



# ***Agrobacterium*-mediated transformation of tomato (*Solanum lycopersicum* L.) using the expansin 10 (*CsEXP10*) gene**

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**ABSTRACT.** The cucumber expansin 10 (*CsEXP10*) gene was previously cloned from young cucumber fruits but its role has not been defined. To determine the role of this gene in plant growth and development, a *CsEXP10* gene transformation system was established. The open reading frame of the gene was inserted behind the *CaMV35S* promoter of vector pCambia1301, and the construct was introduced into tomato plants by *Agrobacterium*-mediated transformation. In total, 19 kanamycin-positive lines were produced and nine independent transgenic lines were identified by  $\beta$ -glucuronidase and polymerase chain reaction (PCR) analysis. Quantitative real-time PCR analysis showed that levels of the *CsEXP10* transcript were higher in transgenic lines than in a non-transgenic line.

**Key words:** *CsEXP10*; GUS-staining assay; Regeneration; Tomato (*Solanum lycopersicum* L.); Transformation system