SOMATIC EMBRYOGENESIS IN AVOCADO (PERSEA AMERICANA MILL. CV. HASS)

I. Vidales-Fernández¹, R. Salgado-Garciglia², M.A. Gómez-Lim³, E. Ángel-Palomares² y H. Guillén-Andrade¹.

¹ Instituto Nacional de Investigaciones Forestales y Agropecuarias, Campo Experimental Uruapan, Ave. Latinoamericana 1101, Col. Revolución, CP 60150, Uruapan, Mich., México. cefapuru@prodigy.net.mx; ² Instituto de Investigaciones Químico-Biológicas, Facultad de Agrobiología "Pdte. Juárez" Universidad Michoacana de San Nicolás de Hidalgo, Edificio B-1, Ciudad Universitaria, CP 58030, Morelia, Mich., México. rsalgado@zeus.umich.mx; ³ Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Unidad de Biotecnología e Ingeniería Genética de Plantas. Apartado postal 629. Irapuato, Gto. México. mgomez@ira.cinvestav.mx

In vitro culture of nucellar avocado tissue (*Persea americana* Mill.) cv. Hass and subsequent induction of somatic embryogenesis has been carried out. Segments of nucellar tissue were placed on a culture medium with mineral salts (MS), auxins (picloram, IBA and 2,4-D) and supplemented with casein hydrolysate. The addition of ascorbic acid and L-cisteine to reduce necrosis, under darkness and low light intensity conditions, was studied. Necrosis was reduced 100% with the immersion of the nucellar tissue in ascorbic acid (400 mg/l) before *in vitro* culture. On the induction medium, 20% of embryogenic calli were developed with 2,4-D (1 mg/l) after 50 days at 25°C in dark conditions. However, the embryogenic calli showed a better development in a medium with the addition of picloram (4 mg/l) and IBA (0.4 mg/l). The multiplication of the embryogenic calli was carried out under low light intensity conditions and on a medium with no growth regulators for 4 weeks; embryos matured on a medium with low quantity of nitrates and no growth regulators and, later, on MS medium with 0.3 mg/l BA.