trials, from efficacy studies to beneficial effects on health conditions.

Concerning the study of functional ingredients and applications, Lu Martínez et al. [8] have studied and proposed the use of *Prunus serotina* defatted flour without hydrogen cyanide risk in cookies and protein concentrate in emulsion stability. Ullah et al. [9] well reviewed and summarized the biomedical properties of polysaccharides as therapeutical agents. It is worth mentioning the work of Swat et al. [10] on characterization of fulvic acid beverages available on the global market. Alternative functional ingredients obtained from waste/side products from industrial grape manufacturing, i.e., grape seeds, were investigated by Lucarini et al. [11].

Studies on evaluation of beneficial effects of nutraceuticals in vitro [12] and in vivo [13] models have been presented, in particular dietary supplementation studies in animal [14–16].

At the same time, specific studies on botanicals have been reported by Fredes et al. [17] and Ji et al. [18] focusing on the importance of these vegetal origin sources.

Nutraceuticals are a challenge for the future of prevention and therapy and a triggering tool in medicine area. The possibility to prevent and/or support a pharmacological therapy, which is nowadays mainly based on pharmaceuticals, can be a powerful tool to face pathological, chronic, long-term diseases in subjects who do not qualify for a pharmacological therapy. The big challenge is to improve nutraceuticals bioavailability and clear their mechanism of action adopting nanotechnologies as new delivery approach and clinical studies to assess and detail how they work in detail [19,20]. At the same time, the interest to new food sources and exploring novel nutraceuticals which beyond their nutritional value have also added value as contributing bioactive substances tailored to specific health conditions for a better results in term of efficacy and safety is stimulating interest and research worldwide for new sources and sustainable environmental friendly solutions [21–23].

This Special Issue end point has been to contribute to the growth of this area of research, trigger interest or research on food and add information scientifically substantiated by new data.

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