

### Abstract:

Senescence of carnation flowers is characterized by autocatalytic ethylene production from petals and subsequent wilting of the petals. Recent studies on the regulation of ethylene production and wilting in senescing carnation flowers revealed that (1) petal senescence is triggered by ethylene produced from the gynoecium during natural senescence, (2) there are two subsets of ethylene responses in the petals; one responsible for autocatalytic ethylene production and the other for wilting, and (3) in the petals ACC oxidase (*DC-ACO1*) and ACC synthase (*DC-ACSI*) genes are sequentially in this order. The expression of the *DC-ACO1* gene probably affects that of the *DC-ACSI* gene.