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Transgenic Fertile Rice Using Particle Gun, NPT and Gus Marker Genes Driven by TR Promoter

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Strictly selected immature-derived embriogenic callus was used for development of suspension culture. In the transformation experiment, fine embriogenic suspension was plated on filter paper over selective medium and bombarded. Gold microcarriers coated with plasmid DNA (pGSGLUC1, pRT99GUS) were accelerated at high velocity using Biolosistic particle delivery system (PDS-1000). For selection after bombardment, agar medium at each stage was supplemented with 75-100 mg/l of G-418. Isolated calli were tested for NPT II and the positive calli only were used in regeneration experiment. 31 NPT II positive plants were grown in greenhouse and 16 of them were fertile. The presence and expression of the introduced genes of transformation in R0 plants and their offsprings were confirmed by NPT II test, Southern analysis and fluometric GUS assay.