Nutritional Science-2013

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference and Exhibition on
Nutritional Science & Therapy

July 15-17, 2013 Courtyard by Marriott Philadelphia Downtown, Philadelphia, USA

Is it possible to improve the excellence of virgin olive oil?

Carlos Sanz
Instituto de la Grasa (CSIC), Spain

Abstract

Virgin olive oil (VOO) is a natural fruit juice having exceptional organoleptic and nutritional properties. These quality properties are determined by the content of minor components formed during the oil extraction process from precursors already present in the fruit. The amount of these components in the oil is controlled by the levels of expression/activity of the corresponding genes/enzymes involved in their biosynthesis which depends on the olive cultivar. However, the selection of olive varieties has been traditionally based almost exclusively on agronomic criteria, paying less attention to the identification of markers of oil quality. Knowledge of the kinetic properties and regulatory mechanisms of genes/enzymes related to the synthesis of metabolites responsible for VOO quality would allow establishing control strategies to optimize this quality, both in the technological field and in breeding programs. From a technological point of view, new olive oils with tailored quality characteristics may be developed by modulating the relevant biochemical processes active during their extraction. On the other hand, identification of the most important genes/enzymes in relation to the oil quality and knowledge of their regulation can be used in the molecular marker assisted selection of olive clones with improved VOO quality features.

Biography

Carlos Sanz completed his PhD (Chemistry) at the University of Seville and his MSc (Plant Physiology) at Oregon State University where he had a postdoctoral leave. He joined the Spanish Council for Scientific Research (CSIC) in 1994 and is now a Research Professor at the Instituto de la Grasa (Seville) with major interests in the characterization of the biosynthetic pathways of the components that determine the organoleptic and nutritional quality of plant foods, the assessment of changes going on during processing and storing, and the development of technologies to improve the quality of the food.