

findings, it is suggested that kakkalide is a prodrug, and irisolidone is a bioactive agent for counteracting the effect of drinking and hepatic injury.

[PC2-5] [ 04/18/2003 (Fri) 09:30 - 12:30 / Hall P ]

### Diarylheptanoid Isolated from *Alpinia officinarum* Inhibits Pancreatic Lipase

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Pancreatic lipase-inhibitory activity of the rhizome of *Alpinia officinarum* (AO) and its antihyperlipidemic activity were measured. When water extract of AO was stepwise fractionated with organic solvents, ethylacetate fraction exhibited the most potent inhibition. From it, Diarylheptanoid was isolated as an inhibitor of pancreatic lipase and we investigated its *in vitro* inhibitory effect of lipase activity and *in vivo* antihyperlipidemic effect. AO, ethylacetate fraction and Diarylheptanoid significantly inhibited lipase activity, and serum TG level in corn oil feeding-induced mice and serum TG and cholesterol in Triton WR-1339-induced hyperlipidemic mice.

[PC2-6] [ 04/18/2003 (Fri) 09:30 - 12:30 / Hall P ]

### Optimal culture conditions for production of Escherichia coli Adhesin protein coupled to Escherichia coli Heat Labile Enterotoxin A2B in Escherichia coli TB1.

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The FimH subunit of type 1-fimbriated *Escherichia coli* has been determined as a major cause of urinary tract infection. To produce a possible vaccine antigen against urinary tract infection, the fimH gene was genetically linked to the ltxa2b gene, which was then cloned into the pMAL-p2E expression vector. The chimaeric construction of pMALfimH/ltxa2b was transformed into *Escherichia coli* TB1 and its N-terminal amino acid sequence was analyzed. Fusion protein, the adhesin fused to the *Escherichia coli* heat labile enterotoxin A2B (LTxA2B), was induced for 4 hr with 0.3 mM isopropyl- $\beta$ -D-thiogalactopyranoside (IPTG) at 37C, to yield soluble fusion protein. The expressed fusion protein was confirmed by SDS-PAGE, western blotting, and GM1-ganglioside ELISA using antibodies for maltose binding protein (MBP) and cholera toxin subunit B(CTXB). The results indicate that the purified fusion protein is an Adhesin/LTxA2B protein containing GM1-ganglioside binding activity of LTxB. The Adhesin/LTxA2B protein may be used as a candidate antigen for oral immunization against uropathogenic *E.coli*.

[PC2-7] [ 04/18/2003 (Fri) 09:30 - 12:30 / Hall P ]

### Inhibitory effects of Kimchi lactic acid bacteria on harmful enzymes of human intestinal bacteria

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