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GENETIC TRANSFORMATION OF TROPICAL MAIZE (*Zea mays* L.) BY *Agrobacterium tumefaciens* AND PARTICLE BOMBARDMENT

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Genetic transformation of plants has become a routine technique used to improve the quality and performance of many important monocotyl and dicotyl crop species. EMBRAPA Maize and Sorghum, a Brazilian Agricultural Research Corporation, has a program of production of transgenic tropical maize genotypes with enhanced nutritional quality and insect resistance. Maize endosperm, the major component of the grain, is low in essential aminoacids such as methionine, lysine and tryptophane. One alternative to improve grain protein quality is by overexpressing delta zein, a methionine rich protein, in the maize endosperm. In this project the delta zein will be overexpressed in the maize endosperm using the gamma zein gene promoter. The construct of the gamma zein gene promoter directing the delta zein expression was inserted in the pCAMBIA 1303 and 1304 vectors which contain hygromycin resistance gene, GUS and GFP reporter genes. We present here successful transient reporter gene results of immature maize embryo transformed with these vectors via *Agrobacterium tumefaciens* and particle bombardment. Hygromycin resistant calli obtained in N6 basal medium containing 2 mg/L Dicamba are in regeneration process in the same basal medium supplemented with 0,5 mg/L IBA and 1mg/L BAP. Transgenic maize plants will be confirmed by histochemical GUS assay, fluorescence microscopy and Southern blot hybridizations. Supported by: CNPq, FINEP/PADCT, FAPEMIG and EMBRAPA