constituents exhibited a potent antioxidant activity on the free radicals and lipid peroxidation and a notable protective effect on the t-BuOOH induced oxidative damage. In vivo test of skin damage induced by UVB irradiation, the extract of C. chinensis and a constituent, picetaninol, exhibited a significant protective effect. The life-span of the HEK-N/F cells were extended by 1.21-2.12 fold as a result of the continuous administration of 3 \( \mu \)g/ml of C. chinensis and the active constituents compared to that of the control. These observations were attributed to the inhibitory effect of the C. chinensis extract and its constituents on the age-dependent shortening of the telomere. Consequently, it is suggested that C. chinensis and its constituents can protect the skin cells from oxidative stress and thereby prevent cellular aging.

[OD4-1] [ 2003-10-11  11:00 - 11:15 / ASEM Hall Meeting Room 203 ]

**New inhibitors of the NF-\( \kappa \)B activation and NO production from Artemisia sylvatica**

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Three new guaianolide type of sesquiterpene lactones, \( \alpha \)-angeloyloxy-\( \alpha \)-hydroxy-3a,4\( \alpha \)-epoxy-5a,7aH-10(14),11(13)-guaian-12,6a-oxide (1), \( \alpha \)-methylbutyryloxy-\( \alpha \)-hydroxy-3a,4\( \alpha \)-epoxy-5a,7aH-10(14),11(13)-guaian-12,6a-oxide (2), and \( \alpha \)-isovaleryloxy-\( \alpha \)-hydroxy-3a,4\( \alpha \)-epoxy-5a,7aH-10(14),11(13)-guaian-12,6a-oxide (3), together with six known sesquiterpenes, artemisolide (4), 3-methoxyanaparhloide (5), deacetylauronobiolide (6), moxartenolide (7), arteminolide B (8), and arteminolide D (9) were isolated by bioassay-guided fractionation using the NF-\( \kappa \)B mediated reporter gene assay system. All the isolated compounds showed strong inhibitory activity on both NF-\( \kappa \)B activation and NO production with \( IC_{50} \) values of 0.49 \( \mu \)M ~ 7.17 \( \mu \)M and 1.46 \( \mu \)M ~ 6.16 \( \mu \)M, respectively. These results suggest that artemisolides, sesquiterpene lactone guaianolides and moxartenolides are novel inhibitors of NF-\( \kappa \)B activation and NO production and could be used as anti-inflammatory agents.

[OD4-1] [ 2003-10-11  11:15 - 11:30 / ASEM Hall Meeting Room 203 ]

**Four new lanostane-type triterpenes from Ganoderma applanatum**

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Four new lanostane-type triterpenes were isolated from \( CH_2Cl_2 \) fraction of Ganoderma applanatum (Polyporaceae). There structures were determined as (20S)-3\( \beta \), 7\( \beta \),20,23\( \zeta \)-tetraydroxy-11,15-dioxolanosta-8-en-26-oic acid, (20S)-7\( \beta \),20,23\( \zeta \)-trihydroxy-3,11,15-trioxolanosta-8-en-26-oic acid, 7\( \beta \),23\( \zeta \)-dihydroxy-3,11,15-trioxolanosta-8,20E(22)-dien-26-oic acid, and 7\( \beta \)-hydroxy-3,11,15,23-tetraoxolanosta-8,20E(22)-dien-26-oic acid methyl ester on the basis of spectral data.

[OD4-1] [ 2003-10-11  11:30 - 11:45 / ASEM Hall Meeting Room 203 ]

**Noninvasive blood glucose monitoring system based on NIR spectroscopy with a contact pressure control device**

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The purpose of this study is to improve repeatability of a non-invasive blood glucose measurement. The portable NIR system that was newly integrated by our lab includes a tungsten halogen lamp, a specialized reflectance fiber optic probe and a photo diode array type InGaAs detector, which was developed by a microchip technology based on the lithography. Reflectance NIR spectra of finger tip were recorded by using a fiber optic probe. The probe was fixed in the system and subjects put their finger on the probe head. But, difference of