D205 Temperature sensitive morphological mutant in *Arabidopsis*

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We have isolated a temperature-sensitive mutant that show pleiotropic effect on shoot development from T-DNA insertional lines of *Arabidopsis*. At a low temperature, the mutnant have multiple shoot, abnormal leaf shape and number, and reduced trichome number. Scanning electron microscopic analysis showed that meristem-like structures are ectopically formed and the leaf primordia retain meristematic structure. Thus, the mutant are named *"amudena"* (or *amu* for short). At a higher temperature, mutant phenotype is reversed with formation of almost normal leaf, normal shoot, but longer hypocotyl and early flowering also appeared. These result show that the *AMUDENA* gene is required for maintaining the differentiated states ; with a defect in this gene, cell become meristematic.

D206 Isolation and Characterization of Genes Differentially Expressed During Berry Development in Grapes

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Fruit development has been recognized as a highly regulated developmental process in which activation of specific genes take place. However, little is known about the development of nonclimacteric fruits such as grapes. In this study, we attempted to analyze changes in gene expression patterns during berry development in grapes following a typical double-sigmoid growth curve. RNAs were isolated from grape berries harvested at the three different stages during development and their reverse transcriptase-PCR products were displayed on a sequencing gel. cDNAs differentially expressed at each stage were subcloned and used as probes for northern blot hybridization analysis. One of these cDNAs, designated vexo1 was found to hybridize to 1.5 kb-transcript which was enriched in skin compared to flesh tissues at the stage I during berry development. The transcript was also expressed in other organs such as flower and leaf. Sequence analysis revealed that the clone encodes an elongation factor EF-1γ, suggested as an anchor for the EF1 complex in the endoplasmic reticulum. However, it remains to be further studied whether it plays a role during the early stage of berry development.