

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, piceatannol, 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 µg/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.

[OD2-4] [2003-10-11 11:00 - 11:15 / ASEM Hall Meeting Room 203]

New inhibitors of the NF-κB activation and NO production from *Artemisia sylvatica*

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Three new guaianolide type of sesquiterpene lactones, 8α-angeloyloxy-1α-hydroxy-3α,4α-epoxy-5α,7αH-10(14),11(13)-guaiadien-12,6α-olide (1), 8α-methylbutyryloxy-1α-hydroxy-3α,4α-epoxy-5α,7αH-10(14),11(13)-guaiadien-12,6α-olide (2), and 8α-isovaleryloxy-1α-hydroxy-3α,4α-epoxy-5α,7αH-10(14),11(13)-guaiadien-12,6α-olide (3), together with six known sesquiterpenes, artemisolide (4), 3-methoxytanaphtholide (5), deacetylalaurenobiolide (6), moxartenolide (7), arteminolide B (8), and arteminolide D (9) were isolated by bioassay-guided fractionation using the NF-κB mediated reporter gene assay system. All the isolated compounds showed strong inhibitory activity on both NF-κB activation and NO production with IC₅₀ values of 0.49 µM ~ 7.17 µM and 1.46 µM ~ 6.16 µM, respectively. These results suggest that arteminolides, sesquiterpene lactone guaianolides and moxartenolide are novel inhibitors of NF-κB activation and NO production and could be used as anti-inflammatory agents.

[OD2-5] [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 CH₂Cl₂ fraction of *Ganoderma applanatum* (Polyporaceae). Their structures were determined as (20S)-3β, 7β,20,23ζ-tetrahydroxy-11,15-dioxolanosta-8-en-26-oic acid, (20S)-7β,20,23ζ-trihydroxy-3,11,15-trioxolanosta-8-en-26-oic acid, 7β,23ζ-dihydroxy-3,11,15-trioxolanosta-8,20E(22)-dien-26-oic acid, and 7β-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

contact pressure induced low repeatability. In order to improve repeatability, the suction pump head was applied to the probe. It ensured constant pressure on the skin and resulted in improved repeatability. In vivo spectra were collected over the spectral range 1100~1750 nm. Partial least squares regression (PLSR) was applied for the calibration and validation for the determination of blood glucose.

[OD4-2] [2003-10-11 11:45 - 12:00 / ASEM Hall Meeting Room 203]

Determination of Alkylphenols, Chlorophenols and Bisphenol A in Various Samples by Freezing Filtration and GC/MS-SIM

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A method for determination 11 endocrine disrupting chemicals of phenols in various samples was developed. The alkylphenols, chlorophenols and bisphenol A were determined by gas chromatography/mass spectrometry-selected ion monitoring (GC/MS-SIM) followed by two work-up methods for comparison; isobutoxycarbonyl (isoBOC) derivatization method and tert-butyldimethylsilyl (TBDMS) derivatization method. Eleven endocrine disrupting chemicals (EDCs) of phenols in biological samples were extracted with acetonitrile and then acetonitrile layer was refrigerated at -60°C for 2 hours (freezing filtration). Also, solid-phase extraction (SPE) was used to XAD-4 and subsequent conversion to isoBOC or TBDMS derivatives for sensitive analysis with the GC/MS-SIM mode.

[OF1-1] [2003-10-11 12:00 - 12:15 / ASEM Hall Meeting Room 203]

A survey analysis of Curriculum Reform Task Force of Yeungnam University

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We performed this survey to hear Yeungnam University Graduates' opinion on the current curriculum for the purpose of creating an education system of "practically competent person" instead of simply "competent person". Questionnaire was made up of 13 multiple-choice questions and 1 descriptive question by Curriculum Reform Task Force of Yeungnam University. The survey was administered to randomly chosen 50 graduates by e-mail on August 1, 2003 and was collected between August 1 and August 10, 2003 for the analysis of respondent's reply. The survey revealed that the "relatedness" of their current job and what they have studied in the University was greater in recent graduates (within the past 3 years) than earlier graduates (more than 3 years ago): 1.16 versus 1.20, 1 being "very related" and 5 being "not related at all". In "helpfulness" of what they have studied in the University, recent graduates responded with negative answer compared to earlier graduates: 2.56 versus 1.8, 1 being "very helpful" and 5 being "not helpful at all". Also, in "diversity" of the curricula they, recent graduates responded more negatively than earlier graduates: 3.32 versus 3.08, 1 being "very diverse" and 5 being "not diverse at all". We concluded that recent graduates are working at major-related job areas compared to the earlier graduates, however, they appear to be more dissatisfied with "helpfulness" and "diversity" of what they have learned in the University. Based on this survey we recently have reformed current major-curricula with emphasis on improvement of "helpfulness" and "diversity". The reformed curricula will be administered beginning spring semester of 2004.

[OA1-1] [2003-10-11 09:30 - 09:45 / ASEM Hall Meeting Room 208]

Inhibitory effect of DA-125 on cancer metastasis by downregulating MMPs and CAMs

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Matrix metalloproteinases (MMPs) play an important role in tumor invasion and metastasis by extracellular matrix degradation. To analyze the effect of DA-125, an anthracycline derivative, on the invasion or metastasis of cancer cells the expression of matrix metalloproteinases (MMPs) was investigated in human fibrosarcoma HT1080 cells by RT-PCR or gelatin zymographic methods. As a result, DA-125 suppressed the expression of MMP-2 and 9 as well as tissue inhibitor of metalloproteinase-1 (TIMP-1), TIMP-2 and MT1-MMP with a time- and dose-