* 분류번호	I-5

제 목	Synthesis and Cytotoxic Activity of Flavone Derivatives.
연구자	안 병 준
소 속	충남대학교 약학대학
내 용	

2-Benzoyloxyacetophenones were prepared by reaction of benzooic acids and 2-hydroxyacetophenones in the presence of dicyclohexylcarbodiimide and 4-dimethylaminopyridine. The rearrangement of 2-Benzoyloxy acetophenones to 2-Dibenzoylmethans has been carried out in the presence of tetrabutylammoniumfluoride(a phase transfer catalyst).

Both methods have been applied first for the synthesis of flavones and gave better yields of products and the reaction ran in shorter reaction time.

46 synthetic flavone derivatives were tested for the cytotoxic activity against L1210, HL-60 cells in vitro. Among them, 5-methoxy-2'-benzyloxyflavone (ED50(μg/ml)=4.9, 3.1), 5,7-dimethoxy-2'-benzyloxyflavone(ED50(μg/ml)=8.2, 5.0), 2'-hydroxy-5,6'-dimetho xyflavone(ED50(μg/ml)=7.2, 5.9), 5,2'-dihydroxy-6,7,8-trimethoxyfla vone(ED50(μg/ml)=2.2, 0.9) showed a potent cytotoxic activity. Existence of methoxy group in C-5 and benzyloxy group in C-2' is necessary for cytotoxic activity against L1210, HL-60 cells.

Existenec of hydroxy group in C-2' and methoxy group in c-6' is necessary for cytotoxic activity against L1210, HL-60 cells.

Consquentlly, coplanarity between A-C-ring and B-ring was suggested playing a certain role on the cytotoxic activity.