GRUPO DE PROTEÍNAS VEGETALES

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DESCRIPCIÓN DEL GRUPO

Chemical (protein, moisture, ash, fat, fiber) nutritional (amino acid profile) and structural (molecular profile and degree of hydrolysis) characterization of the raw materials and protein products

REVALORIZATION

Design of processes to obtain high protein-content fractions from different animal and plant sources

Protein Isolate

Protein Content: >80 %
Balanced Amino Acid Profile with limiting aas
Low Solubility to pHs 3 - 7
Digestibility < 70-80 %

Protein Concentrate

Protein Content: 50 -75 %
Balanced Amino Acid Profile with limiting aas
Low Solubility to pHs 3 - 7
Digestibility < 70-80 %

Protein Hydrolysate

Protein content: >80 %
Balanced Amino Acid Profile with limiting aas
High Solubility at all pH
Digestibility 100 %
Bioactivity - Health

BIOACTIVITY

SCALE -UP

Service 1

Determination of Carbon, Hydrogen and Nitrogen by Elemental Analysis for homogeneous (TrueSpect LECO) and heterogeneous (LECO 928) solid samples.

Service 2

Determination of Amino Acids by HPLC.

Possibility of scaling the process in pilot plant

Service 3

Obtention of Protein Concentrates, Isolates and Hydrolysates at the Pilot Plant Scale.

Service 4

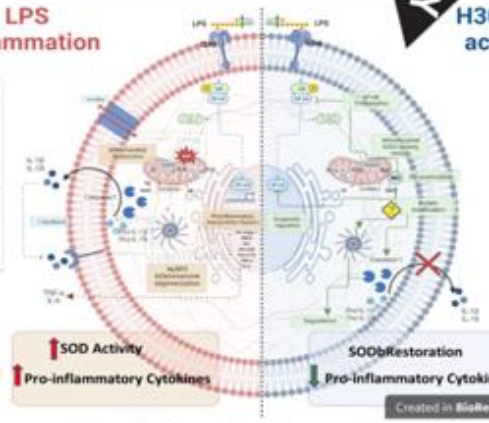
Spray-Drying Process at Pilot Plant Scale.

Powdered drink from chickpea protein hydrolysate

Emulsified drink based on lupine protein hydrolysate

LPS inflammation

H30BIO action



Development of methods to obtain peptides with biological activity using enzymatic processes and functional food design

PUBLICACIONES DEL GRUPO

Martín-Rodríguez, N. et al. (2023) Production of chickpea protein hydrolysate at laboratory and pilot plant scales: Optimization using principal component analysis based on antioxidant activities. Food Cheimistry. In revision.
Cruz-Chamorro, I., et al. (2023). Chemical and biological characterization of the DPP-IV inhibitory activity exerted by lupin (Lupinus angustifolius) peptides: From the bench to the bedside investigation. Food Chemistry, 426 https://doi.org/10.1016/j.foodchem.2023.136458
Maestro-Gaitán, I., et al. (2023). Quinoa plant architecture: A key factor determining plant productivity and seed quality under long-term drought Environmental and Experimental Botany 21, 105350. https://doi.org/10.1016/j.envexpbot.2023.105350

FINANCIACIÓN

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