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**Abstract:** Banana and plantains (*Musa spp.*) are considered the fourth important staple food crop in the world after rice, maize and wheat. The crop is the most nutritious of all food crops and provides food and income to millions of people around the world. Available techniques for the genetic transformation with important genes could overcome some of the agronomic and environmental problems limiting conventional breeding of bananas. Although it is possible to transform bananas, broad application of the technology is limited because of the low overall efficiency and lack of reliability of the technique. Despite playing a key role in the economy of many developing countries, its production and as such export is constrained by many biotic as well as abiotic factors. This research reports on the potential of *Agrobacterium* for the transformation of Banana. The meristem of the suckers was used as the explants for the aseptic culture establishment of banana. The banana culture was established using MS medium supplemented with 6.0 mg/l BAP, 0.2 mg/l IAA and 100.0 mg/l AdSO<sub>4</sub> which was used for the infection with *Agrobacterium tumefaciens*. The npt II gene was used as reporter, the genes is under the regulation of CaMV35S promoter, for quantification of transformants in the binary vector, pCAMBIA 2300. Results obtained indicated that the 45 min. co-culture was found most suitable for achieving transformants in the media supplemented with 200.0 mg/l kanamycin. The Kanamycin tolerance test was performed to check the sensitivity of explants, which was observed best at 200.0 mg/l and was used for the selection of the transformants. Only about 22.22% explants showed resistance on kanamycin stressed media upon 45th day at 45 min. co-culture with bacteria.

**Description:** Genetic transformation of Banana (*Musa sp.*) through *Agrobacterium tumefaciens*

**Subject:** Biotechnology

**Theme:** Genetic transformation of Banana (*Musa sp.*) through *Agrobacterium tumefaciens*

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