〔Phytochemistry, **31**, 665-669 (1992)〕 [Lab. of Pharmacognosy]

Three 2',4',6'-Trioxygenated Flavanones in Roots of *Echinosophora koreensis*.

MUNEKAZU IINUMA*, MASAYOSHI OHYAMA, TOSHIYUKI TANAKA,
MIZUO MIZUNO, SOON-KEUN HONG

Futher investigation of the phenolic constituents of the roots of *Echinosophora koreensis*, led to the isolation of 11 compounds. Their structures were determined as (2*S*)-6-geranyl-5,7,2',4',6'-pentahydroxyflavanone, (2*S*)-8-geranyl-5,7,2',4',6'-pentahydroxyflavanone, (2*S*)-6,8-di (γ,γ-dimethylallyl), 5,7,2',4',6'-pentahydroxyflavanone (kenusanone B), sophoraisoflavaone A, isosophoranone, 2,3-dehydrokievitone, sophoracarpane B, sophoronol, pratensein, genistein and scopoletin. Three of them are novel flavanones possessing a 2',4',6'-trihydroxyl moiety on the B ring.

〔Phytochemisty, **31**, 675-678 (1992)〕 [Lab. of Pharmacognosy]

Isoflavones from Roots of *Euchresta japonica*.

MIZUO MIZUNO, NOBUYASU MATSUURA, MUNEKAZU IINUMA*, TOSHIYUKI TANAKA

Seven new isoflavones named euchrenone b_{10}-b_{16} were isolated from the roots of *Euchresta japonica*. These structures were determined by the means of spectroscopic analysis. Furthermore, to clarify the postion fused by a dimethylpyran ring on ring A, we also discussed the UV spectral data.

〔Phytochemistry, **31**, 717-719 (1992)〕 [Lab. of Pharmacognosy]

Coumarin Derivatives in *Coptis trifolia*.

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TOSHIYUKI TANAKA, KIYOTO GOTO

Known compounds, epiberberine, groenlandicine, scopoletin and β-sitosterol were characterized in the whole plant of *Coptis trifolia*. By means of spectral analysis, the structures of two new compounds were determined to be glycosides of a 10-hydroxygeranyl residue which is linked with scopoletin through an ether linkage.

〔Shoyakugaku Zasshi, **46**, 42-48 (1992)〕 [Lab. of Pharmacognosy]

Chemical Constituents and Their Variations among *Coptis* Species in Japan.

MIZUO MIZUNO, HIROYUKI KOJIMA, MUNEKAZU IINUMA*, TOSHIYUKI TANAKA

In this work on the chemical characterization of *Coptis* species (Ranunculaceae) in Japan, some minor constituents were isolated and their structures were determined and the chemotaxonomical results obtained in the present study generally agreed with the morphological and taxonomical classification.

〔Phytochemistry, **31**, 2487-2490 (1992)〕 [Lab. of Pharmacognosy]

Five Complex Flavonoids in the Farinose Exudate of *Pityrogramma calomelanos*.

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MIEKO TAKENAKA, MIZUO MIZUNO

From the farinose exudate of *Pityrogramma calomelanos*, five new complex flavonoids named calomelanos F-J were isolated. Calomelanol F was characterized as an angular structure, and those of calomelanols G, H, I and J as linear structures from spectroscopic evidence.

〔Phytochemistry, **31**, 2855-2858 (1992)〕 [Lab. of Pharmacognosy]

Three 2',4',6'-Trioxygenated Flavanones in Roots of *Echinosophora koreensis*.

MUNEKAZU IINUMA*, MASAYOSHI OHYAMA, TOSHIYUKI TANAKA,
MIZUO MIZUNO, SOON-KEUN HONG

By further investigation on the constituents of roots of *Echinosophora koreensis*, three novel flavanones with a 2',4',6'-trioxygenated B ring were isolated. These structures were determined to be (2*R*,3*S*)-8-γ,γ-dimethylallyl-6-geranyl-5,7,2',6'-tetrahydroxy-4'-methoxyflavanonol (kenusanone C), (2*S*)-8-γ,γ-dimethylally-5,7,2',6'-tetrahydroxy-4'-methoxyflavanone (kenusanone D) and (2*S*)-8-γ,γ-dimethylallyl-5,2',6'-trihydroxy-7,4'-dimethoxyflavanone (kenusanone E), respectively, by spectroscopic analysis. The characteristic behaviour of H-2 and H-3 in 2',6'-dioxygenated flavanone or flavanonol is also discussed.