

[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 activities against various bacteria except for *Escherichia coli*. Among the compounds prepared, geranylgeranoic acid had potent antibacterial activity against *Salmonella typhimurium*, *Proteus vulgaris* and *Bacillus subtilis*, the minimum inhibitory concentration (MIC) being in the range of 6.25–12.5 µg/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 6.25–25 µg/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, <sup>1</sup>H-NMR, <sup>13</sup>C-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 37°C 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 ]

### Quantitative Analysis of Current Crude Drugs Containing Loganin

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Iridoids represent a group of cyclopentano[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, choleric, 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 -