

Perbanyak dan Transformasi Genetik Menggunakan *Agrobacterium tumefaciens* pada Tanaman Melinjo (*Gnetum gnemon*) dengan Teknik Kultur Jaringan

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ABSTRACT

An experiment has been done at Tissue Culture Laboratory of Indonesian Center for Agricultural Biotechnology and Genetic Resources Research and Development, Bogor, starting on July 2001 until August 2002. The objective of the research is to study multiplication and genetic transformation via *Agrobacterium tumefaciens* on Melinjo (*Gnetum gnemon*) by using *in vitro* technique. The multiplication experiment used thidiazuron for treatment at the concentrations 0, 0.1, and 0.3 ppm in combination with three kinds of medium i.e. MS, WPM, and Anderson. Before acclimatization, the bud was incubated in IBA solution (0, 250, 500, and 750 ppm) for 60 minutes. The results showed that treatment of Melinjo bud thidiazuron 0.3 ppm in MS medium could increase number of bud multiplication. Treatment with 500 mg/l IBA before acclimatization could increase rooting and usage of explants from leaf pieces. Transformation with an inoculation periode of 60 minutes gave a higher percentage of transformants from buds than a periode of 30 minutes inoculation.

Keywords: *Agrobacterium tumefaciens*, genetic multiplication and transformation, *Gnetum gnemon*