CHARACTERIZATION OF LEAF ESSENTIAL OIL COMPOSITION OF HOMOZYGOUS AND HETEROZYGOUS *CITRUS CLEMENTINA HORT. EX TAN.* AND OF ITS ANCESTORS

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Clementine, that is a tangor, resulting from an interspecific cross between mandarin and sweet orange, is of great importance in the Mediterranean citrus industry.

Gametic embryogenesis, allows the single-step development of complete homozygous line from the heterozygous parents, increasing the efficiency of perennial crop breeding programmes.

Tri-haploids have been regenerated through pollen embryogenesis (specifically, by anther culture) of *Citrus clementina* Hort. ex Tan., cv. Nules (Germanà et al., 2005). Two of them (HOMO 1 and HOMO 2) have been acclimatised and grafted *in vivo* in 2000.

Within the scope of the characterization of these homozygous clementine genotypes, in this study the essential oils from their leaves, were extracted by Clevanger apparatus and analysed by GC-MS and compared with oils obtained from the heterozygous plant and its ancestors (orange and mandarin).

Research regarding the biochemical characteristics of plant regenerated by pollen embryogenesis or gynogenesis can be useful to study the “gametoclonal variation”, also for further application of haploidy technology in *Citrus* breeding.