INGREEN: Ingredientes innovadores y verdes para la industria alimentaria

Cristina Soler-Rivas*, Susana Santoyo, Laura Jaime, Mónica Rodríguez, Alejandro Ruíz, Luis Vázquez, Tiziana Fornari, Diana Martín, David Villanueva, Francisco R. Marín

CIAL Instituto de Investigación en Ciencias de la Alimentación (UAM+CSIC). c/Nicolás Cabrera 9. 28049 Madrid

DESCRIPCIÓN DEL GRUPO

Diseño de nuevos alimentos funcionales usando tecnologías medioambientalmente sostenibles a partir de cultivos emergentes o alternativos y subproductos valorizables con un efecto beneficioso para la salud humana más allá de la nutrición adecuada

EXTRACCION Y AISLAMIENTO DE COMPUESTOS BIOACTIVOS — T. FORNARI / L. VÁZQUEZ

- Fluidos presurizados (SFE, PLE, cromatografía supercrítica)
- Separación con membranas (micro/nano filtración, osmosis reversa)
- Purificación cromatográfica

TRANSFORMACIÓN DE PRECURSORES — C. SOLER / A. RUÍZ

- Modificación enzimática (enzimas fúngicas)
- Transformaciones por métodos físico / químicos
- Encapsulación, micelas, exosomas

CARACTERIZACIÓN QUÍMICA — M. RODRÍGUEZ / D. VILLANUEVA

- Determinaciones preliminares (espectrofotométricas, kits etc.)
- Determinaciones analíticas (HPLC, GC, etc.)

ACTIVIDADES BIOLÓGICAS — S. SANTOYO / F. R. MARÍN

- Cultivos celulares (Caco 2, HepG2, THP-1, etc.)
- Cultivos microbianos (bacterianos, fúngicos, virus)
- Antioxidante, inmunomodulación, hipocolesterolemia, hipoglucemia etc.
- Modulación transcriptómica

BIODISPONIBILIDAD Y MICROBIOTA — L. JAIME / D. MARTÍN

- Modelos de digestión y absorción *in vitro* (bioaccesibilidad, INFOGEST etc)
- Modulación microbioma (modelos colónicos etc.)

PUBLICACIONES DEL GRUPO

Publicaciones 2023:

1. Costa-Machado *et al.* Peripheral modulation of antidepressant targets MAO-B and GABAAR by harmol induces mitohormesis and delays aging in preclinical models. Nature Communications 14:2779. https://doi.org/10.1038/s41467-023-38410-y
2. Hurtado-Ribeira *et al.* The Interaction of slaughtering, drying, and defatting methods differently affects oxidative quality of the fat from black soldier fly (*Hermetia illucens*) larvae. Insects (2023) 14, 368. https://doi.org/10.3390/insects14040368
3. Chipaca-Domingos et al. Pressurized liquid extraction for the production of extracts with antioxidant activity from borututu (*Cochlospermum angolense* Welw) Foods (2023) 12, 1186. https://doi.org/10.3390/foods12061186
4. Fornari *et al.* Effect of moisture and oil content in the supercritical CO_2 defatting of *Hermetia illucens* Larvae. Foods 12, 490. https://doi.org/10.3390/foods12030490
5. Vasquez-Rojas *et al.* Validation of high-pressure homogenization process to pasteurize Brazil nut (*Bertholletia excelsa*). Beverages: Sensorial and Quality Characteristics during Cold Storage. Beverages 9, 22. https://doi.org/10.3390/beverages9010022
6. Wagner *et al*. Biological Activities of Miracle Berry Supercritical Extracts as Metabolic Regulators in Chronic Diseases. Int. J. Mol. Sci. 2023, 24, 6957. https://doi.org/10.3390/ijms24086957
7. Vasquez-Rojas *et al*. Extraction and analytical characterization of phenolic compounds from Brazil nut (Bertholletia excelsa) skin industrial by-product. Trends in Sciences 20(8): 5457. https://doi.org/10.48048/tis.2023.5457
8. Morales *et al*. Effect of household cooking treatments on the stability of β-glucans, ergosterol and phenolic compounds in white-button (*Agaricus bisporus*) and shiitake (*Lentinula edodes*) mushrooms. *Food and Bioprocess Technology*. https://doi.org/10.1007/s11947-023-03169-z Tamargo *et al.* Deciphering the interactions between lipids and red wine polyphenols through the gastrointestinal tract. *Food Research International*, *165*, 112524.
9. Vasquez-Rojas *et al*. Brazil Nut (*Bertholletia excelsa*) Beverage Processed by High-Pressure Homogenization: Changes in Main Components and Antioxidant Capacity during Cold Storage. *Molecules*, *28*(12), 4675.
10. Nieto *et al*. Implication of the polymeric phenolic fraction and matrix effect on the antioxidant activity, bioaccessibility, and bioavailability of grape stem extracts. Molecules 28(6), 2461. https://doi.org/10.3390/molecules28062461
11. Tejedor-Calvo *et al.* Extraction and trapping of truffle flavoring compounds into food matrices using supercritical CO2. Food Research International 164, 112422 .
12. Morales *et al*. Combining UV-irradiation and alkaline deacetylation to obtain vitamin D- and chitosan-enriched fractions from shiitake mushrooms (Lentinula edodes). Food and Bioprocess Technology 16: 1303-1311.
13. Silvan *et al*. Olive leaf as a source of antibacterial compounds active against antibiotic-resistant strains of *Campylobacter jejuni* and *Campylobacter coli*, *Antibiotics*, 12, 26, DOI: 10.3390/antibiotics12010026
14. Guerrero-Hurtado *et al*. Why proanthocyanidins elute at increasing order of molecular masses when analysed by normal phase high performance liquid chromatography? Considerations of use. *J. Chromatography A*, 1696, 463957, https://doi.org/10.1016/j.chroma.2023.463957

Para visualizar algunas de las publicaciones de los años anteriores: https://www.uam.es/Ciencias/Publicaciones/1446762514053.htm?language=es&nodepath=Publicaciones

FINANCIACIÓN

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