

## DIFFERENTIAL EXPRESSION OF DEHYDRIN GENE (*OeDHN*) IN OLIVE FRUITS AND LEAVES

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Dehydrins (DHN) belong to a subgroup of late-embryogenesis-abundant (LEA) proteins and accumulate in various plant tissues during cellular dehydration (1). DHN proteins exhibit a wide range of molecular masses (9-200 kDa) but are all characterized by glycine and lysine rich domains and lack of cysteine and tryptophan (2-3-4). It has been demonstrated that DHN genes (*DHN*) are modulated during the late stages of embryogenesis and are induced by environmental stress such as water scarcity, salinity and freezing (1-5). *DHNs* triggering during cell dehydration suggests their involvement in protection and defence mechanisms even though their specific roles is not yet fully understood.

In the present work a fragment of gene encoding for DHN belonging to a multiple member family was isolated in *Olea europaea* c.v. *carolea* L. (*OeDHN*). The deduced partial polypeptides sequence showed the highest identity with DHN of *Salvia miltiorrhiza*. Gene specific quantitative PCR was performed to monitor *OeDHN* expression and its transcript was more abundant in fruit than in leaves and in both organs it appeared to be developmentally modulated. In leaf, message abundance was associated to leaf age, peaking in old leaves. In drupe, the transcript level was low at early stage of development, rose to the maximum at green mature stage and decreased after ripening. Moreover, *OeDHN* expression was two fold higher in epicarp than in endocarp. These preliminary data suggest that *OeDHN* may play a role during fruit maturation and ripening affecting fruit production and quality. Hence, *DHN* genes may have an impact as markers in assisted breeding as well their biotechnological control may be a tool to affect such traits.

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