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A RARE FLAVONOID FROM *Maydis stigma* WITH THE ABILITY TO INFLUENCE LIPID PEROXIDATION IN LIPOSOMES

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In our previous papers, we reported on the antioxidant effects of the herbal drug *Maydis stigma* (dried cut stigmata of maize, *Zea mays* L. ssp. *mays,* Poaceae) and in the silks of fifteen maize hybrids with economic importance in Serbia [1, 2]. Continuing our research efforts, we have investigated the MeOH extract of a commercial herbal drug *Maydis stigma* (Institute for Medicinal Plants Research "Dr. Josif Pancic", Belgrade, Serbia) in an attempt to isolate the compound presumably responsible for the observed *in vitro* ability to inhibit lipid peroxidation in liposomes (LP). In brief, powdered plant material (1.0 kg) was first defatted with *n*-hexane and $CHCl_3$ in a Soxhlet apparatus, then extracted in the same manner with MeOH at 50°C until exhausted. Dry MeOH extract (10 g) was fractionated by silicagel VLC using a $CHCl_3$ to $CHCl_3$–MeOH (50:50, v/v) gradient at a 10% rate. The influence of each fraction on LP was determined by the TBA test [3]. Fractions with similar composition (monitored by TLC) and LP inhibitory activity (those eluted with 10 % and 20 % MeOH in $CHCl_3$, in particular) were pooled together and subjected to polyamide CC with 70 % (v/v) aqueous MeOH as a solvent system. The effluents were combined again based upon the TLC pattern and, finally, subjected to Sephadex LH-20 gel filtration chromatography. The column (1 cm internal diameter, 15 cm length) was eluted sequentially with water and aqueous MeOH solutions, and compound **1** (27 mg) was isolated.

Compound **1** (bright yellow, amorphous solid). Positive ESI-MS (70 eV), *m/z* 593 $[M + H]^+$, 431 $[M – (Glc) + H]^+$. PMR (300 MHz, DMSO-d_6, δ, ppm, J/Hz): 1.05 (1H, d, H-6″), 1.24 (1H, br.d, J = 12.3, H-2′$_{eq}$), 2.87 (1H, ddd, J = 12.3, 12.3, 2, H-2′$_{ax}$), 3.20 (1H, m, H-4″), 3.20 (1H, m, H-4′), 3.30 (1H, m, H-3‴), 3.40 (1H, m, H-2‴), 3.50 (1H, m, H-5‴), 3.50 (1H, m, H-6‴a), 3.80 (1H, m, H-6‴b), 3.90 (1H, m, H-3″), 3.90 (1H, m, H-5″), 3.97 (3H, s, OCH_3), 4.82 (1H, d, J = 7.3, H-1″), 5.30 (1H, dd, J = 12.3, 2, H-1″), 6.97 (1H, s, H-3), 7.00 (1H, dd, H-5′), 7.00 (1H, s, H-8), 7.52 (1H, d, H-2′), 7.58 (1H, dd, H-6′). ^{13}C NMR (75 MHz, DMSO-d_6, δ, ppm): 17.1 (q, C-6″), 30.4 (t, C-2″), 60.8 (t, C-6‴a), 64.7 (d, C-1″), 67.2 (d, C-3″), 69.2 (d, C-4″), 70.0 (d, C-4‴), 70.0 (d, C-5″), 73.7 (d, C-2‴), 75.2 (d, C-3‴), 77.4 (d, C-5‴), 95.1 (s, C-8), 102.2 (d, C-1‴), 103.5 (d, C-3), 105.1 (s, C-4a), 110.2 (d, C-2′), 113.0 (s, C-6), 115.8 (d, C-5′), 120.4 (d, C-6′), 121.2 (s, C-1′), 148.0 (s, C-3′), 150.9 (s, C-4′), 156.2 (s, C-8a), 157.8 (s, C-5), 163.1 (s, C-7), 164.0 (s, C-2), 182.2 (s, C-4). The spectral data presented are in a good agreement with published data on chrysoeriol 6-C-*β*-boivinopyranosyl-7-*O*-*β*-glucopyranoside [4].

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