[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 -