

[Chem. Pharm. Bull., 40, 2193-2195 (1992)]

[Lab. of Pharmacognosy]

**Chlorine-Containing neo-Clerodane Diterpene from *Teucrium pernyi*.**NING XIE, ZHI-DA MIN, SHOU-XUN ZHAO, YANG LU, QI-TAI ZHENG,  
CHUNSHU WANG, MIZUO MIZUNO, MUNEKAZU IINUMA\*, TOSHIYUKI TANAKA

A novel chlorine-containing neo-clerodane diterpene, teupernin D, and two known compounds, teucvidin and teufflin, were isolated from the whole parts of *Teucrium pernyi*. The structure of teupernin D was characterized as (12*S*)-15,16-epoxy-8 $\beta$ -hydroxy-17-chloro-19-nor-10*a*-neo cleroda-4,13,14-triene-18,6 $\beta$ :20,12-diolide on the basis of spectral evidence. The absolute configuration was established by the CD spectrum and confirmed by X-ray crystallographic analysis.

[Chem. Pharm. Bull., 40, 2749-2752 (1992)]

[Lab. of Pharmacognosy]

**Phenolic Constituents in *Erithrina*  $\times$  *bidwilli* and Their Activity against Oral Microbial Organisms.**MUNEKAZU IINUMA\*, TOSHIYUKI TANAKA, MIZUO MIZUNO, HIROBUMI YAMAMOTO,  
YASUKO KOBAYASHI, SHIGETOMO YONEMORI

Five flavonoid compounds, including two new isoflavanones, were isolated from the root bark of *Erithrina*  $\times$  *bidwilli*. Their structures were determined to be erythrabyssin II, 6,8-di ( $\gamma,\gamma$ -dimethylallyl)-7,2',4'-trihydroxyisoflavanone (bidwillon A), 8- $\gamma,\gamma$ -dimethylallyl-2',4'-dihydroxy-[6'',6''-dimethylpyrano (2'',3'' : 7,6)] isoflavanone (bidwillon B), 8- $\gamma,\gamma$ -dimethylallyldaidzein and auriculatin by means of spectroscopic analysis. Some potent activities against oral microbial organisms (*Fusobacterium nucleatum* and *Povotella intermedia*) were shown in these flavonoids compounds.

[Phytochemistry, 31, 837-840 (1992)]

[Lab. of Pharmacognosy]

**Flavonol Glycosides Production in Callus Cultures of *Epimedium diphyllum*.**HIROBUMI YAMAMOTO\*, KYOKO IEDA, SHIN-ICHI TSUCHIYA, KUANG YAN,  
TOSHIYUKI TANAKA, MUNEKAZU IINUMA, MIZUO MIZUNO

Callus cultures of *Epimedium diphyllum* produced a large amount of epimedeside A in addition to small amount of diphyllaside B, ikarisoside C, epimedeside E, diglycosides of des-*O*-methylanhydroicaritin. Icaritin, epimedins A, B and C, glycosides of anhydroicaritin, were also produced in the callus cultures. The time-course experiments showed that an inverse relationship existed between cell growth and flavonol glycosides production. Effects of hormonal factors on cell growth and flavonol glycosides production indicated that 2,4-dichlorophenoxyacetic acid was needed for the production of flavonol glycosides.