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GC-EIMS: a Fast Tool for the Identification of Organic Acid Derivatives from the Bulbs of *Autonoë madeirensis* (MENEZES) SPETA

C. Dias, A. Paulo and J. Nascimento

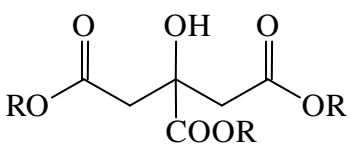
Centro de Estudos de Ciências Farmacêuticas (CECF), Faculty of Pharmacy, University of Lisbon, Av. Forças Armadas, 1649-003, Lisboa, Portugal.

Autonoë madeirensis (MENEZES) SPETA [1] (*Scilla maderensis* MENEZES) is a *Hyacinthaceae* endemic from the Madeira Archipelago (Portugal). Previous pharmacological studies indicated the presence of compounds with positive inotropic activity in extracts of this species [2]. Included in the systematic phytochemical study of the bulbs [3, 4], we decided to use Gas Chromatography-Mass Spectrometry for the identification of known and wide spread natural compounds such as organic and phenolic acid derivatives.

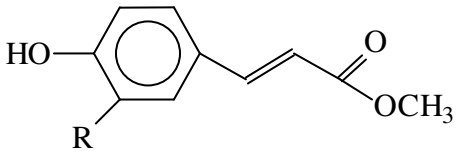
Fresh bulbs were sliced and extracted with ethanol, the residue dissolved in hot water and submitted to liquid-liquid partition with petroleum ether, ethyl acetate and n-butanol. The ethyl acetate fraction was then screened by GC-EIMS on a HP5 capillary column (30 m x 0.25 mm x 0.25 μm, He as carrier gas), with the temperature program: 150 ºC for 1 min, 150 ºC → 300 ºC at 5 ºC/min, 300 ºC for 5 min.

Based on retention times (t_R) and MS fragmentation patterns it was possible to undoubtedly identify organic acid derivatives such as ethyl, *iso*propyl and butyl esters of fatty acids, citric (**1**) triethyl and monoethyl esters, *p*-coumaric (**2**) and ferulic (**3**) methyl esters, among others.

These results reinforce our conviction that GC-EIMS is a fast, simple and accurate method for the identification of known natural compounds in non polar mixtures, saving time and money in the long and expensive process of isolation and structure identification of pure compounds.



1 R=H



2 R = H; **3** R = OCH_3

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3. Dias, C., Nascimento, J., Houghton, P. (1999) A new pyrimidine derivative from the bulbs of *Scilla maderensis*. Book of Abstracts 2000 Years of Natural Products Research - Past, Present and Future. Amsterdam, July 26-30.
4. Dias, C., Vasconcelos, P., Nascimento, J. (1999) Identification of fatty acids from the bulbs of *Scilla maderensis*. Book of Abstracts 2000 Years of Natural Products Research - Past, Present and Future. Amsterdam, July 26-30.