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ANTIOXIDANT AND ANTIHYPERTENSIVE NATURAL PEPTIDES IN DRY-CURED HAM BY-PRODUCTS

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Meat industry produces tons of by-products that represent both an economical and environmental problem. Dry-cured ham manufactories are also important producers of by-products including all residues derived from the slicing of ham such as rinds, bones, fat, etc. On the other hand, proteolysis is one of the most important biochemical reactions occurred during dry-cured ham processing. It is responsible for the main changes in texture as well as for the generation of thousands of small peptides which influence in the characteristic aroma and flavor of the final product. Some of the sequences of these naturally generated peptides in dry-cured ham has also been described to exert biological activities such as antioxidant or antihypertensive. Hypertension is one of the major risk factors for the development of cardiovascular diseases, stroke, and end-stage renal disease, and it has been the focus of attention in clinical and medicine research for the last decade. Main concerns in this matter are the secondary effects of antihypertensive drugs and, for this reason, current studies are based on new findings of naturally generated antihypertensive peptides which results less aggressive. Peptides naturally generated and extracted using different solvents from dry-cured ham by-products were evaluated for their antioxidant activity using DPPH, ferric reducing-power, ORAC, beta-carotene, and ABTS methodologies. Their potential as antihypertensive peptides was also studied with the measurement of inhibition of Angiotensin-Converting Enzyme (ACE) and Endothelin-Converting Enzyme (ECE). The results suggest that dry-cured ham by-products constitute a good source of bioactive peptides with potential health benefits.

Biography

Leticia Mora completed her PhD at the Universidad Politécnica of Valencia in 2010. As a postdoctoral researcher, Mora enjoyed a postdoctoral contract in Ashtown Food Research Centre, Teagasc, in Dublin (Ireland) and later, a postdoctoral Marie Curie Intra-European Fellowship FP7-PEOPLE-IEF, FOODSAF project in Royal Holloway University of London (Egham, UK). Currently, Mora is reintegrated at the Instituto de Agroquímica y Tecnología de Alimentos, CSIC, with a postdoctoral contract. She is involved in the FP7-PEOPLE BACCHUS project and is the fellow of the Marie Curie FP7-PEOPLE-CIG HIGHVALFOOD project. She has published more than 40 papers in peer-reviewed journals.

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