B199 Antifungal sesquiterpene from the root of *Vernonia tweedieana*

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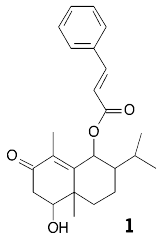
With the aim of searching new antifungal compounds, and etnopharmacological survey was carried out in Paraguay. Several species selected from an interview taken *in situ*, were screened in order to establish their antifungal activity against yeasts, dermatophytes and/or filamentous fungi (1). The dicloromethane extract from *Vernonia tweedieana* Baker root inhibited the growth of 2 of the 11 strains tested, in agar disk diffusion assay (1). The biossay-guided fractionation of the extract using an agar overlay bioautographic method allowed the isolation of the active compound.



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The dicloromethane extract was fractionated on MPLC Si60 eluted with a gradient of hexane: $-Cl_2CH_2-$MeOH (1:0:0 to 0:1:0 to 0:0:1). Fraction 4A was active against *Cryptococcus neoformans* CECT 1075, *Microsporum gypseum* CECT 2908 and *Trichophyton mentagrophytes* CECT 2795. The active compound (**1**) was isolated from fraction 4A by MPLC and CC on Si60, CC on Sephadex® LH-20 and HPLC on Nucleosil® 100 column.

The structure of **1** was elucidated by standard spectroscopic techniques (^{1}H-RMN, ^{13}C-RMN, DEPT, H,H-COSY, HSQC, HMBC, EI-MS, CI-MS and IR) and identified as 6-cinnamoyl-1-hydroxy-eudesm-4-en-3-one, a new antifungal compound only previously described in *Ambrosia artemisioides* (2). Its minimal inhibitory concentration (MIC) and minimal fungicidal concentration (MFC) against yeasts and dermatophytes were between 4-16 µg/ml.

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B200 Antiprotozoal activity and chemical investigation of traditionally used medicinal plants in the treatment of dysentery and diarrhoea in Mexico

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As a part of our effort to discover natural products with potential use as antiprotozoal agents, 25 Mexican medicinal plants were screened for their ability to inhibit the growth of trophozoites of *Entamoeba histolytica* and *Giardia lamblia* (1, 2). Accordingly, after the initial observation of the significant activity displayed by some species, *Rubus coriifolius* Focke (Rosaceae), *Teloxys graveolens* Willd (*Chenopodiaceae*), and *Lepidium virginicum* L. (*Cruciferae*) were selected for the activity-guided fractionation. The extract of the aerial parts of *Rubus coriifolius* gave (–)-epicatechin, (+)-catechin, nigaishigoside F1, hyperine, gallic acid, and ellagic acid while that of the aerial parts of *T. graveolens* afforded melilotoside, rutin, narcissin, pinocembrine, pinostrobin, and chrysine, and that from the roots of *L. virginicum* yielded glucotropaeolin and β-sitosterol. Epicatechin, melilotoside, and glucotropaeolin had the lowest IC_{50} values among the pure compounds at < 20.4 µg/ml for *E. histolytica* and at < 16.8 µg/ml toward *G. lamblia*. Epicatechin was the most potent inhibitor with IC_{50} values of 1.92 for *E. histolytica* and of 1.64 µg/ml against *G. lamblia*, its activity was comparable to emetin, but no exceeded that of metronidazole. The results of the present study lend some support to use of these species in traditional medicine for the treatment of dysentery.

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References: 1. Calzada, F. and Alanís, A.D. (1998) Phytother. Res. 12: 70-72. **2.** Calzada, F. and Meckes, M. (1998) Pharm. Biol. 36: 305-309.