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MICROPROPAGATION OF *SENECIO MACROPHYLLUS* M. BIEB.

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This is the first protocol for *in vitro* micropropagation of *Senecio macrophyllus*. Shoot tips and fragments of the cotyledon, hypocotyls and roots were isolated from 10-day-old sterile seedlings. The morphological response was tested on MS medium supplemented with different types of cytokinins: BA (2.2 µM, 4.4 µM or 13.3 µM), KN (4.7 µM or 13.9 µM) and ZEA (4.6 µM or 13,7 µM) in combination with 0.54 µM NAA or 0.27 µM NAA (with 2.2 µM BA only), but only shoot tips were capable of shoot organogenesis. Shoot proliferation was highest for explants cultured on MS medium supplemented with 4.4 µM BA in combination with 0.54 µM NAA. The shoots formed were then multiplied on the same medium. Rooting was achieved on full- and half-strength MS medium without auxin, but shoots cultured on medium BA-supplemented began inducing roots a week later than shoots obtained on media with other types of cytokinins. Well-rooted plantlets were transferred to ex vitro conditions. The survival rate of rooted plants was 100% for plants cultured in a mixture of vermiculite and sand, and 92% for those planted in soil after 4 weeks of acclimatization. In the first year the plants grew intensively under field conditions and were able to develop a leaf rosette. In the second year the plants were able to flower and produce viable seeds.

Key words: *Senecio macrophyllus*, micropropagation, shoot tip, benzylaminopurine, flowering plantlets.

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