

*Aster scaber* Thunb. (Asteraceae) is widespread and cultivated as culinary vegetables in Korea. *Aster* species have been used in traditional Chinese medicine to treat bruises, snakebite, headache and dizziness.<sup>1)</sup> Recently, triterpene glycosides and volatile compounds have been reported from *Aster scaber*.<sup>2, 3)</sup> In our previous study on the aerial part of this plant, we reported four antiviral quinic acid derivatives and two new monoterpene hydroperoxides.<sup>4, 5)</sup> In the course of our search for the topoisomerase I inhibitor from Korean traditional medicine, three cerebrosides and four triterpene glycosides were isolated from the root of *Aster scaber*. In this poster, the structure of isolated compounds are to be discussed.

1) Kim, C. M., Sin, M.K., An, T. K., Lee, K. S. (ed.), Dictionary of Chinese Herb. JungDam publisher, Seoul, 1997, p.1431.

2) Nagao, T., Tanaka, R., Iwase, Y., Okabe, H., *Chem. Pharm. Bull.*, 41, 659-665 (1993).

3) Chung, T. Y., Eiserich, J. P., Shibamoto, T., *J. Agric. Food Chem.*, 41, 1693-1697 (1993).

4) Kwon, H.C., Jung, C.M., Shin, C.G., Lee, J.K., Choi, S. U., Kim, S.Y., Lee, K. R., *Chem. Pharm. Bull.*, 48, 1796-1798 (2000)

5) Jung, C.M., Kwon, H.C., K.R.Lee, *Planta Medica*, 67, 482-484 (2001)

[PD2-17] [ 04/19/2002 (Fri) 10:00 - 13:00 / Hall E ]

### Cytotoxic Saponins from the Starfish *Certanardoa Semiregularis*

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In our search for cytotoxic metabolites from the starfish *Certanardoa Semiregularis*, we have isolated ten new glycosides of polyhydroxysterols designated as certonardoside A-J and the known halityloside D from the brine shrimp active fraction of the methanolic extract. The structures were determined based on spectral analysis and chemical manipulation. Certonardoside A-E contained previously undescribed 2-O-methyl- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)-3-O-sulfonato- $\beta$ -D-xylopyranosyl unit. The 2,4-di-O-methyl- $\beta$ -D-xylopyranosyl-(1 $\rightarrow$ 2)- $\beta$ -D-xylofuranosyl unit in certonardoside F-H were also unprecedented.

[PD2-18] [ 04/19/2002 (Fri) 10:00 - 13:00 / Hall E ]

### Lactonic Compounds from the Leaves of *Litsea japonica* and Their Anti-complement Activity

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Three new lactonic compounds, litsenolides KR1-3 (1-3), were isolated from a hexane-soluble fraction of the leaves of *Litsea japonica* (Lauraceae), together with three known hamabiwalactone A (4), hamabiwalactone B (5), and ( $\pm$ )-litsenolide B (6). The structures of new lactones were determined as 5-methyl-3-(1,15,17-octadecadienyldene)-2(5H)-furanone (1), and 5-methyl-3-(1,11-teradecadienyl)-2(5H)-furanone (2), dihydro-4-hydroxy-5-methyl-3-(1-dodecane-11-ynyl)-2(3H)-furanone (3), respectively, by chemical and spectroscopic means. The stereochemistry of a hydroxyl group at C-5 in litsenolide KR3 (3) was determined by a modification of Mosher's method.

As anti-complement activity of lactones isolated from *L. japonica*, litsenolide KR1 (1), litsenolide KR2 (2), hamabiwalactone A (4), and hamabiwalactone B (5) showed inhibitory activity against classical pathway complement system with 50% inhibitory concentrations (IC<sub>50</sub>) values of 17, 227, 186, and 37  $\mu$ g/ml, respectively, while litsenolide K3 (3) and ( $\pm$ )-litsenolide B (6) were inactive.