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Poster Abstract – G.07

SNPs DETECTED ON CANDIDATE GENES OF OLIVE

SARRI V.*, VENDRAMIN G.G.**, SEBASTIANI F.**, PORCEDDU A.***, BALDONI L.****, ALAGNA F.****, CULTRERA N.G.M.****, MARIOTTI R.****

*) University of Perugia, Department of Cell and Environmental Biology, 06123 Perugia
**) CNR - Institute of Plant Genetics, 50019 Sesto Fiorentino (FI)
***) University of Sassari, DSAGVA, 07100 Sassari
****) CNR - Institute of Plant Genetics, 06128 Perugia

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Single Nucleotide Polymorphisms (SNPs) were detected on three candidate genes of olive. One of them, Acyl Carrier Protein (*acp*), is involved in lipid synthesis, Lupeol synthase (*lup*) in terpene synthesis, and Sucrose transporter (*sut*) is part of carbohydrate metabolism.

The polymorphism analysis and SNP frequency were evaluated at all loci on 90 cultivars collected along the Mediterranean area. About 800 bp fragments were analyzed for each gene.

In order to identify different haplotypes and evaluate the presence of polymorphic multilocus genes, PCR products, amplified on a subset of six varieties, were cloned and re-sequenced. Where necessary, primers have been re-designed on polymorphic regions for the amplification of single-locus genes.

SNP frequency, haplotype structure and genetic differentiation among populations have been calculated on the entire set of varieties.

Linkage Disequilibrium (LD) decay was estimated along each locus showing a rapid decline within few hundreds of base pairs distance.

Data are currently being analysed for their possible application on studies of association mapping.