

[Biochem. Syst. and Ecol., 22, 621-629 (1994)]

[Lab. of Pharmacognosy]

Phylogenetic Analysis in Genus *Euchresta* Based on Secondary Metabolites.

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Two different phylogenetic relationships among *Euchresta* species have been proposed on the basis of general morphology. To confirm the relationships, we applied a cladistic analysis based on the secondary metabolites in the genus. Our accumulated data on the structures of prenylflavonoid compounds in the stems and the roots of all *Euchresta* species revealed the presence of presumed enzyme which contribute to their formation. The enzyme were used as characters in the phylogenetic analysis of *Euchresta* plants and a relative, *Sophora tonkinensis*. The cladistic analysis and the results of relative ratios of O- or C-apigenin glycosides in the leaves led us to propose new evolutionaly trends in *Euchresta*.

[Chem. Pharm. Bull., 42, 2117-2120 (1994)]

[Lab. of Pharmacognosy]

Two Novel Resberatrol Trimer, Leachianols A and B, from *Sophora leachiana*.

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Two novel resveratrol trimers, named leachianols A and B, were isolated from the roots of *Sophora leachiana*. Their structures were determined by spectroscopy using correlation spectroscopy involving long range coupling and nuclear Overhauser effect experiments. The resveratrol trimers, which are formed by characteristic oligomerization via a pallidol, are the first naturally occuring oligostilbenes to be reported.

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[Lab. of Pharmacognosy]

Structures of New and Known Cyanoglucosides from a North American Plant, *Purshia tridentata* DC.

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A new cyanoglucoside, purshianin, was isolated together with a known cynoglucoside, menisdaurin from stems of *Pursia tridentata* (Rosaceae) collected in Oregon, U.S.A. and these structures were established based on chemical and spectral evidence. Notably, the absolute structure of new glucoside was dicided based on combined sudies of difference NOE spectra and Dreiding model inspection.