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ANTIMICROBIAL CLERODANE DITERPENE FROM THE LEAVES OF *Echinodorus scaber* RATAJ.

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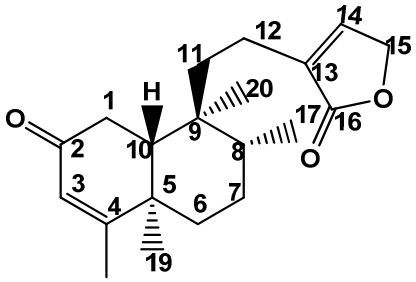
E. scaber Rataj. (Alismataceae) known as "chapéu de couro" is used in Brazilian folk medicine mainly as anti-inflammatory, antirheumatic and diuretic. Chemical studies reported the presence of clerodane and labdane diterpenes as well as flavonoids as the main constituents of this specie [1]. The scientific literature presents many reports about the pharmacological properties of *E. scaber* extracts/preparations[1]. Antimicrobial and antinflamatory properties have been previously reported to clerodane/abietane-like diterpenes [2]. The aim of this work is to carry out antimicrobial assays and to isolate and identify diterpenes from the leaves of *E. scaber*. The leaves (150.00g) were extracted with methanol (7x500mL) to afford the crude methanolic extract (**ESME;** 27.52g; 18.34 %). The **ESME** was suspended in MeOH/H_2O (1:1; 500 mL) solution and extracted with $CHCl_3$ (3x500 mL). The $CHCl_3$ fraction (2.0 g; 7,44%) was chromatographed in sílica gel 60 (70-230 mesh) column, affording 5 fractions (A-E). Fraction D (450 mg; 22.5 %) afforded an impure majoritary compound which was submitted to column chromatography on sephadex LH-S 20, yielding the clerodane diterpene **1** (350mg; 13.5%). The identification was carried out through ^{1}H and ^{13}C NMR analysis (uni and bidimensional) and the ^{1}H NMR data is in agreement with the literature [3]. The antimicrobial assays were performed employing the disc diffusion method (Bauer *et al.* 1966), with the following pathogens: *Escherichia coli* (ATCC 25928), *Staphylococcus aureus* (ATCC 25923), *Pseudomonas aeruginosa* and *Escherichia coli* ESBL+. Tetracycline (5 mg/mL) was used as a positive control, and pure MeOH was the negative control. The clerodane diterpene **1** was effective, inhibiting pathogens *E. coli* (*2* cm) and *S. aureus* (*3* cm) when assays were performed at a concentration of 20 ug/ml of **1**. *E. coli* and *P. aeruginosa* were multidrug-resistant, with zone of inhibition lower than those obtained with tetracycline (*1.5* cm). Therefore the compound **1** was considered active against the pathogens tested.



15-hydroxy-2-oxo-kolavenic-16-oic acid lactone (**1**).

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