

exhibited potent inhibitory activities against the proliferation of bovine aorta endothelial cells (BAECs). Bioassay-guided fractionation of the extracts led to the isolation of six anti-angiogenic compounds (1-6), 5,7-dihydroxy-1-methyl-6-oxo-6H-anthra[1,9-bc]thiophene (1), 5,7-dihydroxy-1-methoxycarbonyl-6-oxo-6H-anthra[1,9-bc]thiophene(2), and 1,8-dihydroxyanthraquinone (3) from the bryozoan *D. subovoidea*, 1,3-dimethylisoguaninium (4) from the sponge *A. paraviridis*, and 5'-deoxytoyocamycin (5) from the sponge *C. chucalla*. The structure elucidation of compound (6) from the sponge *C. chucalla* is in progress. Compounds (1-6)selectively inhibited bFGF-induced mitogenesis of BAECs. Among these compounds, new compounds 1 and 4 showed more selective inhibition of BAECs mitogenesis than the other compounds in a dose-dependent manner.

[PD2-9] [ 10/19/2001 (Fri) 14:00 ~ 17:00 / Hall D ]

### Identification and Analysis of the Constituents in the Fruits of *Acanthopanax sessiliflorum* by HPLC and LC-MS

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In a previous study, as part of elucidation of the usefulness of the fruits of *A. sessiliflorum* for health foods as well as for naturally occurring drugs, we isolated and characterized various active principles from this plant parts. In this study, we could also identify active principles such as eleutheroside E, B and chiisanoside by HPLC and LC-MS system permitting the identification of the presence from this plant parts. All separations were performed by reverse phase HPLC [water : acetonitrile = 9:1→5:5 (gradient elution), flow rate and detection wavelength at ambient temperature to 1.0 ml/min and 210 nm]. Four micro liters of the n-butanol fraction diluted with methanol was injected and peaks were assigned by spiking the samples with standard compounds, and comparison of retention times. The calibration curves for chiisanoside was linear from 0.2 to 2.6 µg/ml. The regression equation for chiisanoside were  $Y=149282.7X-3519.8$  ( $R^2=0.9982$ ). Our system was successfully applied for the LC-MS analysis of the butanol fraction. The chiisanoside was readily assigned in sample with its molecular ions and fragment peaks at 955 [M+H]<sup>+</sup> and 485 [M-(Glc-Glc-Rha)+H]<sup>+</sup> if detection was performed in positive ESI mode. In conclusion, the method presented in this report facilitates the analysis of chiisanoside, eleutheroside E and B in the fruits of *A. sessiliflorum* significantly by HPLC within 30 min..

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### Bromotyrosines and Related Compounds from a Two-Sponge Association

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Although bromotyrosines are considered as the chemotaxonomic marker of the sponges of the order Verongida, they have recently been isolated from the sponges of other orders. In our search for cytotoxic metabolites from an association of two non-Verongid sponges, *Jaspis* sp. and *Poecillastra wondoensis*, we have isolated a number of bromotyrosines and related compounds. Their structures have been established on the basis of spectroscopic data.

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