

Tyrosinase inhibitory activity of native plants from central Argentina: isolation of an active principle from *Lithrea molleoides*

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RESUMEN

Screening of 91 native plants from central Argentina was carried out with the aim of finding new sources of anti-tyrosinase compounds. Extracts obtained from *Achyrocline satureioides*, *Artemisia verlotiorum*, *Cotoneaster glaucophylla*, *Dalea elegans*, *Flourensia campestris*, *Jodina rhombifolia*, *Kageneckia lanceolata*, *Lepechinia floribunda*, *Lepechinia meyenii*, *Lithrea molleoides*, *Porlieria microphylla*, *Pterocaulon alopecuroides*, *Ruprechtia apetala*, *Senna aphylla*, *Sida rhombifolia*, *Solanum argentinum*, *Tagetes minuta* and *Thalictrum decipiens* exhibited more than 90% inhibition of tyrosinase monophenolase activity at 1000 µg ml⁻¹. *D. elegans*, *L. meyenii* and *L. molleoides* were the most potent with IC₅₀ values of 0.48, 10.43 and 3.77 µg ml⁻¹, respectively. *D. elegans*, *L. molleoides* and *T. decipiens* also showed more than 90% inhibition of diphenolase activity at 1000 µg ml⁻¹, with the first of these being the most effective (IC₅₀ = 49.27 µg ml⁻¹). (Z,Z)-5-(trideca-4,7-dienyl)-resorcinol (1) was isolated from *L. molleoides* as an effective tyrosinase inhibitor with l-tyrosine or l-DOPA as substrates (IC₅₀ = 0.49 and 14.94 µg ml⁻¹, respectively). Compound 1 was 37 times more active in monophenolase inhibitory activity than kojic acid used as a reference. Effective extracts as well as (Z,Z)-5-(trideca-4,7-dienyl)-resorcinol could prove to be promising preservative agents for use in the food industry.

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**PALABRAS
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