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**PhD project title:**

Chemical and biological studies of medicinal, food, and phytoalimurgic plants

**Research summary:**

Today, phytoalimurgic plants are a renewal source of phytochemicals, especially useful as important nutrients and health-promoting substances often lacking in the modern diet. In addition, these wild plants can be obtained free and can be proposed as the base of a healthy diet with nutrient-rich foods. The present PhD project is devoted to the study of different wild edible plants, in order to increase their knowledge by giving their phytochemical and biological characterization. The experimental steps of the project include: the selection of plants, belonging to different genera, for their traditional and medicinal/healthy features; the extraction of plant material with solvents of different polarity; the isolation of active constituents by chromatographic processes such as HPLC and flash chromatography; the chemical

characterization of the isolated compounds using NMR, MS and UV techniques; the chemical fingerprint through selected biomarkers for quality control studies. Finally, the evaluation of their biological activity will be useful for the validation of leads for the design of new drugs.

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