

Conservation of European Biodiversity through Exploitation of Traditional Herbal Knowledge for the Development of Innovative Products'

EthnoHERBS is the acronym of a research **European project** which aims to apply systematic ethnobotanical surveys and cutting edge technologies in the field of Natural Product Chemistry in order to fully and efficiently exploit the traditional knowledge and the therapeutic potential of medicinal and aromatic plants of the Balkan Peninsula.

The consortium consists of seven academic and eight SMEs partners, which under the coordination of **Dr. Nektarios Aligiannis**, Associate Professor at the Department of Pharmacognosy and Natural Products Chemistry (Faculty of Pharmacy, University of Athens), will join forces and exchange know-how through an extended secondments scheme to advance Research & Innovation:

- **Academic partners:** National and Kapodistrian University of Athens (GREECE), University of Belgrade (SERBIA), Bulgarian Academy of Sciences (BULGARIA), Universita Degli Studi Di Firenze (ITALY), Institut Dr Josif Pancic (SERBIA), Universidade Do Minho (PORTUGAL), Benaki Phytopathological Institute (GREECE)
- **Non-academic partners:** Zurko Research (SPAIN), Indena SPA (ITALY), Apivita (GREECE), Novamechanics Limited (CYPRUS), Associacao Universidade Empresa Para Desenvolvimento Tecminho (PORTUGAL), Venus Roses Lab Solutions (BULGARIA), EURO HERBS Doo (SERBIA), Galen-N (BULGARIA).

The duration of the project is four years and has a **total budget of 2.447.200 €**.

The scientific concept of **EthnoHERBS** involves the **Conservation of European Biodiversity through Exploitation of Traditional Herbal Knowledge for the Development of Innovative Products**.

The cornerstone of 'EthnoHERBS' project is the exploitation of traditional knowledge, the investigation of plant biodiversity and the application of eco-friendly technologies for the efficient extraction and purification of bioactive ingredients, as well as their complete chemical characterization and biological evaluation of their effects on skin disorders. Optimization of production processes as well as formulation using emerging technologies will lead to the development of novel final products. The organic cultivation of selected plants will ensure the conservation of biodiversity and the sustainability of the project.

In more details, information related to the use of herbs for the treatment of skin disorders will be collected and a selection of these herbs will be chemically analyzed. For the fast and efficient identification of bioactive components chemometrics and heterocovariance methodologies will be used as well as application of metabolomics and dereplication approaches and other improved techniques will be used to isolate, purify, and structurally characterize the active constituents, which will be further investigated with the aim to be exploited commercially. A broad spectrum of bioassays will be incorporated for the evaluation of antioxidant, antimicrobial, anti-

inflammatory, anti-aging, skin whitening and wound healing properties of all derived extracts and products. Using the experience of the academic partners in ethnobotany, phytochemistry and biology, as well as the practical experience of the SMEs in commercialization of plant derived products and development of innovative final products, transfer of scientific knowledge, best practices and know-how, training courses and workshops will take place. Overall, the implementation of the ‘EthnoHERBS’ project aspires to develop a successful and sustainable international and intersectoral collaboration model that will contribute to the most effective conservation and exploitation of natural resources and the development of innovative product.

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