

PHYTOCHEMISTRY & HEALTHY FOODS LAB (LabFAS)

FOOD SCIENCE AND TECHNOLOGY DEPARTMENT I CEBAS-CSIC



HUMAN RESOURCES



Cristina García-Viguera, Ph.D CSIC - Research Professor caviguera@cebas.csic.es



Diego A. Moreno, Ph.D CSIC - Sci. Researcher dmoreno@cebas.csic.es



Sonia Media Escudero, Ph.D

CSIC - Postdoctoral researcher hired Ramón & Cajal Program (Ministry of Science and Innovation) smescudero@cebas.csic.es



RESEARCH LINES

From Farm to Health | Integrated Studies

Development of New Foods (beverages or other processed foods; fresh sprouts; derived vegetable by-products) with high content of bioactive compounds

(phenolic compounds, glucosinolates, vitaminas, minerals, etc)

Characterization of the phytochemical composition of plant-based foods. **Design and development** of new valorization strategies to take advantage of edible materials and by-products as sources of bioactive compounds

> **Optimization of** agronomical conditions to improve food quality (growth factors, genetic resources, and technological issues)

bioactive compounds of Bioavailability and bioc plant-based foods (transport, storage, cooking methods) nization of by-products



New dietary sources of bioavailable and bioactive PHYTOCHEMICALS

Benefits for health (carbohydrate and lipid metabolism, inflammation and other chronic conditions)

products; ingredients; processed food products) Determination of industrial and domestic processing conditions to preserve the

Organoleptic and nutritive quality studies

on fruits and vegetables for human

consumption (direct consumption as fresh

Studies in vitro on the bioaccessibility. bioavailability, and bioloactivity (descriptive and mechanistic studies) of phytochemical compounds of plant-based foods

Clinical assays for evaluating the bioavailability, metabolism, and biological activity of phytochemical constituents of foods in vivo

INFRASTRUCTURES & KNOW-HOW - RESOURCES - COLLABORATIONS



Experimental Farm ("La Matanza", 33 Ha), (greenhouses with hydroponic systems and controlled/uncontrolled growth conditions).



Analytical equipments HPLC-DAD-ESI-MS; HPLC-DADs, UHPLC-ESI-QqQ-MS/MS, UHPLC-DAD-ESI-QTOF-MS/MS HPLC-UV, EAA-ICP.

(http://www.cebas.csic.es/general spain/metabolomica.html)

Controlled Growth Chambers (environmental parameters) and storage.



Bioavailability, metabolism, and bioactivity labs and facilities according to the requirements of in vitro and in vivo studies, nutritional interventions, and clinical studies.

ACTIVE COLLABORATIONS with the Regional Health System, food industries and Societies, and other Research Institutions and Universities from all over the world.

CEBAS-CSIC+UPCT Associated Research Unit "Food Quality and Risk Assessment"

(https://www.upct.es/grupos-investigacion/centros/UACSA.php)