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Poster Communication Abstract – 5C.09

IDENTIFICATION OF *ARTEMISIA UMBELLIFORMIS* GENOTYPES SUITABLE FOR CULTIVATION

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Artemisia umbelliformis Lam. is an herbaceous plant belonging to the *Asteraceae* family and growing wild at an altitude of between 2,000 and 3,700 m (a.s.l.). Its flowers are mainly used for the production of "Genepì", an highly prized liquor of bitter taste whose peculiar flavour is given by the plant volatile constituents and sesquiterpene lactones. The indiscriminate picking of the flowers undermines the survival of the species in nature and its harvesting is banned in Switzerland and Italy and strictly regulated in France.

A. umbelliformis is at present grown in North-western Alps, but flower production does not meet market needs; thus it is important to select high productive genotypes representative of the genetic variation at present in cultivation.

Within the Interreg ALCOTRA '*Alpi Latine Cooperazione Transfrontaliera* Project "GENEALP – Genepì delle Alpi e altre piante officinali" we performed an AFLP-based assessment of the genetic architecture in five *A. umbelliformis* ecotypes grown in as many locations (Val Gesso, Marmora, Elva, Gran Paradiso and Val Chisone) as well as a selected (RAC12) and a natural population (Wild). The evaluation of the genetic variability between and within ecotypes/populations enabled to detect the distribution of the analyzed genotypes into three main clusters. Ecotypes Val Chisone, Elva, Gran Paradiso and Valle Gesso were chosen as representative of the genetic variability present in cultivation and referred as "Occitan" ecotypes. Within each of these ecotypes, 10 plants were selected, according to the production observed at the time of flowering (number of flowers per plant).

PCO analysis based on their AFLP-fingerpring confirmed the genetic differentiation among "Occitan" ecotypes and made it possible to identify 10 genotypes (plants) which will be used as mother plants to obtain *in vitro* clonal populations. This clonally propagated material will subsequently be evaluated for cultivation.