

# EVALUATION OF THE NUTRITIONAL VALUE OF CHESTNUT (*CASTANEA SATIVA*, *AESCVLVS HIPPOCASTANVM*) AND WALNUT (*JVGLANS REGIA*) GEMMOTHERAPY EXTRACTS FOR THE DEVELOPMENT OF HEALTH-PROMOTING FOODSTUFF

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The importance of Mediterranean diet has been well documented for the prevention of many non-communicable diseases (Dernini et al., 2017). The chestnut and walnut health-promoting effect has been suggested by many studies (Chauhan et al., 2020; Morling et al., 2018; Zhao et al., 2018). Nuts are rich in unsaturated fatty acids, bioactive compounds, high-quality vegetable protein, fiber, minerals, tocopherols, phytosterols, and phenolic compounds etc. We carried out an HPLC-MS evaluation of the mentioned species specific gemmotherapy extracts, and were able to describe several bioactive compounds that belong to polyphenols, flavonoids, alkaloids, coumarins, amino acids, fatty acids, etc. Research data have shown the diverse health benefits of the walnut through many clinical studies. Based on such data we decided to evaluate the nutritive properties of our gemmotherapy extracts. The obtained data are suggesting no relevant toxic effects as seen on *Drosophila* cell culture lines, though substantial antimicrobial effect could be observed in the case of walnut extract. Currently we are evaluating the putative anti-diabetic effects of the extracts.

We are also considering the chestnut flour for food fortification since it contains fatty acids, phenolic compounds, dietary fiber and vitamins aiming for the development of foodstuff that would be suitable for elderly people nutrition.