

# A New Heptasubstituted (*E*)-Aurone Glucoside and Other Aromatic Compounds of *Gomphrena agrestis* with Biological Activity

Eliane O. Ferreira<sup>a</sup>, Marcos J. Salvador<sup>b</sup>, Elizabeth M. F. Pral<sup>c</sup>, Silvia C. Alfieri<sup>c</sup>, Izabel Y. Ito<sup>d</sup>, and Diones A. Dias<sup>a,\*</sup>

<sup>a</sup> Departamento de Física e Química, Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Avenida do Café s/n, 14040-903, Universidade de São Paulo, Ribeirão Preto, SP, Brasil. Fax: +0051 66 33-2960. E-mail: elianeof@yahoo.com.br or diones@fcfrp.usp.br

<sup>b</sup> Departamento de Química, Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brasil

<sup>c</sup> Departamento de Parasitologia, Instituto de Ciências Biomédicas, Universidade de São Paulo, São Paulo, SP, Brasil

<sup>d</sup> Departamento de Análises Clínicas, Toxicológicas e Bromatológicas, Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, SP, Brasil

\* Author for correspondence and reprint requests

Z. Naturforsch. **59c**, 499–505 (2004); received February 11/April 7, 2004

A new aurone **1** and two known substances, aurantiamide acetate (**2**) and tiliroside (**3**), were isolated from the ethanolic extract of *Gomphrena agrestis*. The structural determination of **1** was based on spectroscopic and spectrometric data. The substance was defined as (*E*)-3'-*O*- $\beta$ -D-glucopyranosyl-4,5,6,4'-tetrahydroxy-7,2'-dimethoxyaurone. Biological activity of the ethanolic crude extract and isolated compounds against bacteria, fungi and *Leishmania amazonensis* amastigotes was evaluated. This appears to be the first report documenting aurone and aurantiamide compounds in the Amaranthaceae family. In the evaluation of biological activity the ethanolic extract of *G. agrestis* and compounds **1**, **2**, and **3** were shown to be active mainly against *Staphylococcus aureus*, *Staphylococcus epidermidis* and *Pseudomonas aeruginosa*.

*Key words:* *Gomphrena agrestis*, Aurone, Biological Activity