potential β-lactamase inhibitors. Among them 1,1-Dioxo-6-bromo-6-[(2-bromo, 3-phenyl) allylidene] penicillanic acid effectively inhibited Enterobacter cloacae β-lactamase(IC50 = 0.007mM/ml).
In this study, three inhibitors from this series were docked into Enterobacter cloacae β-lactamase with computer docking program, QXP. The docking results demonstrated that a new inhibitor with high biological activity proven experimentally docked well into the active site of the enzyme but the inhibitors with no activities were not docked. It provided potential binding modes for the new inhibitor to the target enzyme. The docking results of E and Z isomers of 1,1-Dioxo-6-bromo-6-[(2-bromo, 3-phenyl) allylidene] penicillanic acid showed that more prevalent Z isomer docked well into the active site, while the E isomer did not. This result suggests that the biologically active stereoisomers may be selected by the docking study.

[PC1-8] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Properties of Polyphenoloxidase and Antioxidant Enzyme in the Leaves of Erechitites hieracifolia

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Polyphenoloxidase activity in the leaves of Erechitites hieracifolia was estimated by Warburg's manometric method. The enzyme was most reactive toward chlorogenic acid followed by caffeic acid. Diethydithiocarbamate and potassium cyanide were shown powerful inhibition rate to the polyphenoloxidase from the leaves of Erechitites hieracifolia. Electrophoretic isoenzyme banding pattern of SOD, POD and CAT were observed by native PAGE. We confirmed antioxidant activity of its methanol extract by DPPH radical scavenging method.

[PC1-9] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Inhibitory effect of some natural product on tyrosinase activity in vitro

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To indentify inhibitors of melanogenesis, we compared the effect of 4 natural products on mushroom tyrosinase, human melanocytic tyrosinase activity and melanin content. The cytotoxicity of the component were also tested on cultured mouse melanoma cells.
Each extract significantly inhibited tyrosinase activity in vitro and B 16 melanoma cell lines. In B 16 cell lines, watermelon's inner shell extract inhibited tyrosinase activity as strong as kojic acid at 0.105g/ml concentration. Each extract were strong inhibitors of tyrosinase activity in B 16 mouse melanoma cell lines at less than 0.1g/ml concentration.
These result show that extract of watermelon's inner shell,lettuce,morning glory's seed,ginko could be developed as skin whitening component of cosmetics.

[PC1-10] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Inhibitory Effects of Isoquinoline Alkaloids on Proinflammatory Cytokines.

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