Consortium

The CIPROMED consortium consists of 17 members including 8 RTO's (UTH, UNIBO, UNITO, UGOE,DIL, CNR, IIT, ILU), 8 SMEs (AE, NP, SPAROS, FS, ABT, TALOS, SB, ELVIZ), and one NGO (GDI) across 7 European (Greece, Germany, Italy, Spain, Portugal, Cyprus, Malta) and 3 non-European countries (Tunisia, Israel, Morocco).

CIPROMED

Circular and Inclusive utilisation of alternative PROteins in the MEDiterranean value chains

Production of sustainable, healthier, more environmental-friendly, affordable and competitive food and feed product formulations available for all.

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Cipromed Project

This project is part of the PRIMA programme supported by the European Union

PRIMA PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

The main objective of the CIPROMED project is to enhance the stability and resilience of agri-food production systems in the Mediterranean region. This will be achieved by directly utilizing locally grown traditional crops and extracting proteins from agri-industrial side-streams (e.g. brewer's spent grain and oilseed presscakes). The project will also focus on transforming the residues left after protein extraction into valuable proteins sourced from insects, legumes, microalgae, and fermentation products.

Objectives

- Create protocols for the production of new protein value chains using high protein agricultural crops, insects, microalgae, and agri-industrial side-streams.
- Evaluate protocols for insect rearing and cultivation of heterotrophic microalgae (*Galdieria sulphuraria*) on side-streams to generate protein-rich biomass.
- Optimize the conditions for outdoor mass production of autotrophic microalgae (*Chlorella* sp.) biomass with high protein content using flue gas from a power plant as a Co_2 source.
- Develop advanced extraction, stabilization, and technological conversion methods to obtain protein ingredients for various food and feed applications.
- Integrate protein extraction residues in insect rearing and microalgae
- Characterize the sensory, nutritional, technological, functional, and safety aspects, as well as anti-nutritive factors, of the protein ingredients.
- Formulate and evaluate new food and feed products containing the new protein ingredients.
- Assess the environmental impact and economic implications of the new products and technologies.
- Understand public perceptions and beliefs regarding the novel protein production.
- Update the existing EU regulation framework on the use of novel proteins (Novel Foods).

Impact

- Improve the consumers' acceptance regarding alternative sources of proteins.
- Mitigate the risk of dependence on imported protein sources for Mediterranean countries and promote the exploitation of locally produced nutrient sources.
- Play a significant role towards the mitigation of global hunger, by ensuring access to affordable food.
- Adapt novel protein production to the specific conditions of the Mediterranean region, establishing an economically viable and environmentally sustainable alternative protein value chain and production system within the Mediterranean region.
- Play significant role in providing greener agricultural practices. Compared to conventional agriculture, the production of commonly reared insects and heterotrophic microalgae species using by-product feeds results in significantly lower greenhouse gas emissions (30-50% lower).
- Prioritize the improvement of human health by developing and evaluating alternative protein-based diets to promote overall well-being.
- Prioritize the improvement of human health by developing and evaluating alternative protein-based diets that target metabolic and immune systems to promote overall well-being.
- Create new business opportunities for commercializing the new protein sources.