

Nutraceuticals in balancing redox status in ageing and age-related diseases

**WGs Meeting of the NutRedOx COST Action CA16112
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Book of Abstracts

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The word of welcome

Dear colleagues,

We would like to welcome you to the 3rd Group meeting within the NutRedOx CA16112 COST Action, which is entitled: “Nutraceuticals in balancing redox status in ageing and age-related diseases”. We hope that this gathering will enable us to shed more light on the healing nature of proper nutrition. Since ancient times, food was regarded as something more than a fuel for survival. The Greek doctor Hippocrates once said: “Let food be thy medicine and medicine be thy food.” Nutraceuticals or “nutritional medicines” could be the answer to difficulties encountered during aging, without neglect of official medications. In a society living longer than ever, health has become one of the most valuable assets. It would be comforting to know that in the near future old age is not associated with deteriorating quality of life.

This COST action was initiated in 2017, as a consortium of countries and scientists whose primary goal was to “focus on the impact of redox active compounds in food on healthy ageing, chemoprevention and redox control in the context of major age-related diseases”. By now, 34 COST participating countries and 6 Near Neighborhood Countries took part in this project, showing that there is great interest in this problem.

We are pleased that you have decided to take part in this mutual conversation, where many will present their recent work, through poster sessions, oral communications or simply by asking questions. One of the goals of this action is cooperation between laboratories by short term scientific missions, so we look forward hearing the results of these encounters. Although we are approaching the end of this joint venture, it is satisfying to know that participants are not yet tired, which is supported by the number of registrations and abstracts that will be presented. On this meeting 67 participants from 24 countries will take part.

Belgrade, an old city which is always young, embraced by two rivers, will be your host. We hope that you will enjoy its rugged charm and warm hospitality, its streets, restaurants and cultural heritage.

At the confluence of new ideas and experiences we again wish you a warm welcome.

Your Local Organising Committee

P2. CHERRY-THE SOURCE OF POTENTIAL FUNCTIONAL FOOD

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Serbia is among the top world producers of high-quality cherry fruit. Beside its refreshing taste, cherries are a rich source of many natural active principles. The most interesting among them are those one which exhibit antioxidant properties. It is possible to produce many derived products from cherries and one certainly is fruit wine. Such wine, is a rich source of those natural active principles present in cherry fruit and the aim of this study is to investigate antioxidant properties of cherry wine. Fruit wines were produced from Serbian autochthonous sort of cherry. Microvinification was conducted with pure selected yeast culture and enzymatic preparation glycosidase. In the half of microvinifications pits were left, without cracking. Determinations of total phenolic content (TPC) were conducted using Folin-Ciocalteu method. Antiradical activity estimated by DPPH method, while FRAP method was also applied. Selected phenolic compounds were quantified by UPLC TQ-MS/MS. The TPC for the cherry wines were in interval 1552-1787 mg GAE/L while FRAP was 45.3 – 73.5 mmol/L Fe²⁺. The IC₅₀ anti DPPH radical activity was from 3.8 to 7.2%. Also, were quantified compounds which exhibit antioxidant properties which are hydroxybenzoic acid derivatives, such as vanillic, gallic, protocatechuic and parahydroxybenzoic acid. The obtained results indicate that cherry wine is a good source of antioxidant compounds. Antioxidant properties and quantity of phenolic compounds depends from the technological process applied in the production of fruit wines. Cherries and their derived products have beneficial health effect for overall health.