iata
Instituto de Agroquímica y Tecnología de Alimentos

RESEARCH GROUP

Biochemistry, Technology and Innovation of meat and meat products

The group is open to discuss any kind of collaboration with industry and academia related to these topics.

The group has a long and extensive experience in the chemical, biochemical and instrumental analysis of meat. The work focuses on the biochemical mechanisms involved in the processing of meat and meat products with a view to improving the sensory quality, safety and nutritional value.

FIELD OF EXPERTISE

The group is a global pioneer in the purification and characterisation of muscle enzymes and enzymes from lactic acid bacteria and yeasts, in order to understand and optimise their mechanisms of action for industrial meat processes. These processes include the lipolysis and proteolysis mechanisms, and the generation of bioactive peptides, which are identified and characterised. It also has extensive experience in the flavor of meat and meat products, especially in the study and identification of the generated aroma compounds.

Based on this knowledge the group can contribute to the improvement of meat products and processes in terms of sensorial quality, safety and nutritional value.

MAIN APPLICATIONS AND SERVICES

- Study of the mechanisms (chemical, enzymatic and microbiological) of generation and perception of colour, aroma and flavour in meat products.
- Characterisation of aroma compounds by olfactometry analysis.
- Proteomic characterisation of proteins and peptides as markers of quality and bioactivity.
- Development of rapid methodologies for monitoring and improving manufacturing processes and for the detection of illegal substances and/or contaminants.
- Metabolomic study of meat and meat products to establish the profile of compounds with functional activity.
- Development of high quality sensory and nutritive meat products with reduced salt and / or fat or improved lipid profile.

FURTHER INFORMATION

UNIDAD DE TRANSFERENCIA DEL CONOCIMIENTO
Institute of Agrochemistry & Food Technology · IATA

t. + 34 963 900 022 **ext.** 3107
email: utc@iata.csic.es

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Consejo Superior de Investigaciones Científicas