



Micropropagation of tea tree (*Melaleuca alternifolia* Cheel)

Yohana de Oliveira¹, Fernanda Pinto², **Marguerite Quoirin**³

¹Programa de Pós-Graduação em Agronomia – Produção Vegetal, Universidade Federal do Paraná (UFPR); ²Faculdades Integradas UniBrasil; ³Departamento de Botânica, Setor de Ciências Biológicas, UFPR. Caixa postal 19031, CEP 81531-990 Curitiba PR Fax: 41 3266 2042 Email: mquoirin@ufpr.br

Melaleuca alternifolia (Myrtaceae) is cultivated for the production of an essential oil used by cosmetic and pharmaceutical industries. There is little knowledge about its *in vitro* propagation. The aim of this study was to establish a protocol of micropropagation of *M. alternifolia* for the clonal propagation of elite genotypes with superior oil yield. First, nodal segments were established *in vitro* after disinfestation with the fungicide thiophanate methyl (2 g L⁻¹) followed by NaOCl (1%) for 20 min. Several culture media were tested: MS and WPM with or without agar (6 g L⁻¹) and activated charcoal (0.2%). There was no statistical difference between the results with the use of MS and WPM media, nevertheless the solid media promoted higher shoot number per explant (1.83) than liquid medium (1.01). For multiplication, MS and WPM media were tested, solid and liquid, supplemented with BAP at 0, 0.55, 1.11, 2.22, 3.33 and 4.44 µM. The highest shoot number per explant (11.8) was reached in liquid MS medium supplemented with 1.11 µM BAP for two subcultures of four weeks each. On solid WPM medium the highest multiplication rate (4.5) was obtained when 0.55 µM BAP was added. Auxins were not necessary for *in vitro* rooting and the plantlets rooted on a MS medium presented a higher survival rate during acclimatization than those rooted on half-strength MS medium. Funded by CNPq, Brazil.

Key words: aromatic plant, growth regulator, tissue culture.