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Phytochemical Study of Annoni – 2 Grass Leaves (*Eragrostis plana* Nees) – Plant with Allelopathic Potential

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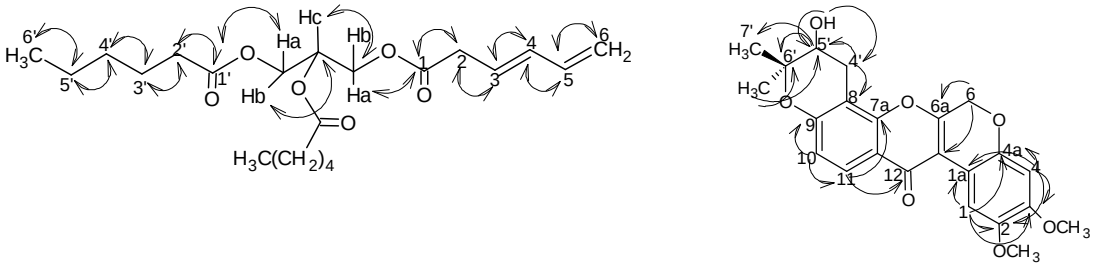
The Annoni-2 grass (*Eragrostis plana* Nees) is a Poaceae of South African origin with potential allelopathic effects as reported by previous studies [1]. This work consists of the fractionation and purification of the ethyl acetate extract of Annoni-2 grass leaves, collected in the summer, and identification of the isolated compounds assisted by spectrometric and spectroscopic methods: NMR ^{1}H and ^{13}C, HSQC and HMBC experiments and GC-MS.

The comparison with Carvalho, Oliveira and Werle (2000) allowed us to confirm in the compound **1**, a glyceride corresponding to the signals in: δ 5.25 (Hc; m), δ 4.29 (Ha; dd) and δ 4.14 (Hb; dd); this correlates to the carbons on the HSQC experiment: δ 69, δ 62.1, δ 62.1, respectively. The other signals observed for this sample are in accordance with signals reported in the study mentioned above. The mass spectrum showed intense signals at *m/z* 267, 169, 325 and 326.

In the compound **2**, it was possible to confirm the presence of a dehydrodeguelin skeleton due to signals in the ¹H NMR: δ 7.43 (H-1; s), δ 7.08 (H-4; s), δ 5.25 (H-6; m), δ 6.85 (H-10; d) and δ 7.95 (H-11; d) [3]. These correlate to the carbon signals on the HSQC experiment: δ 111, δ 103.5, δ 68.8, δ 115.3 and δ 128.9, respectively. In the same way, the other signals observed for compound **2** are in agreement with those reported in the work mentioned above. The mass spectrum of the compound **2** showed strong signals at *m/z* 193, 221 and 207. The presence of two classes of chemical compounds was observed in the leaves of Annoni-2 grass; a triacylglycerol and a rotenoid. The presence of rotenoids is of great importance because the same class of chemicals has been confirmed in other species [4] with herbicide activity, which may explain the allelopathic potential of *E. plana* Nees. Allelopathic tests with this pure substance is of great interest.



(A) (B)

Figure 1 - Isolated structures of the ethyl acetate extract of Annoni-2 grass leaves, collected in the summer, the arrows represent the correlations observed by HMBC experiment. (A) compound **1**, (B) compound **2**.

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