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Genetic Transformation of Chrysanthemum with Salt Tolerance Genes

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We have tried to make improved cultivars of Chrysanthemum (*Dendranthema grandiflorum* cv. Puma) which is adapted itself to improve salt tolerance in the natural field using particle bombardment and vacuum assisted *Agrobacterium*-mediated transformation with *TaNHX* gene (1.739kb). Leaf explants of the chrysanthemum were cultured on MS medium supplemented with various concentrations of NAA, IAA, 2,4-D and BA. The highest frequency of shoot formation was observed on MS medium supplemented with 1.0mgL⁻¹ BA, 0.3mgL⁻¹ 2,4-D. The suitable concentration of tetracycline to select the transformant are 5 mgL⁻¹. The highest calli formation efficiency is observed for 20 min with 0.5ng/μL (O.D. 660nm) in the case of *agrobacterium*-mediated methods and it is good conditions of 900–1,100psi of helium pressure in the case of particle bombardment. The salt tolerance gene (*TaNHX*) has been injected in Chrysanthemum leaf disc and three transgenic plants have been produced successfully on the selection media with 3% sucrose containing phytohormone. In the PCR detection of *TaNHX* gene, *TaNHX* gene bands were found.

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