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FIRST REPORT OF THE ISOLATION AND CHARACTERIZATION OF ENT-16α,17-DIHYDROXY-KAURAN-3-ONE FROM *EUPHORBIA TIRUCALLI* LEAVES (EUPHORBIACEAE)

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Euphorbia tirucalli is a species belonging to the Euphorbiaceae family, popularly known as aveloz[1]. It is a plant widely used in folk medicine to treat various diseases, due to its numerous reported medicinal properties[2]. To contribute to the phytochemistry from the genus *Euphorbia*, the present study aims to isolate and identify the chemical constituents from *E. tirucalli* leaves. The leaves of *E. tirucalli* were collected from the medicinal garden of the Eldorado campus of UNIFESP, followed by drying, grinding, and extraction until exhaustion with *n*-hexane and, subsequently, with methanol. The methanolic extract was subjected to a liquid-liquid partition procedure with *n*-hexane, DCM and EtOAc, to afford its respective partition phase fractions. The dichloromethane phase was fractionated on a silica gel column, with DCM/EtOAc, with an increasing polarity gradient, obtaining 18 fractions. Fractions ET-C8 to ET-C11 were combined and subjected to a new chromatographic fractionation with the same previous conditions, and at subfraction 21 was possible to observe a pure compound. The compound was analyzed by UHPLC-DAD-ESI-QTOF-HRMS/MS, ATR-FTIR, and NMR (^{1}H, ^{13}C, DEPT 135, HSQC and HMBC), to perform its complete chemical characterization. The MS spectra displayed ions with *m/z* 321.2418 $[M+H]^+$, 303.2316 $[M-H_2O+H]^+$ and 285.2218 $[M-2(H_2O)+H]^+$, corresponding to $C_{20}H_{32}O_3$ molecular formula. The ^{1}H and ^{13}C NMR spectra revealed signals corresponding to a kaurane diterpene derivative, evidenced by the characteristic signals at δ_H 2,46 (t, *J*= 14,8 Hz, H-2) and δ_H 3,51 (q, *J*= 10,7 Hz, H-16 e H-17), and at δ_C 79,80 (C-O; C-16), δ_C 70,00 (CH_2OH; C-16) and δ_C 218,3 (C=O). The presence of carbonyl was only confirmed in HMBC and at ATR-FTIR spectrum with an absorption band at 1700 cm^{-1}, characteristic of a ketone carbonyl group. After comparing the experimental data with the literature, it was possible to confirm the identification of the compound as *ent*-16α,17-dihydroxy-kauran-3-one, being the first time reported at *Euphorbia tirucalli*.

Keywords: *Euphorbia tirucalli, Kaurane diterpene, chemical characterization, chromatographic isolation*

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