

Agrobacterium-mediated transformation of indica rice under Acetosyringone-free conditions
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Abstract

The possibility of developing **transgenic indica rices** through Agrobacterium-mediated **transformation** in the absence of **acetosyringone** at bacterial preinduction or co-cultivation or both stages was assessed. Four-week-old, scutellum derived calluses of indica rice (*Oryza sativa* L. cv. Pusa Basmati1) were co-cultivated with *A. tumefaciens* strain LBA4404 b-glucuronidase (GUS) and hygromycin phosphotransferase (pSB1), harboring the binary vector pCAMBIA 1301 with the (HPT) genes in the T-DNA region. Addition of acetosyringone (AS) to both preinduction medium (PIM) and co-cultivation medium (CCM) induced higher levels of transient GUS expression than that obtained with the addition of AS to either of the stages. Addition of only sucrose to both preinduction and co-cultivation media yielded transient expression levels similar to those obtained by the addition of AS. The resultant fertile plants were stable transformants as revealed by GUS histochemical assay and PCR analysis for the GUS and HPT genes. Thus, phenolics like AS may not be essential for induction of vir genes, and development of transgenic indica rice is feasible under AS-free conditions.