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REGENERATION OF PLANTLETS AND TETRAPLOIDY INDUCTION IN *PSEUDOSTELLARIA HETEROPHYLLA*

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This study was aimed at developing an efficient protocol for regeneration of *Pseudostellaria heterophylla* plantlets and induction of polyploidy. Calli of *P. heterophylla* (Miq) from stems, leaves and buds as explants could not differentiate into plantlets. However, young embryo segments used as primary explants produced embryonic calli on MS medium containing 5.0 mg/L 2,4-D and 0.5 mg/L KT. After the embryonic calli with granular protuberances were transferred to MS medium containing 0.5 mg/L BA, they developed shoots and then rooted to form plantlets. Polyploidy was induced when embryonic calli were placed in liquid MS medium containing 0.5% colchicine for 4 days, followed by culturing in solid medium to induce differentiation. Polyploidy was identified by the number of chromosomes and the size of plantlet stomata. The tetraploid plantlets produced larger root tubers than the diploid plantlets.

Key words: Callus, embryonic calli, *Pseudostellaria heterophylla*, regeneration, tetraploidy.

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