Identification of Ellagic Acid Derivatives in Methanolic Extracts from Qualea Species

Ana L. M. Nasser a,*, Camila B. A. Carlib, Clenilson M. Rodrigues a, Danielle C. G. Maia b, Iracilda Z. Carlos b, Marcos N. Eberlinc, Clélia A. Hiruma-Lima d, and Wagner Vilegas a

a UNESP – São Paulo State University, Instituto de Química de Araraquara, C. Postal 355, 14801-970, Araraquara, SP, Brazil. Fax: 55-16-3301-6692. E-mail: nasser@iq.unesp.br
b UNESP – São Paulo State University, Faculdade de Ciências Farmacêuticas, C. Postal 502, 14801-902, Araraquara, SP, Brazil
c UNICAMP – Campinas State University, Instituto de Química, 13083-970, Campinas, SP, Brazil
d UNESP – São Paulo State University, Departamento de Farmacologia, Instituto de Biociências, 18618-000, Botucatu, SP, Brazil

* Author for correspondence and reprint requests

Z. Naturforsch. 63c, 794–800 (2008); received February 28/May 16, 2008

The methanolic extract from the barks of the medicinal plant Qualea parviflora (Vochysiaceae) was fractionated by column chromatography over silica gel followed by gel permeation over Sephadex LH-20 to give 3,3\textsuperscript{1}\textsubscript{H}\textsuperscript{1032}-di-O-methylellagic acid-4-O-\(\beta\)-d-glucopyranoside (1), 3-O-methylellagic acid-4′-O-\(\alpha\)-l-rhamnopyranoside (2), 3,3′,4-tri-O-methylellagic acid-4′-O-\(\beta\)-d-glucopyranoside (3), and 3,3′-di-O-methylellagic acid (4), together with triterpenes and saponins. We also performed comparative analyses among this species and Q. grandiflora and Q. multiflora using high-pressure liquid chromatography. The biological assays showed that, when compared to the standard ellagic acid, compounds 1–4 are less cytotoxic but have a lower capacity of stimulating murine peritoneal macrophages to release nitric oxide and tumoural-\(\alpha\) necrose factor.

Key words: Qualea, Ellagic Acid Derivatives, Liquid Chromatography