

New neolignans and lignans from Vietnamese medicinal plant *Machilus odoratissima* NEES

Phan M.G., Phan T.S., Matsunami K., Otsuka H.

Faculty of Chemistry, College of Natural Science, Vietnam National University, 19 Le Thanh Tong Street, Hanoi, Viet Nam; Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8553, Japan

Abstract: Four new natural neolignans and lignans, which were given the trivial names odoratisols A-D (1-4), together with (-)-licarin A, kachirachirol B, obovatifol, and machilin-I were isolated from the air-dried bark of the Vietnamese medicinal plant *Machilus odoratissima* NEES (Lauraceae). Their absolute structures were determined on the basis of spectroscopic analyses including circular dichroism spectra. ?? 2006 Pharmaceutical Society of Japan.

Author Keywords: Absolute structure; Lauraceae; Lignan; *Machilus odoratissima*; Neolignan; Odoratisol

Index Keywords: austrobailignan 7; futokadsurin b; kachirachirol b; licarin a; lignan derivative; machilin i; neolignan; obovatifol; odoratisol; plant extract; unclassified drug; verrucosin; angiosperm; article; circular dichroism; drug design; drug structure; drug synthesis; *Machilus odoratissima*; medicinal plant; proton nuclear magnetic resonance; spectroscopy; Chromatography, Thin Layer; Circular Dichroism; Lauraceae; Lignans; Magnetic Resonance Spectroscopy; Molecular Conformation; Plant Bark; Spectrometry, Mass, Fast Atom Bombardment; Spectrophotometry, Infrared; Vietnam

Year: 2006

Source title: Chemical and Pharmaceutical Bulletin

Volume: 54

Issue: 3

Page : 380-383

Cited by: 2

Link: Scopus Link

Chemicals/CAS: Lignans

Correspondence Address: Otsuka, H.; Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8553, Japan; email: hotsuka@hiroshima-u.ac.jp

ISSN: 92363

CODEN: CPBTA

DOI: 10.1248/cpb.54.380

PubMed ID: 16508197

Language of Original Document: English

Abbreviated Source Title: Chemical and Pharmaceutical Bulletin

Document Type: Article

Source: Scopus

Authors with affiliations:

1. Phan, M.G., Faculty of Chemistry, College of Natural Science, Vietnam National University, 19 Le Thanh Tong Street, Hanoi, Viet Nam, Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8553, Japan
2. Phan, T.S., Faculty of Chemistry, College of Natural Science, Vietnam National University, 19 Le Thanh Tong Street, Hanoi, Viet Nam
3. Matsunami, K., Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8553, Japan
4. Otsuka, H., Graduate School of Biomedical Sciences, Hiroshima University, 1-2-3 Kasumi, Minami-ku, Hiroshima 734-8553, Japan

References:

1. Pham, H.H., (1991) Illustrated Flora of Vietnam, 1 (1), pp. 488-492. , Published by the Author, Montreal
2. Le, K.K., (1971) Common Flora of Vietnam, 2, pp. 265-266. , Science and Technique, Hanoi
3. Do, T.L., (1995) Medicinal Plants and Remedies of Vietnam, pp. 666-668. , Science and Technique, Hanoi
4. Nguyen, D.M., (1995) Anti-infective Drugs from Plants of Vietnam, pp. 105-109. , Medicine, Ho Chi Minh city
5. Aiba, C.J., Campos Corr?a, R.G., Gottlieb, O.R., (1973) Phytochemistry, 12, pp. 1163-1164
6. Nascimento, I.R., Lopes, L.M.X., Davin, L.B., Lewis, N.G., (2000) Tetrahedron, 56, pp. 9181-9193
7. Ito, K., Ichino, K., Iida, J., Lai, J., (1984) Phytochemistry, 23, pp. 2643-2645
8. Tsai, I.L., Hsieh, C.F., Duh, C.Y., (1998) Phytochemistry, 48, pp. 1371-1375
9. Shimomura, H., Sashida, Y., Oohara, M., (1988) Phytochemistry, 27, pp. 634-636
10. Benevides, P.J.C., Sartorelli, P., Kato, M.J., (1999) Phytochemistry, 52, pp. 339-343
11. Nascimento, I.R., Lopes, L.M.X., (1999) Phytochemistry, 52, pp. 345-350
12. Forrest, J.E., Heacock, R.A., Forrest, T.P., (1974) J. Chem. Soc. Perkin Trans. I, 1974, pp. 205-209
13. Shimomura, H., Sashida, Y., Oohara, M., (1987) Phytochemistry, 26, pp. 1513-1515
14. Matsuda, N., Kikuchi, M., (1996) Chem. Pharm. Bull., 44, pp. 1676-1679
15. Hattori, M., Hada, S., Kawata, Y., Tezuka, Y., Kikuchi, T., Namba, T., (1987) Chem. Pharm. Bull., 35, pp. 3315-3322
16. Kraft, C., Jenett-Siems, K., K??hler, I., Tofern-Reblin, B., Siems, K., Bienzle, U., Eich, E., (2002) Phytochemistry, 60, pp. 167-173
17. Urz?a, A., Freyer, A.J., Shamma, M., (1987) Phytochemistry, 26, pp. 1509-1511
18. Konishi, T., Konoshima, T., Daikonya, A., Kitanaka, S., (2005) Chem. Pharm. Bull., 53, pp. 121-124
19. Hada, S., Hattori, M., Tezuka, Y., Kikuchi, T., Namba, T., (1988) Phytochemistry, 27, pp. 563-568