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UnLiON BROKERAGE EVENT

10th December 2025, 10:00-13:00 CET

HORIZON EUROPE Cluster 6

Food, Bioeconomy, Natural Resources,
Agriculture and Environment



**CLUSTER 6: FOOD, BIOECONOMY, NATURAL
RESOURCES, AGRICULTURE AND ENVIRONMENT**

**María Garrido
University of Extremadura (Spain)**

**UnLiON Brokerage Event under Horizon Europe Cluster 6 calls on
Food, Bioeconomy, Natural Resources, Agriculture and
Environment | 10th December 2025**

UNIVERSITY OF EXTREMADURA (SPAIN)

It is the main public training and research institution in Extremadura (Spain) with **4 university campuses**. It has over **24,000 students** and **2,405 Researchers and Professors**.

According to **Shanghai's ranking**, it is **ranked 593th** amongst universities all over the world (Scimago Institutions Ranking, SIR 2022); and has been awarded

Campus of International Excellence since 2011
in association with two Portuguese universities

Its international well-position is shown in its **coordination of the European University Alliance EU GREEN**, participation in **international networks** such as **UNILION**, or its coordination and participation in projects within **Horizon Europe** or **Erasmus+**.



Research Group of Neuroimmunophysiology and Chrononutrition

Our expertise aligned with FARM2FORK & CIRCBIO calls:

- Circadian rhythms and chrononutrition research, focusing on the relationship between diet, health, and well-being.
- Evaluation of bioactive compounds from natural sources, with a focus on their physiological and health-promoting effects.
- Clinical trials and biomarker analysis (oxidative stress, inflammation, melatonin, serotonin).



11

Related projects



51

Related publications

1

Related patent

*Nutraceutical composition
for mood disorders
and insomnia
(ES 2 342 141 B1)*

HORIZON-CL6-2026-02-FARM2FORK-09: Sustainable and healthy diets for cardiovascular diseases prevention with the support of digital applications

Call Scope

Advance knowledge and develop innovative solutions on how nutrition and dietary patterns influence cardiovascular health, supporting healthier, sustainable diets.

*(...) investigate the host-microbiota interactions, **standardised biomarkers, involving inflammatory and metabolic pathways** or other pathways to elucidate the relationship between changes in the diet, the gut microbiome and cardiovascular risk in **different populations** (based on gender, age, genetic background)(...)*

❖ Group Expertise

The group specializes in chrononutrition, circadian rhythms, and clinical trials on functional foods improving health.

❖ Proposed Contribution

Design of intervention studies on functional foods impact on stress, inflammation, metabolism, and biomarker analysis.

❖ Added Value

A strong track record in multidisciplinary research integrating nutrition, physiology, and sustainability provides solid evidence to support innovative dietary strategies.

HORIZON-CL6-2026-02-FARM2FORK-10: Sustainable and healthy diets based on health status and socio-economic risk factors of ageing population

Call Scope

Advance knowledge and develop innovative solutions on how nutrition and dietary patterns influence healthy ageing, supporting healthier, sustainable diets.

*(...) identification of specific dietary needs (including foods, beverages, food ingredients and nutrients) for the older population (above 65 years old) with a **positive impact on their health, wellbeing, and prevention of any diseases** (including those related to ageing)(...)*

❖ **Group Expertise**

The group specializes in chrononutrition, circadian rhythms, and clinical trials on functional foods improving health and sleep in different age groups.

❖ **Proposed Contribution**

Design of intervention studies on functional foods impact on stress, sleep, cognition, and biomarker analysis.

❖ **Added Value**

A strong track record in multidisciplinary research integrating nutrition, physiology, and sustainability provides solid evidence to support innovative dietary strategies.

Relevant publications:

1. The consumption of a Jerte Valley cherry product in humans enhances mood, and increases 5-hydroxyindoleacetic acid but reduces cortisol levels in urine. *Experimental Gerontology*. DOI: [10.1016/j.exger.2012.05.003](https://doi.org/10.1016/j.exger.2012.05.003)
2. Tryptophan-enriched diet or 5-hydroxytryptophan supplementation given in a randomized controlled trial impacts social cognition on a neural and behavioral level. *Scientific Reports*. DOI: [10.1038/s41598-021-01164-y](https://doi.org/10.1038/s41598-021-01164-y)
3. Tryptophan-rich diet is negatively associated with depression and positively linked to social cognition. *Nutrition Research*. DOI: [10.1016/j.nutres.2020.10.005](https://doi.org/10.1016/j.nutres.2020.10.005)
4. Influence of diet on mood and social cognition: A pilot study. *Food & Function*. DOI: [10.1039/d0fo00620c](https://doi.org/10.1039/d0fo00620c)

Relevant projects:

1. Individualized Cognitive, Affective and Social Enhancement in nutritional interventions for longevity and well-being. **JPI HDHL-NutriCog**. <https://www.healthydietforhealthylife.eu/project/icase>
2. Cherries from the Jerte Valley as a source of tryptophan, serotonin, and melatonin. Potential benefits against cellular aging caused by oxidative stress, depression, and insomnia. Funded by the Regional Government, *Junta de Extremadura* (Spain).
3. Valorization of a nutraceutical product rich in tryptophan, serotonin and melatonin, based on cherries from the Jerte Valley with medicinal properties. Improvement and transfer of research for commercialization purposes. Funded by the Regional Government, *Junta de Extremadura* (Spain).

Patent:

1. Nutraceutical composition against mood disorders and insomnia. Ref: ES 2342141 B1.

HORIZON-CL6-2026-01-CIRCBIO-07: Advancing the European bio-based innovation enabled by biotechnology and biomanufacturing concepts

Call Scope

Advance the development of innovation in biotechnology, life sciences and/or biomanufacturing concepts, preparing future deployment of **bio-based and bio-inspired processes, products and materials, as a basis for sustainable, fair, safe and circular value chains (...)**

Group Expertise

Expertise in extracting and characterizing bioactive compounds from different plant matrices (e.g., cherries, olive leaves, grapes).

❖ Proposed Contribution

Identification of bioactive compounds and bioactivity screening to support circular economy strategies.

❖ Added Value

Strong bioactivity validation, collaborations with agro-food industry, and commitment to sustainability principles.

Our expertise on European bio-based innovation (HORIZON-CL6-2026-01-CIRCBIO-07)

Relevant publications:

1. A lutein and zeaxanthin enriched extra virgin olive oil as a potential nutraceutical agent: A pilot study. *Food Chemistry*. DOI: [10.1016/j.foodchem.2024.141811](https://doi.org/10.1016/j.foodchem.2024.141811)
2. Chlorophyll pigments of olive leaves and green tea extracts differentially affect their antioxidant and anticancer properties. *Molecules*. doi.org/10.3390/molecules28062779
3. Lycopene and melatonin: Antioxidant compounds in cosmetic formulations. *Skin Pharmacology and Physiology*. DOI: [10.1159/000508673](https://doi.org/10.1159/000508673)
4. Jerte Valley cherry-enriched diets improve nocturnal rest and increase 6-sulfatoxymelatonin and total antioxidant capacity in the urine of middle-aged and elderly humans. *Journal of Gerontology*. DOI: [10.1093/gerona/glq099](https://doi.org/10.1093/gerona/glq099)
5. Bioavailability of bioactive molecules from olive leaf extracts and its functional value. *Phytotherapy Research*. DOI: [10.1002/ptr.5625](https://doi.org/10.1002/ptr.5625)

Relevant projects:

1. Management of by-products from the Extremadura fruit industry for a circular bioeconomy. Funded by the Regional Government, *Junta de Extremadura* (Spain).
2. Potential use of non-commercial cherries in the health field: Circular economy applied in the Jerte Valley. Funded by the Regional Government, *Junta de Extremadura* (Spain).
3. Sustainable development for the comprehensive use of cherry waste: from waste to functional raw material. Funded by the Regional Government, *Junta de Extremadura* (Spain).
4. Comprehensive use of by-products and co-products from the local agri-food industry for the preservation of meat products. Funded by *Ministerio de Ciencia e Innovación*, Government of Spain.
5. Valorization of waste and by-products. *Ministerio de Ciencia, Innovación y Universidades* (Unión Europea - NextGenerationEU). Agroalnext Programme.

Patent:

1. Nutraceutical composition against mood disorders and insomnia. Ref: ES 2342141 B1.

What are we seeking?

Looking to join a strong consortium as a scientific partner bringing expertise in chrononutrition and bioactive compounds to shape healthier diets and sustainable food systems.

CONTACT DETAILS

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Research group: Neuroimmunophysiology and Chrononutrition (<https://opendata.unex.es/investiga/grupos-de-investigacion/BBB021>)

Research Institute: University Institute for Agricultural Resources Research (INURA)