TRANSFORMATION OF SOYBEAN (*GLYCINE MAX* L. MERR.) WITH THE PHOSPHINOTHRICIN ACETYLTRANSFERASE (PAT) GENE.

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ABSTRACT

Shoot apex and shoot tip cultures of soybean (*Glycine max* L. Merr.) were vacuum infiltrated with *Agrobacterium tumefaciens* strain LBA 4404 (pBI121)(pRK2013) containing the GUS gene, or strain LBA 4404 (pBI101-PAT)(pRK2013) containing the PAT gene. After selection on a kanamycin sulphate selection medium, 12 putative GUS transformants were identified and tested using the GUS fluorimetric test. Four of these will undergo further testing for transformation. Explants transformed with LBA 4404 (pBI101-PAT) will be selected on the herbicide phosphinothricin (PPT), to identify transformants.

Key words: *Agrobacterium, Glycine max,* herbicide, phosphinothricin, shoot apices, soybean, transformation

Abbreviations: BAP 6-benzylaminopurine, GS glutamine synthetase, GUS ß-glucuronidase, NAA naphthalene acetic acid, PCR polymerase chain reaction, PPT phosphinothricin