

PHYTOCHEMISTRY LAB

Research Group on Quality, Safety and Bioactivity of
Plant-based Foods

Food Science and Technology Department

CEBAS-CSIC

Human resources

Cristina García-Viguera, Ph.D.
CSIC Research Professor

Diego A. Moreno, Ph.D.
CSIC Staff Scientist

Pre- (1) and Postdoctoral (1) fellows
Staff Technician (1)
Lab Technician - contract (1)



CSIC

CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS



Research lines

From Farm to Health – Integrated Study

- Development of new foods, for direct/fresh consumption and processed items (beverages; jams; cruciferous byproducts and other vegetables), enriched in bioactive compounds (flavonoids and phenolic compounds in general, glucosinolates, minerals, vitamin C, etc.)
- Organoleptic and nutritive quality studies of fruits and vegetables for human consumption (direct consumption - fresh products; processed food products)
- Optimization of agronomical conditions to improve the food quality (growth factors, genetic and technological factors).
- Determination of Industrial and Domestic Processing conditions to preserve the bioactive compounds of plant-based foods and food products (transport, storage, cooking methods, etc.)
- Evaluation of *in vitro* biological activity (chemical analysis; enzyme activities; cell culture) and *in vivo* (Clinical tests in humans) of phytochemical constituents of foods. Bioavailability and metabolism studies.



Contact: Campus Universitario de
Espinardo
Murcia. E-30100 (SPAIN).
Dra. Cristina García-Viguera
cgviguera@cebas.csic.es
TEL: +34 968 39 6304
FAX: (+34) 968 39 62 13

Phytochemistry Lab



In the **CEBAS-CSIC**, as “Centre of Quality and Excellence” within the frame of **CSIC** Institutes, we explore the capacity **to generate and transfer knowledge** from scientific research in food science and technology, carrying out a multidisciplinary agrifood research capable to obtain healthy and safe plant-based foods for the health and wellbeing of the consumers.

Research Group on “Quality, Safety and Bioactivity of Plant-Based Foods”

The research group on “Quality, Safety and Bioactivity of plant-based foods”, as main group of the Food Science and Technology Department of **CEBAS-CSIC** it is subdivided in operative smaller groups, and one of them is the Phytochemistry Lab.

Human Resources (General Group):
Staff Researchers (11)
Lab Technicians and Engineers (5)
Hired Postdocs (6)
Predoc Fellows (6)

CONSOLIDER-INGENIO 2010
‘FUN-C-FOOD’ (CSD2007-00063)
Consortium Leader



Scientific Excellence Group
of Murcia Region
(Murcia Sci.&Tech. Agency)



Phytochemistry Lab

Infrastructure and Know-How - Resources

CEBAS - CSIC

- Phytochemistry Lab and Equipments: HPLC-DAD-ESI-MS; micro-HPLC-UltraMS-MS; HPLC-DADs, HPLC-UV, EAA-ICP, colorimetry, other small equipments for QA/QC of foods and functional ingredients).
- Controlled Growth Chambers (environmental parameters) and Storage and Postharvest Chambers.
- Experimental Farm ("La Matanza" (33 Ha), greenhouses with hydroponic systems and controlled/uncontrolled growth conditions).
- Bioavailability, metabolism and bioactivity labs (*in vitro* and *in vivo* studies, nutritional interventions and clinical studies).
- Collaboration with Plant Nutrition Department at CEBAS-CSIC for human resources and infrastructures.

Other Universities in Spain and Research Centres:

- Associated Unit of Research UPCT-CEBAS-CSIC for Quality and Risk Assessment of Foods.
- Univ. Murcia (UMU), Tech. U. Cartagena (UPCT), Catholic Univ. 'San Antonio' Murcia (UCAM);
- Technical School of Elche and Technical School of Orihuela of the University of Elche 'Miguel Hernández' (UMH)
- University of Salamanca (USAL), Univ. Valladolid (UVa).
- Other Institutes of CSIC (IF-CSIC Madrid, MBG-CSIC Pontevedra)
- INRA (Montpellier, Francia)
- Institute of Food Technology of Novi Sad (FINS) (Serbia)
- CIBIOR Lab (Puebla, Mexico) and IMSS (Mexico DF)
- Esc. Ing. Agronom. Univ. Tras-os-Montes e Alto Douro (Vilareal) & REQUIMTE Institute (Fac. of Pharmacy, Porto) (Portugal).
- Universidad de la República de Uruguay (UDELAR)

Regional Health System

- Hospital Univ. "Virgen de la Arrixaca" in Murcia; Other institutes of the National System of Public Health in Murcia.

Companies and AgroFood Clusters

- Grupo Juan Marín (Lorca, Murcia)
- Cítricos de Murcia S.A. (Murcia) and Dallant S.A. (Barcelona)
- HERO España S.A.
- Corporación Vidarium and Grupo Nutresa (Colombia)
- MNL-Group (Chile)

