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## **O2.6. PLANT FOOD SUPPLEMENTS: FROM EFFICACY TO ADVERSE EVENTS**

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**Background:** Plant Food Supplements (PFS) have received a growing interest among consumers with a consequent expansion of the market in which thousands of products and hundreds of producers are now present.

Food supplements are regulated by the food law and their efficacy must be limited to the maintenance of homeostasis/wellbeing, and to the modulation of the risk factors for chronic illness (cancer, cardiovascular diseases, dementia, diabetes, etc.).

**Aim:** The aim of this lecture is a review on risk and benefit assessment of PFS, using experimental experiences obtained by the authors during and after the European Project PlantLIBRA.

**Methods:** Different in vitro and in vivo tests useful to investigate the efficacy of botanicals will be described. Data on adverse effects from international bodies will be used to focus the importance of phytovigilance in protecting the consumers.

**Results and discussion:** The presentation will describe some practical examples of benefit/risk evaluation, with the indication of the most important problems, including strategies to reduce the complexity of human studies. Suggestions to improve the phytovigilance system will be considered taking into consideration the international sources of information.

**Conclusion:** The inclusion in the human diet of functional foods and food supplements rich in active molecules is important in maintaining homeostasis and wellbeing in populations characterized by a long life-span and stressing habits. The great interest shown by consumers in this sense must ensure surveillance in the chemical quality of botanical derivatives, the plant identification and the safety both in term of tolerability and absence of contaminants.

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