



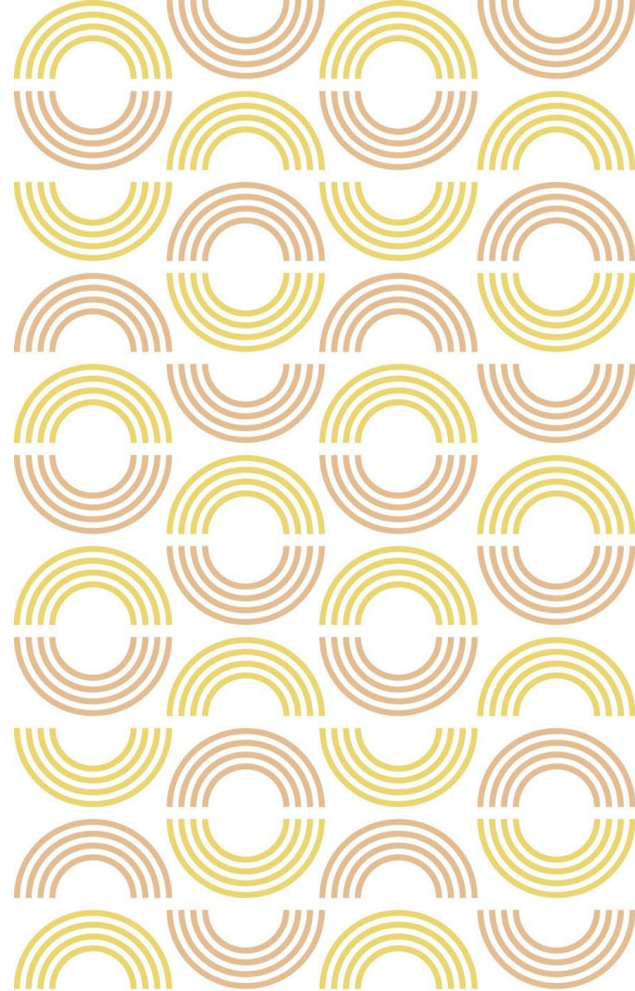
Horizon Europe Brokerage Event  
Cluster 6 Calls 2024

Brussels , 26 September 2023

# Green extraction methods and their effect on micronutrients and bioactive compounds in underutilized crops

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This project has received funding from the European Union's Horizon Europe research and innovation programme, under Grant Agreement No 101059839

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the granting authority can be held responsible for them.

## Topic(s) addressed :

- HORIZON -CL6-2024-BIODIV -02-3-two -stage: Promoting minor crops in farming systems
- HORIZON -CL6-2024-FARM2FORK -01-2: New healthy and sustainable food products and processes

## Other topics of interest:

- Underutilized/minor/neglected/orphan crops
- Micronutrients
- Biological activity

## Project idea

Neglected and underutilized species are experiencing a renewed interest due to their possible nutrition and health-benefiting properties together with their economic and environmental benefits. But the content of the micronutrients and bioactive compounds can be affected by various factors, including the extraction method.

- Identification of novel foods from the group of wild crops, local landraces, and neglected and underutilized edible species to achieve a healthy sustainable diet and contribute to European as well as global food security.
- Optimization of sustainable green extraction methods, such as subcritical hot water extraction or supercritical fluid extraction to provide greater yield and higher content of micronutrients and other bioactive substances

We are interested to be a partner

## Main expertise offered

- Identification of specific wild edible species\_\_\_\_\_, local landraces, and edible NUS based on the literature review as well as on the consultation and questionnaires filled out by local/small farmers and home garden owners.
- Collection and preparation\_\_\_\_\_ of the plant material for further analyses
- Modern ecological separation methods\_\_\_\_\_, e.g. pressurized hot water extraction and subcritical fluid extraction
- High -tech analytical instruments and analyses\_\_\_\_\_ (e.g. GC/MSD, GC-Q TO F, UHPLC-Q TO F, NMR) for qualification and quantification of the micronutrients and phytochemicals\_\_\_\_ present
- Determination of biological activity, especially antimicrobial and antioxidant activity\_\_\_\_\_ by various methods
- Evaluation of safety profile and cytotoxicity\_\_\_\_\_

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