[PD1-34] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Antimicrobial activity of farnesoic acid derivatives

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The biological activities of farnesoic acid derivatives against pathogenic fungi and bacteria were investigated. Farnesoic acid and its derivatives showed growth inhibitory activites against various bacteria except for Escherichia coli. Among the compounds prepared, geranylgeranoic acid had potent antibacterial activity Salmonella typhimurium, Proteus vulgaris and Bacillus subtilis, the minimum inhibitory concentration (MIC) being in the range of 6.25-12.5μg/ml. On the other hand, amide derivatives of farnesoic acid showed antifungal activity. In particular, compound 6 had potent antifungal activity against Aspergillus niger, Candida albicans and Trichophyton sp., the MIC being in the range of 6.25-25μg/ml.

[PD1-35] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Synthesis, Characterization, and In Vitro and Calf Thymus DNA Identification of N7-Guanine Adduct of 2-Bromopropane

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Recently, we have reported that 2-bromopropane might have an immunotoxic potential in rats when exposed for 28 days. In the present studies, the possibility of 2'-deoxyguanosine adduct formation by 2-bromopropane was investigated in vitro to elucidate molecular mechanism of 2-bromopropane-induced immunosuppression. N7-Guanine adduct of 2-bromopropane (i.e., N7-isopropyl guanine) was chemically synthesized and structurally characterized by analysis of UV, 1H-NMR, 13C-NMR, COSY and ESI mass spectrometry to use as a reference material. Incubation of 2'-deoxyguanosine and/or calf thymus DNA with an excess amount of 2-bromopropane in PBS buffer solution, pH 7.4, at 37oC for 16 hr, followed by a thermal hydrolysis, produced a detectable amount of N7-isopropyl guanine by an HPLC, UV and ESI mass spectrometry analysis. The present results suggest that 2-bromopropane might form a DNA adduct in N7 position of 2'-deoxyguanosine at a physiological condition.

Poster Presentations - Field D2. Pharmacognosy

[PD2-1] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Quantative Analysis of Current Crude Drugs Containing Loganin

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Iridoids represent a group of cyclopentanol[c]pyran monoterpenoids and are found as natural effective constituents in a number of plant families. They have shown various activities such as antimicrobial, antitumoral, hemodynamic, choleretic, anti-inflammatory and hepatoprotective activities. Loganin is a sort of iridoids and occurs in some crude drugs.
For the quality control of these crude drugs, loganin was isolated from the EtOAc fraction of 6 samples -

Corni Fructus(Cornaceae), Lonicerae Flos(Caprifoliaceae), Gentianae Scabrae Radix, Swertiae Herba (Gentianaceae) and Lonicerae Flos, Corni Fructus over 5 years. A quantative analysis of loganin using HPLC method showed that this results in 6 samples collected from Kyung-Dong market in Seoul.

[PD2-2] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Evaluation of Oriental Bezoar Quality

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Oriental Bezoar is a stone formed in the gall sac of *Bos Taurus* Linne var. Domesticus Gmelin (*Bovidae*). Korea has imported it from some other countries such as Brazil, Argentina, Australia, Japan, etc. And most of them have been packaged to the Whole and the Broken types at that moment. It is widely used as a traditional medicine for the treatment of frenzy delirium and sold at a high price in oriental areas. So fake or inferior goods could be circulated.
In order to guarantee the quality of Oriental Bezoar, 318 samples imported from June 1998 to May 2001 were tested on specification in K.P. The 12 samples were not passed, which the 10 samples of Broken type were failed on the ash test, one sample of Whole and Broken type on the ash and the assay test, respectively, and another on the discrimination because of mold. Also content of bonded bilirubin in Orienta Bezoar was quantified with the average of 27.91±7.73 % in samples of passed the test and the ash content was 7.39±0.65 %(n=306). So the assay level of bonded bilirubin of Oriental Bezoar on specification might be evaluated to be higher than now.

[PD2-3] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Chemical Components of H2O and MeOH extracts from Cordyceps militaris

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Cordyceps militaris(CM) has been used as a tonics and herbal medicine traditionally. Recent research has shown the effect of glucose metabolism, cancer, endocrine and sexual functions of CM. Phytochemical examination of CM which is cultivated in Korea isolated cordycepin along with four similar amino acids from H2O soluble fraction and three lipophilic components as fatty acids and phthalide from MeOH soluble fraction of CM. We also carried out quantitative determination of cordycepin by High Performance Liquid Chromatography. The results showed that the contents of cordycepin is 0.08853% in CM.

[PD2-4] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Two Novel Nucleosides from a Brown Alga Sargassum fulvellum

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In the course of our researches for bioactive compounds from Korean marine algae, the methanolic extract of a brown alga in genus *Sargassum* (Fucales, Phaeophyceae) off Cheju Island, Korea was partitioned between *n*-BuOH and H_2O. The aqueous fraction was subjected to ODS flash, Sephadex LH-20, and prep. TLC to afford adenosine and two novel *N*-methylaminosugar nucleosides. The formula molecular was established as $C_{11}H_{13}N_6O_3$ on the basis of the HRESI mass and ^{13}C NMR spectra. Their structures were