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Micropropagation and ex vitro rooting of pistachio (*Pistacia vera* L.)

Abstract

An effective pistachio (*Pistacia vera* L.) micropropagation system was developed involving rapid axillary bud proliferation and ex vitro rooting. The highest shoot proliferation frequency was obtained from nodal explants cultured on Murashige and Skoog (MS) basal salts containing Gamborg (B₅) vitamins and supplemented with 4 mg l⁻¹ 6-benzyladenine (BA). The addition of 2 mg l⁻¹ meta-topolin (*mT*) generated an optimal number of shoots with suitable morphological features, while kinetin (KIN) was found to be unsuitable for pistachio shoot proliferation.

Microcuttings were rooted ex vitro after being dipped in rooting powder. The peak ex vitro rooting response was achieved after shoot explants were treated with Rhizopon[®] 2% indole-3-butyric acid (IBA). Rooted plantlets were transplanted in plastic pots containing a peat–perlite–vermiculite (1:1:1) mixture and then transferred to the greenhouse. After 2 months, 81.5% survival of rooted microshoots was achieved.

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