

FOODOMICS: PRESENT AND FUTURE CHALLENGES IN FOOD ANALYSIS IN THE POSTGENOMIC ERA

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Nowadays, the use of advanced “omics” tools in food science and nutrition allows investigating topics that were considered unapproachable few years ago. This trend has generated a new discipline defined for the first time by our group as “Foodomics” [1-4]. Safety, quality and bioactivity of foods and food ingredients are investigated in Foodomics through the application and integration of advanced omics technologies, including genomics, transcriptomics, proteomics and/or metabolomics. The main goals of Foodomics are to improve consumers’ well-being, health and knowledge [1-4]. In this work, we will present the last results obtained in our laboratory following a Foodomics strategy to investigate the anti-proliferative effect of dietary polyphenols against human cancer cells. The present work will give additional information on how some dietary polyphenols are able to modulate specific metabolic pathways in the cancer cells, providing new evidences at molecular level on the antiproliferative effect of this type of compounds.

References:

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