

**H209** T-DNA Tagging and Rescue of the Flavonoid-3'-Hydroxylase Gene from *Arabidopsis thaliana*.

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The *tt7* mutant of *Arabidopsis* is defective in the accumulation of a flavonol. Earlier results indicated the *tt7* locus encode flavonoid-3'-hydroxylase (F-3'-OH) in the general phenylpropanoid pathway. Based upon the green fluorescence of *tt7* mutants under UV light, mutant lines were selected from ethyl methanesulfonate mutagenized populations of Landsberg erecta M<sub>2</sub> seeds. Also, blue fluoresced mutants were identified, based upon the visual screening, from *Agrobacterium* mediated transformants carrying disrupted gene with the T-DNA. The T-DNA tagged line 7190 was certified by Southern hybridization using petunia F-3'-OH gene as a probe. Plasmid rescue was conducted using the genomic DNA isolated from the 7190 mutant. The DNA was digested with *EcoRI* and self-ligated. Several DNA clones containing the sequence of F-3'-OH gene were identified using petunia F-3'-OH gene as a probe. One positive clone (pA11) was characterized by restriction digestions and nucleotide sequencing.

**H210** The Strategy for the Tissue Specific Expression and Production of Interleukin-2 Gene in Potato (*Solanum tuberosum* cv. Superior)

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We constructed three kinds of expression vectors and introduced them into potato for effective production of interleukin-2 potatoes. First, GUS gene in pBI121 was replaced with interleukin-2 gene in order to be observed the amount of interleukin-2 protein produced from transformants and its effect in plant. We named this vector as pSSK-1. Secondly we built up pSSK-6 by the substitution of patatin promoter for CaMV 35S promoter in pSSK-1, so that interleukin-2 protein might be expressed in tuber specifically and highly. And finally, we got rid of NPTII gene as a selection marker, from pSSK-6 and was inserted mouse adenosine deaminase gene for the selection of plant transformants without antibiotics. We confirmed the transformation events by southern and northern analyse. We performed the biological assay using the interleukin-2 dependent cell line, CTLL-2 and the biological activity of interleukin-2 expressed by transgenic potatoes.