

Molecules **2000**, *5*, M181

A New Xanthone from *Swertia decora*

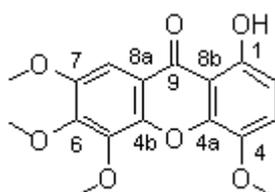
Huai Xiao^a, Zenai Chen^a, Guangming Liu^b, Jinfu Qian^b and Yang Lu^{*a}

^a Department of Chemistry, Shanghai Second Medical University, Shanghai 200025, People's Republic of China. Tel. +86 21 63846590-464, Fax. +86 21 63842916, E-mail: huaxue@shsmu.edu.cn

^b Department of Pharmacy, Dali Medical College, Dali, Yunnan Province-671000, People's Republic of China. Tel. +86 872 2127721, Fax. +86 872 2187801, E-mail: JFQian@public.km.yn.cn

* Author to whom correspondence should be addressed.

Received: 29 August 2000 / Accepted: 19 October 2000 / Published: 25 December 2000



Members of genus *Swertia* (Gentianaceae) have been the source of many active xanthones.^[1] In this note, we report a new xanthone named swertidecoraxanthone-I isolated from *Swertia decora* Franch. It was identified as 1-hydroxy-4,5,6,7-tetramethoxy-9*H*-xanthen-9-one by UV, ¹H NMR, ¹³C NMR, MS, HMQC, HMBC and NOESY.

The air-dried, whole parts of *S. decora* (6.8 kg), collected in the northwestern area of Yunnan Province (China) during the later flowering season in Autumn 1998, were powdered and exhaustively extracted with 90% EtOH three times (each 24 hours) at room temperature. The combined extracts were concentrated under reduced pressure until only H₂O remained. The residue then was successively extracted with gasoline, CHCl₃, EtOAc and *n*-BuOH to yield four corresponding fractions. The CHCl₃ extract (28.5 g) was subjected to a silica gel column and eluted with a gradient of CHCl₃-Et₂O, collecting 12 fractions of 100 ml each. The fractions of 1-4 were combined according to TLC examination and chromatographed repeatedly over silica gel on elution with petroleum ether-CHCl₃-Et₂O, collecting 12 fractions. 6 parts were combined according to TLC to afford swertidecoraxanthone-I (300 mg) as a yellowish orange rectangular lumps.

Mp: 163-165°C.

¹H NMR (400 MHz, CDCl₃): 12.534 (1H, s, 1-OH), 7.184 (1H, d, J = 8.9 Hz, 3-H), 6.689 (1H, d, J = 8.9 Hz, 2-H), 6.834 (1H, s, 8-H), 3.951 (3H, s, 4-OMe), 4.033 (3H, s, 5-OMe), 3.917 (3H, s, 6-OMe), 3.984 (3H, s, 7-OMe).

¹³C NMR (100 MHz, CDCl₃): 154.902 (C1), 108.915 (C2), 119.303 (C3), 139.382 (C4), 153.398 (C5), 139.884 (C6), 159.657 (C7), 96.354 (C8), 181.221 (C9), 144.947 (C4a), 154.515 (C4b), 109.407 (C8a), 109.451 (C8b), 57.346 (4-OMe), 62.093 (5-OMe), 61.510 (6-OMe), 56.506 (7-OMe).

IR (cm⁻¹, KBr): 3425.0(br), 2941.0, 1650.8, 1602.6, 1479.2, 1427.1, 1328.7, 1282.5, 1236.2, 1101.2, 972.0, 815.8.

UV (CH₃OH): 209.8, 236.4, 255.8 (sh), 280.4, 302.4 (sh), 381.6.

EI-MS: 333 (13.50), 332 ($[M^+]$, 61.79), 318 (20.42), 317 (100.00), 302 (17.77), 299 (17.31), 287 (16.67), 259 (12.64).

Acknowledgement: This work is supported by Shanghai Municipal Educational Committee (grants S970204).

Reference

1. Xiao H.; Lu Y.; Chen Z. N.; Qian J. F. Advances in Chemical and Pharmacological Studies on Medicinal Plants of *Swertia*. *Chinese Traditional and Herbal Drugs*. **1999**, 30 (suppl.), 36-39.

Sample availability : Available from the authors and MDPI.

© 2000 MDPI. All rights reserved. *Molecules* website www.mdpi.org/molecules/