Poster Abstract - E.04

SOMATIC EMBRYOGENESIS FROM STIGMA AND STYLE OF GRAPEVINE

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anthers, plant regeneration, secondary embryogenesis, unfertilised ovules, Vitis vinifera

An in vitro protocol has been developed for callus induction, somatic embryogenesis and plant regeneration from stigma and style culture. Four different grapevine cultivars (*Vitis vinifera* L.; cvs. 'Bombino Nero', 'Greco di Tufo', 'Merlot' and 'Sangiovese') were tested. Explants were cultured on Nitsch and Nitsch medium (NN) supplemented with different combinations of 6-benzylaminopurine (BA) (4.5 and 9.0 μ M) and β -naphthoxyacetic acid (NOA) (5.0 and 9.9 μ M). Sucrose (88 mM) was used as carbon source. Somatic embryogenesis was induced within 3-7 months after culture initiation. Even though explants of different origin (unfertilised ovules and anthers) regenerated somatic embryos, the higher embryogenic aptitude was observed in stigma and style explants, with the exception of 'Merlot' that regenerated somatic embryos only from unfertilised ovules. The percentages of stigma- style explants producing somatic embryos was 7% in 'Bombino Nero' (cultured on NN medium supplemented 9.0 μ M BA and 9.9 μ M NOA), 14% in 'Greco di Tufo' (4.5 μ M BA and 9.9 μ M NOA), and 8% in 'Sangiovese' (9.0 μ M BA and 9.9 μ M NOA). The addition of growth regulators (BA and NOA) in the medium was essential for induction of somatic embryogenesis. Plants were regenerated on hormone free NN medium containing 88 mM sucrose.