[*J. Nat. Prod.*, **63**, 378-380 (2000)] [Lab. of Pharmacognosy]

Diterpenoids Acids from *Grindelia nana.*

Ahmed A. MAHMOUD, Ahmed A. AHMED, Toshiyuki TANAKA and Munekazu IINUMA*

Two new norditerpenoid acids of the labdane type (norgrindelic acids), 4,5-dehydro-6-oxo-18-norgrindelic acid and 4β-hydroxy-6-oxo-19-norgrindelic acid , as well as a new grindelic acid derivative, 18-hydroxy-6-oxogrindelic acid, were isolated from the aerial parts of *Grindelia nana*. In addition, the known compounds, 6-oxo-grinderic acid, grindelic acid, methyl grindeloate, 7β-epoxygrinderic acid, and 4α-carboxygrindelic acid were also isolated. The structures of the new compounds were characterized on the basis of spectroscopic data.

[*J. Asian Nat. Prod. Res.*, **2**, 237-243 (2000)] [Lab. of Pharmacognosy]

Rearranged Abietane Diterpenoids from *Clerodendrum mandarinorum.*

Tian-pei FAN, Zhi-da MIN, Munekazu IINUMA* and Toshiyuki TANAKA

Five new abietane dervatives which have a commoly rearrenged abietane skeleton contained a 17(15→16),18(4→3)-diabeo-abietane framework, mandarones D-H, were isolated from the stem of *Clerodendrum mandarinorum* Diels (Verbenaceae). The structures were characterized as (16S)-12,16-epoxy-11-hydroxy-17(15 → 16),18(4 → 3)-diabeo-abieta-3,5,8,11,13-pentane-7-one (mandarone D), 12,16-epoxy-11,14-dihydroxy-17(15 → 16),18(4 → 3)-diabeo-abieta-3,5,8,11,13,15-hexane-7-one (mandarone E), 12,16-epoxy-6,11,14-trihydroxy-17(15→16),18(4→3)-diabeo-abieta-3,5,11,13,15-hexane-7-one (mandarone F), 12,16-epoxy-11,14-dihydroxy-6-methoxy-17(15→16),18(4→3)-diabeo-abieta-3,5,11,13,15-hexane-1,7-dione (mandarone G) and 12,16-epoxy-11,14-dihydroxy-17(15 → 16),18(4 → 3)-diabeo-abieta-3,5,11,13,15-hexane-1,7-dione (mandarone H), respectively, maily based on he spectral analysis and by comparison with those closely related compounds.

[*Tetrahedron Lett.*, **41**, 7929-7932 (2000)] [Lab. of Pharmacognosy]

Vaticanol D, a Novel Resveratrol Hexmer Isolated from *Vatica rassak.*

Toshiyuki TANAKA,* Testuro ITO, Ken-ichi NAKAYA, Munekazu IINUMA, Yoshikazu TAKAHASHI, Hiroshi NAGANAWA, Nobuyasu MATSUURA and Makoto UBUKATA

Vaticanol D isolated from the bark of *Vatica rassak* in the frist instance of a resveratrol hexmer. The structure and relative congifuration were established by means of 2D NMR spectroscopy. Vaticanol D possesed a scavenging activity of super oxide.

[*J. Org. Chem.*, **65**, 2253-2256 (2000)] [Lab. of Pharmacognosy]

Double Isomerization of Oxetane Amides to Azetidine Esters with Ring Expansion and Contraction.

Shigeyoshi KANOH, Tomonari NISHIMURA, Yukio KITA, Hiroshi OGAWA, Masatoshi MOTOI, Masako TAKANI and Toshiyuki TANAKA*

This paper reports a nobel mode of the Lewis acid catalyzed isomerization of oxetane tert-amide. The isomerization of amide gives two heterocyclic compounds quite different from each other. One is a bicyclic acetal prouduced by the single isomerization, and the other is an azetidine derivative having an ester group at the 3-position. The latter reaction is an unusual, counterintuitive transformation consisting of two key steps. Hereafter, the overall reaction sequence is expressed by the term of "double isomerization" to distinguish it from the known single isomerizations of carbonyl-functionized oxetanes.