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CHEMICAL CONSTITUENTS FROM THE TWIGS OF *Cinnamomum macrostemon*

Woei-Ling Yang,[1] Ya-Chun Guo,[2] Hsin-Hsiu Lin,[2] Huei-Chun Hong,[3] and Chung-Yi Chen[4]*

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Cinnamomum macrostemon Hayata is a medium-sized evergreen tree endemic to Taiwan and distributed at medium altitudes throughout the Island [1]. In the course of screening for biologically and chemically novel agents from Formosan lauraceous plants [2–8], *C. macrostemon* Hayata was chosen for further phytochemical investigation. Its branchlets appear to be erect, slender, and glabrous, and it buds with 9 imbricate scales, scales with brown hairs in winter. Leaves appear to be chartaceous, somewhat polished above, dull beneath, ovate-lanceolate to oblong-lanceolate, 10–15 cm long, 3–4 cm wide, acuminate to obtuse apex, acute or suddenly acute at base, with 3 main veins, nerves finely prominent on both sides, not fragrant when crushed; petioles appear to be 1 cm long and are widely furrowed above [1]. This is also being studied and published for the first time. The MeOH extract of its twigs was subjected to solvent partitioning and chromatographic separation to afford 11 pure substances. All of these compounds were found for the first time from this plant.

The twigs of *Cinnamomum macrostemon* Hayata were collected from Pinglin Hsiang, Taipei County, Taiwan, November 2009. Plant material was identified by Dr. Fu-Yuan Lu (Department of Forestry and Natural Resources, College of Agriculture, National Chiayi University). A voucher specimen (Cinnamo. 9) was deposited in the School of Medical and Health Sciences, Fooyin University, Kaohsiung County, Taiwan. The air-dried twigs of *C. macrostemon* (1.7 kg) were extracted with MeOH (50 L × 5) at room temperature, and a MeOH extract (125.8 g) was obtained upon concentration under reduced pressure. The residue was placed on a silica gel column and eluted with $CHCl_3$ gradually enriched with MeOH to afford four fractions. Fraction 1 (5.34 g) eluted with *n*-hexane–acetone (20:1) was further purified by silica gel column chromatography using the same solvent system to obtain stearic acid (**1**) [9] (3 mg), palmitic acid (**2**) [9] (3 mg), coumarin (**3**) [10] (12 mg), *trans*-cinnamaldehyde (**4**) [11] (6 mg), and cinnamyl alcohol (**5**) [11] (8 mg). Fraction 2 (6.25 g) eluted with *n*-hexane–acetone (10:1) was further separated using silica gel column chromatography and purified by preparative TLC (thin layer chromatography) to yield β-sitostenone (**6**) [12] (3 mg), eugenol (**7**) [13] (4 mg), cinnamic acid (**8**) [9] (4 mg), and ficaprenol-11 (**9**) [13] (5 mg). Fraction 3 (4.42 g) was purified by silica gel chromatography (CH_2Cl_2–MeOH, 15:1) to give β-sitosterol (**10**) [10] (3 mg) and (+)-syringaresinol (**11**) [5] (7 mg).

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1) School of Pharmacy, College of Pharmacy, Kaohsiung Medical University, Kaohsiung 807, Taiwan; 2) Department of Applied Chemistry and Materials Science, Fooyin University, Ta-Liao, Kaohuing 831, Taiwan; 3) The Department of Biotechnology, Fooyin University, Ta-Liao, Kaohuing 831, Taiwan; 4) School of Medical and Heath Science, Fooyin University, Ta-Liao, Kaohuing 831, Taiwan, R. O. C., fax: +886 7 7863667, e-mail: xx377@mail.fy.edu.tw. Published in Khimiya Prirodnykh Soedinenii, No. 6, p. 894, November–December 2011. Original article submitted August 19, 2010.

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