rats by using liquid chromatography/electrospray tandem mass spectrometry (LC/MS/MS) method. Twelve metabolites of DDB-S were identified in the urine and feces. DDB-S consists with two methyledioxy biphenyl moiety and isobaric metabolites of DDB-S were hardly differentiated in MS/MS spectrum. In order to characterize the structure of metabolites, one of each methoxy and methylenedioxy group was selectively exchanged with deutrium and characerization of metabolites were done in rats. The major metabolic pathways of DDB-S in rats were identified as demethylenation of the methylenedioxyphenyl group and demethylation of the carboxymethyl moiety. The others were identified as demethylenation and demethylation, and glucuronidation.

[PA1-18] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Effects of Chlorhexidine digluconate on Rate of Rotational Mobility of Porphyromonas gingivalis Outer Membranes.

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Tempting to further understanding the biophysical mechanism of action of chlorhexidine, we examined effects of the antimicrobial agent(chlorhexidine digluconate) on rate of rotational mobility of liposomes of total lipids extracted from anaerobic bacterial outer membranes (Porphyromonas gingivalis outer membranes). The five fluorescent probes, 2-(9-anthroyloxy) stearic acid(2-AS), 6-(9-anthroyloxy) stearic acid(6-AS), 9-(9-anthroyloxy) stearic acid(9-AS), 12-(9-anthroyloxy) stearic acid(12-AS) and 16-(9-anthroyloxy) palmitic acid(16-AP), were utilized as probes for the surface of the membranes and hydrocarbon interior of the membrane bilayer, respectively. These probes are located at a graded series of depths in the membranes. The AS probes reflect the rate of rotational mobility. Chlorhexidine significantly increased the anisotropy of 2-AS. However chlorhexidine significantly decreased the anisotropies of 6-AS, 9-AS, 12-AS and 16-AP. These results indicate that the rate of rotational diffusion changes resulted from the interaction between chlorhexidine digluconate and outer membrane lipid bilayer are important in the biophysical mechanism of action of chlorhexidine digluconate.

[PA1-19] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Estrogen receptor expression and behavioral changes in immature mice treated with bisphenol A

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A large number of chemical pollutants including phthalates, alkylphenolic compounds, organochlorine pesticides and bisphenol A have the ability to disrupt endocrine function in animals, and alter cognitive function. Because hormone mediated events play a important role in central nervous system development and functions. The speculations that the changes in cognitive function are mediated by the endocrine-like action of these chemicals. The present study therefore was designed to investigate effect of bisphenol A (BPA), an endocrine disrupting chemical on neuro-behavior patterns, and expression of estrogen receptors and tyrosine hydroxylase, a limiting enzyme of dopamine synthesis pathway. BPA was treated orally for 3 weeks into 3 week old rats, and then the neuro-behavior patterns (stereotype behaviors such as jumping rearing and forepaw tremor, climbing behavior, tail flick, rotarod and locomotor activity), and the expression of estrogen receptors and tyrosine hydroxylase were determined every 3