GROUP NAME: THE EFFECT OF FOOD PROCESSING TECHNOLOGY ON DIGESTIVE AND ALLERGIC DISORDERS (ALIPAT)

CODE: A20 23R











The ALIPAT research group is particularly multidisciplinary in character. It conducts its research in three areas. On the one hand, we attempt to characterize milk fractions and bioactive proteins along with the effect of technological treatments on their activity. On the other hand, we study the effects of those milk fractions and other natural or food components on intestinal health, using cell models and murine models; this allows us to study interactions between microbiota and the gut, as well as the molecular mechanisms involved in situations of intestinal inflammation and dysbiosis. Finally, from a clinical perspective, we also study the range of allergies caused by food proteins and other allergens – also with the purpose of developing methods to detect them and of studying the impact technological treatments can have on their allergenicity.

LINES OF RESEARCH

- Evaluation of the impact of technologically treated milk proteins and fractions on human health and gut microbiota: potentials for their application in functional foods.
- Characterization of postbiotic components derived from fermented milk fractions: potential applications for digestive health and as antimicrobials.
- Study and analysis of factors involved and treatments to combat chronic inflammatory intestinal pathologies, analyzing immune receptors in a series of inflammation models as well as in affected patients.
- Evaluation of the effects of natural plant components on physio-pathological paths implied in digestive disorders in processes of inflammation.
- Evaluation of anticancer properties of organometallic compounds and carbon nanotube-based compounds for use in colon cancer drug design.
- Study of allergies caused by pollen and by food proteins

NOTABLE PROJECTS

- "Application of new processing technologies for milk subproducts with the aim of obtaining bioactive fractions capable of improving intestinal health". PID2022-139104OB-I00. Ministerio de Ciencia e Innovación. Proyectos de Generación de Conocimiento. 2023-2026.
- "GO-LACTOVALOR: "Innovations in the valorization of whey as a raw material". GOP-2023-0008-02. Grupos operativos de la Asociación Europea para la Innovación (AEI), Plan Estratégico Nacional de la PAC. 2023-2026.
- "Canine idiopathic epilepsy: cognitive-behavioral alterations, genetic basis, biomarkers and involvement of the intestinal microbiota in its development". LMP134_21. Gobierno de Aragón. R+D+i projects in priority lines and of a multidisciplinary nature. 2021-2023.
- "Valorizing industrial wastewater for the production of biological hydrogen (Hi2biO)". PR-H2CVAL4-C1-2022-0049. Ministerio para la Transición Ecológica y el Reto Demográfico. Programas de incentivos a la cadena de valor innovadora y de conocimiento del hidrógeno renovable. 2023-2026.

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