M.J. Hutchinson, S. KrishnaRaj and P.K. Saxena. 1996. Morphological and Physiological Changes during thidiazuron-induced somatic embryogenesis of geranium (*Pelargonium x hortorum* Bailey) hypocotyl cultures. Int. J. Plant Sci. 157: 440-446.

ABSTRACT:

Somatic embryogenesis in geranium (*Pelargonium x hortorum* Bailey cv. 'Scarlet Orbit Improved') was achieved by culturing hypocotyls explants on media supplemented with either thidiazuron (TDZ) or indol-3-yl-acetic acid (IAA) and 6-benzylaminopurine (BAP). The physiological relationships between the morphological changes that lead to complete development of somatic embryos and the endogenous levels of plant growth regulators were studied. TDZ induced similar but more pronounced and earlier morphological changes in cultured tissues than did IAA and BAP, but after 21 d in culture, both treatments promoted the formation of somatic embryos of different developmental stages that were similar to zygotic embryos. TDZ induced a higher number of somatic embryos, with similar but greater increases in the endogenous levels of auxins and cytokinins, than did IAA and BAP. This may indicated that TDZ may be a more potent plant growth regulator in inducing physiological and morphological changes than combined auxin and cytokinin, during the process of somatic embryogenesis in geranium.