

# New diarylheptanoids from *Alpinia pinnanensis*

Giang P.M., Son P.T., Matsunami K., 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:** Three new diarylheptanoids, called alpinnanins A-C (1-3), together with two known chalcones, 2',4'-dihydroxy-6'-methoxychalcone and 4',6'-dimethylchalconaringenin, two known flavanones, alpinetin and naringenin 5-O-methyl ether, a known diarylheptanoid, (3S,5S)-trans-3,5-dihydroxy-1,7-diphenyl-1-heptene, stigmasterol and  $\beta$ -sitosterol as a mixture, and  $\beta$ -sitosterol 3-O- $\beta$ -D-glucopyranoside were isolated from the rhizomes of *Alpinia pinnanensis* T. L. WU et SENJEN (Zingiberaceae). Their structures were elucidated by spectroscopic analyses. © 2005 Pharmaceutical Society of Japan.

**Author Keywords:** *Alpinia pinnanensis*; Alpinnanin; Diarylheptanoid; Zingiberaceae

**Index Keywords:** 2',4' dihydroxy 6' methoxychalcone; 3,5 dihydroxy 1,7 diphenyl 1 heptene; 4',6' dimethylchalconaringenin; alpinetin; alpinnanin a; alpinnanin b; alpinnanin c; beta sitosterol 3 o beta dextro glucopyranoside; chalcone derivative; flavanone derivative; heptane derivative; naringenin 5 o methyl ether; pyranoside; sitosterol; stigmasterol; unclassified drug; *Alpinia*; *Alpinia pinnanensis*; article; chemical structure; controlled study; nonhuman; phytochemistry; rhizome; structure analysis; *Alpinia*; Carbon Isotopes; Diarylheptanoids; Magnetic Resonance Spectroscopy; Molecular Structure; Protons; Reference Standards; Stereoisomerism

Year: 2005

Source title: Chemical and Pharmaceutical Bulletin

Volume: 53

Issue: 10

Page : 1335-1337

Cited by: 4

Link: [Scopus Link](#)

Chemicals/CAS: sitosterol, 19044-06-5, 83-46-5; stigmasterol, 83-48-7; alpinnanin A; alpinnanin B; alpinnanin C; Carbon Isotopes; Diarylheptanoids; Protons

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](mailto:hotsuka@hiroshima-u.ac.jp)

ISSN: 92363

CODEN: CPBTA

DOI: 10.1248/cpb.53.1335

PubMed ID: 16204997

Language of Original Document: English

Abbreviated Source Title: Chemical and Pharmaceutical Bulletin

Document Type: Article

Source: Scopus

Authors with affiliations:

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

References:

- Phan, M.G., Phan, T.S., Lee, J.J., Otsuka, H., (2004) *Chem. Pharm. Bull.*, 52, pp. 879-882
- Phan, M.G., Phan, T.S., Otsuka, H., (2005) *Chem. Pharm. Bull.*, 53, pp. 232-234
- Nguyen, Q.B., (2001) *Selection of Research Works on Ecology and Biological Resources (1996-2000)*, pp. 36-38. , Agriculture, Hanoi
- Wollenweber, E., Jay, M., Favre-Bonvin, J., (1974) *Phytochemistry*, 13, pp. 2618-2619
- Harborne, J.B., Mabry, T.J., (1982) *The Flavonoids: Advances in Research*, , Chapman and Hall, London
- Stevens, J.F., Taylor, A.W., Nickerson, G.B., Ivancic, M., Henning, J., Haunold, A., Deinzer, M.L., (2000) *Phytochemistry*, 53, pp. 759-775
- Itokawa, H., Morita, M., Mihashi, S., (1981) *Phytochemistry*, 20, pp. 2503-2506
- Kuroyanagi, M., Noro, T., Fukushima, S., Aiyama, R., Ikuta, A., Itokawa, H., Morita, M., (1983) *Chem. Pharm. Bull.*, 31, pp. 1544-1550
- Brooks, C.J.W., (1970) "*Rodd's Chemistry of Carbon Compounds*," 2nd Ed., 2 D. , Elsevier, Amsterdam
- Prasain, J.K., Tezuka, Y., Li, J.X., Tanaka, K., Basnet, P., Dong, H., Namba, T., Kadota, S., (1997) *Tetrahedron*, 53, pp. 7833-7842
- Prasain, J.K., Li, J.X., Tezuka, Y., Tanaka, K., Basnet, P., Dong, H., Namba, T., Kadota, S., (1998) *J. Nat. Prod.*, 61, pp. 212-216
- Tezuka, Y., Gewali, M.B., Ali, M.S., Banskota, A.H., Kadota, S., (2001) *J. Nat. Prod.*, 64, pp. 208-213