# ent-pimarane-type diterpenoids from Siegesbeckia orientalis L.

Giang P.M., Son P.T., Otsuka H.

Faculty of Chemistry, College of Natural Science, Vietnam National University, 19 Le Thanh Tong, Hanoi, Viet Nam; Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8551, Japan

Abstract: A new ent-pimarane glucoside, named hythiemoside B (4), was isolated from the aerial part of Siegesbecikia orientate L. (Asteraceae) together with four known ent-pimarane-type diterpenoids: darutigenol (1), darutoside (2), hythiemoside A (3), and ent-(15R),16,19-trihydroxypimar-8(14)-ene 19-O-?-D-glucopyranoside (5). The structure of the new compound was elucidated by spectroscopic analyses and chemical transformation. The NMR data of compounds 1 ($^{1}$H-) and 5 ($^{1}$H- and $^{13}$C-) were also compiled in this study on the basis of 2D experiments. ?? 2005 Pharmaceutical Society of Japan.

Author Keywords: Asteraceae; Diterpenoid; Ent-pimarane; Hythiemoside; Siegesbeckia orientalis

Index Keywords: 15,16,19 trihydroxypimar 8(14) ene 19 o beta glucopyranoside; 16 acetoxypimar 8(14) ene 3beta diol; 3 o beta dextro glucoside; caffeic acid; darutigenol; darutoside; diterpenoid; geranylnerol derivative; germacranolide derivative; hythiemoside A; hythiemoside B; melampolide; pimarane; rutoside; sitosterol; stigmasterol; thiazolidine derivative; unclassified drug; abietane derivative; diterpene; arthritis; article; Asteraceae; carbon nuclear magnetic resonance; drug isolation; drug structure; furunculosis; hydrolysis; impetigo; menstruation disorder; nonhuman; proton nuclear magnetic resonance; rheumatic disease; siegesbeckia orientalis; stereochemistry; thin layer chromatography; traditional medicine; Viet Nam; chemistry; fast atom bombardment mass spectrometry; high performance liquid chromatography; infrared spectroscopy; isolation and purification; nuclear magnetic resonance spectroscopy; Asteraceae; Chromatography, High Pressure Liquid; Chromatography, Thin Layer; Diterpenes; Diterpenes, Abietane; Hydrolysis; Magnetic Resonance Spectroscopy; Spectrometry, Mass, Fast Atom Bombardment; Spectroscopy, Fourier Transform Infrared; Vietnam

Year: 2005

Source title: Chemical and Pharmaceutical Bulletin

Volume: 53

Issue: 2

Page : 232-234

Cited by: 3

Link: Scorpus Link

Chemicals/CAS: caffeic acid, 27323-69-9, 331-39-5; rutoside, 153-18-4, 22519-99-9; sitosterol, 19044-06-5, 83-46-5; stigmasterol, 83-48-7; Diterpenes; Diterpenes, Abietane; hythiemoside B; pimarane

Correspondence Address: Otsuka, H.; Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8551, Japan; email: hotsuka@hiroshima-u.ac.jp

ISSN: 92363

CODEN: CPBTA
DOI: 10.1248/cpb.53.232
PubMed ID: 15684525
Language of Original Document: English
Abbreviated Source Title: Chemical and Pharmaceutical Bulletin
Document Type: Article
Source: Scopus
Authors with affiliations:

1. Giang, P.M., Faculty of Chemistry, College of Natural Science, Vietnam National University, 19 Le Thanh Tong, Hanoi, Viet Nam, Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8551, Japan
2. Son, P.T., Faculty of Chemistry, College of Natural Science, Vietnam National University, 19 Le Thanh Tong, Hanoi, Viet Nam
3. Otsuka, H., Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8551, Japan

References:

1. Do, T.L., (1991) Dictionary of Vietnamese Medicinal Plants, pp. 555-556. , Science and Technology, Hanoi
2. (1999) Selected Medicinal Plants in Vietnam, pp. 277-282. , ed. by Le V. T., Science and Technology, Hanoi
3. Barua, R.N., Sharma, R.P., Madhusudanan, K.P., Thyagarajan, G., Werner, H., Ramaswamy, M., (1979) Phytochemistry, 18, pp. 991-994
4. Barua, R.N., Sharma, R.P., Thyagarajan, G., Werner, H., Serengolam, V.G., (1980) Phytochemistry, 19, pp. 323-325
5. Zdero, C., Bohlmann, F., King, R.M., Robinson, H., (1991) Phytochemistry, 30, pp. 1579-1584
6. Phan, T.S., Le, K.N., Phan, M.G., Nguyen, V.D., (2002) Journal of Vietnam Pharmaceutical Society, 7, pp. 11-13
7. Phan, T.S., Phan, M.G., Sattler, I., Gr??fe, U., Natural Products Research, , in press
8. Xiong, J., Jin, Q.D., Xu, Y.L., (2001) Chinese Chemical Letters, 12, pp. 51-54
9. Miyaichi, Y., Tomimori, T., (1995) Natural Medicines, 49, pp. 82-86
10. Kim, J.H., Han, K.D., Yamasaki, K., Tanaka, O., (1979) Phytochemistry, 18, pp. 894-895