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Poster Abstract – A.24

BIOLOGICAL AND MOLECULAR CHARACTERIZATION OF DIFFERENT ACCESSIONS OF *ORIGANUM VULGARE* L.

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Oregano, essential oils, M13-PCR

Oregano (*Origanum vulgare* L.) belongs to *Lamiaceae* family and it's an aromatic and medicinal plant widely used both as food source and phytotherapy. Moreover, it can be potentially used as biocide, because its essential oil is toxic against phytopathogenic bacteria, fungi and weeds. Essential oils are synthesized in glandular structures abundant on the leaf surface. The composition of essential oils is subjected to variations of the active principles, partially due to the use of heterogeneous populations and the environmental conditions.

The aim of this work is the comparison between oregano plants collected from different geographical areas and the effects of the environment. The plants were collected in the year 2006 in different areas of Campania region near Sicignano degli Alburni, Acerno, Ricigliano and Solofra and were cultivated in the Sele Valley (Salerno district). In the year 2007 the agronomic relieves at the harvest were carried out both on the plants in the origin areas and in the Sele Valley.

The results showed differences among the accessions and locations for bio-morphological characters, stomatic leaf density, biomass and essential oils yields. Flowering dates of the plants cultivated in the Sele Valley were earlier with respect to those ones grown in the places of origin. "Acerno" accession showed the highest height of the plants and weight of biomass with respect to the other accessions. The percentage of essential oil of "Sicignano" was higher than the other accessions both *in situ* and in the Sele Valley; conversely, "Acerno" accession showed the lowest percentage of essential oils in the two location. Anyway the essential oil percentage was higher in the original location for all the collected accessions.

M13 molecular characterization on the bulk of the four oregano accessions, was carried out. A very similar patterns among the accessions was observed, with only few differential bands. Further investigation on DNA polymorphism are in progress on single plants.