

EFFECT OF PLANT GROWTH REGULATORS ON CALLI AND EMBRYOGENIC CALLI FROM LEAF OF POKEWEED (*Phytolacca americana* L.)

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Summary

Phytolacca americana L. belongs to family Phytolaccaceae, which is medicinal plant. It planted in Vietnam 10 years ago. In Vietnam and in the world, no micropropagation studies of *Phytolacca americana* L. were reported. In this study, we have achieved in inducing calli and embryogenic calli from leaf explants. Leaf explants were sterilized and cultured on MS Murashige and Skoog medium (MS) supplemented with 2, 4-dichlorophenoxyacetic acid (2.4 - D) alone or 2.4 - D with α - naphthaleneacetic acid (NAA) or kinetin (Kin) at different concentrations. The results showed that the MS medium containing in combination of 1,0 mg/l 2.4 - D and 0.5 mg/l Kin was suitable for the callus formation. MS medium supplemented 2.4 - D at 0.0 mg/l to 4.0 mg/l induced embryogenic calli. However, 100% success rate for embryogenic formation and the highest number embryos like body (23.92 ± 2.31 embryos per explant) when explants were cultured in MS medium added with 3.0 mg/l 2.4 - D. The globular and early heart embryos were occurred when embryogenic calli were transferred to the same medium without agar and shaken at 125 rpm/minute.

Keywords: Callus, embryogenic calli, embryos, *Phytolacca americana* L.