

“*Agrobacterium tumefaciens* mediated genetic transformation of *Arachis hypogaea* (Ground nut)”

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ABSTRACT

A major limitation of current peanut transformation is the application of in vitro regeneration protocols to the transformed tissue, which is difficult, time-consuming and genotype-dependent. Minimizing the role of tissue culture in the transformation procedure would therefore be advantageous.

In the present study both tissue culture-based and in planta transformation was carried out on peanut (*Arachis hypogaea* cv. TMV-2). *Agrobacterium tumefaciens* strain LBA 4404 harboring the binary vector pCAMBIA 1301 that carries the gene for β -glucuronidase (GUS) and hygromycin phosphotransferase resistance gene (hptII), driven by CAMV 35S promoter was used for transformation. Following co-cultivation of seeds with the bacterium and growth, 2 out of 12 plants were found to be transgenic by GUS histochemical assay. This was further authenticated by Genomic DNA PCR.