Title Introduction of ethylene insensitivity in *Campanula carpatica* flowers by genetic manipulation with Etr1-1

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Citation Abstracts Book, 6th International Postharvest symposium, 8-12 April 2009, Antalya, Turkey. 256 pages.

Keyword Flower; ethylene; Etr1-1

Abstract

The construct containing the *etrl-l* gene from *Arabidopsis thaliana* under control of the flower specific jbpl-promoter from Petunia was used to obtain *Campanula carpatica* Jacq. potted plants with ethylene insensitive flowers. The flowers on the wild type *Campanula* plants wilted within three days when exposed to 2 µl l^{-1} ethylene. The tested transgenic *etrl-1* lines had various levels of tolerance against ethylene and the best transgenic line continued to flower for up to 27 days in the presence of exogenous ethylene. The expression of *etrl-l* in flowers and buds was cOnlumed by PCR and RT-PCR. The transgenic plants were fertile without any reduction in rooting ability of cuttings, and they did not differ morphologically from the wild type. Tl progeny, a cross between a wild plant and a transgenic plant possessing ethylene insensitive flowers, showed 1:1 segregation in terms of ethylene insensitivity and the presence of the trans gene.