# Establishment of Embryogenic Cell Suspension Culture of Chilli [Capsicum annum L. var. accuminatum Fingerh] for Somatic Embryogenesis

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**Abstract**

Chilli [Capsicum annum L. var. accuminatum Fingerh] is one of the important spice crops ofSri Lanka. Embryogenic suspension cultures of chilli were developed with an objective to induce somatic embryogenesis Successful callus induction was obtained from both leaves and cotyledons of two weeks old seedlings in MS medium containing 1 ppm 2, 4 • D, after incubation in the dark for two to three weeks. A combination ofKinetin (0.x ppm) and 2,4- D (1 ppm) promoted callus proliferation at a high rate. Cell suspension cultures were established using 2 g of four week old leaf and cotyledon calli in 20 ml of liquid MS medium with 1 ppm 2, 4- D in 100 ml Erlenmeyer flasks. Weekly sub culturing was performed. MS medium with 2. 4-D (1 ppm) stimulated embryogenesis on cotyledon callus after 12 weeks in culture. Embryogenic calli formed are pale yellow to brown, compact, organized and nodular in appearance. It comprised of small, richly cytoplasmic cells without large vacuoles. Both initiation of embryogenic cells and the subsequent development of these cells into embryoids occurred in the. same MS (2, 4-D 1 ppm) medium. Within a period of five to seven days, 12 week old, 20 ml of embryogenic cell suspension produced 14 proembryoids After 7-14 days they developed into heart stage and to mature embryoids Plantlet development has not observed until now in the tested MS media,

containing activated charcoal, zeatin, IBA and GA3.