



**HORIZON-CL6-2022-CIRCBIO-01-04: Spanish company and research center are looking for partners to develop food, nutritional and health formulations with glucosinolates enriched crop subproducts.**

**Call Title**

HORIZON-CL6-2022-CIRCBIO-01-04 Maximising economic, environmental and social synergies in the provision of feedstock for bio-based sectors through diversification and increased sustainability of agricultural production systems.

**Call Reference:** HORIZON-CL6-2022-CIRCBIO-01-04

**Funding Programme:** Horizon Europe <https://errin.eu/funding-programme/horizon-europe>

**Deadline of the Call:** Tue, 15/02/2022 - 12:00

**Proposal Information:**

The Spanish company breeds, produces and markets high quality vegetable seeds throughout Europe, Middle East, Russia and Africa. Its research, production and sales facilities are located in 22 countries. It offers over 900 varieties of broccoli, tomato, squash, watermelon, cabbage, cauliflower, pepper, melon, cucumber and oriental crops to name a few.

This company has a research line focusing on increasing bioactive compounds in its products. In collaboration with a prestigious Spanish research centre, they have developed a patented product and methodology that substantially increases the amount of glucosinolates in Brassica crops. This development will boost the exploitation of glucosinolates as active compounds in food and health related products.

Brassica crops (broccoli, cauliflower, cabbages, mustard, rapeseed, etc.) are sources of glucosinolates and their derivatives, the isothiocyanates. These plant-derived bioactive compounds are well-known for their antioxidant, antimicrobial, bactericide, and fungicide activity as well as by their possible protective effect towards cancer and other diseases.

The project objective is to create value from glucosinolates enriched crop subproducts for their use in food, nutritional and health formulations. The company is looking for partners to complete the consortium. The partners searched must incorporate the plant-derived glucosinolates in their formulations.

The project will be submitted to HORIZON-CL6-2022-CIRCBIO-01-04 topic under Horizon Europe on 15th of February of 2022.

**Advantages:**

Glucosinolates and their derivatives, the isothiocyanates, could have interesting applications as biocidal molecules for food conservation and preservation, as flavouring agents, and as functional and nutritional ingredients. It will improve the competitiveness of the products containing this compound.

Previous researches have highlighted the potential of glucosinolates in food conservation and preservation. Due to its antibacterial and antifungal properties, glucosinolates could be used as a food ingredient for the control of foodborne bacterial and fungal pathogens. Moreover, it could be also employed as a flavouring agent.

Previous studies have assessed the relationship between glucosinolates and isothiocyanates with cancer diseases. They suggest that functional foods containing glucosinolates as ingredients could play a role in promoting optimal health and protecting against several forms of cancer.

Additionally, glucosinolates have also been studied for their anti-inflammatory<sup>8</sup> and osteoporosis<sup>9</sup> properties as well as for the treatment of skin pigmentation anomalies.

Glucosinolates have also shown the potential to be used to modulate gastrointestinal microbiota to help in the management of being overweight and obese.

**Deadline for Expression of Interest:** Mon, 17/01/2022 - 12:00

**Type of Partners Sought:**

The company is currently setting up a European consortium to carry out an European research-funded collaborative project. With this purpose, it looks for companies related to the food, nutrition, and health

sector willing to research the incorporation of plant-derived glucosinolates in their formulations as food, nutritional or functional ingredients through a sustainable and circular approach.

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