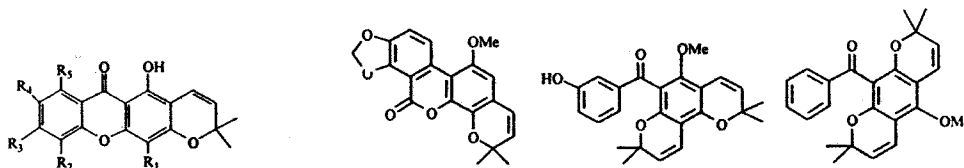


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KEY WORDS : *GARCINIA SPECIOSA* /GUTTIFERAE

RANEE SANGSUWON : INVESTIGATIONS OF BIOACTIVE COMPOUNDS FROM
GARCINIA SPECIOSA. THESIS ADVISORS : VICHAI REUTRAKUL, Ph.D., PATOOMRATANA
TUCHINDA, Ph.D., 309P. ISBN 974-663-221-3.

This study is a chemical investigation of leaves-twigs and stems of a cytotoxic plant, named *Garcinia speciosa*. The leaves-twigs were isolated into the following compounds: three new xanthenes (1-3), one new coumarin derivative (4), two new benzophenones derivatives (5, 6) and five known compounds (friedelin, stigmasterol, macluraxanthone, vismiaphenone-B and 5-O-methyl- vismiaphenone-B). The isolated compounds were tested for cytotoxicity and anti-HIV-RT reverse transcriptase. Macluraxanthone showed activities against several human cell lines i.e. P-388, KB, KBV(+VLB), KBV(-VLB), Col-2, BCA-1, Lu-1, LNCaP, ZR-75-1. Compounds (1), (2), (3) and (4) showed moderated cytotoxicity against several human cell lines i.e. P-388, KB, Col-2, BCA-1, Lu-1 and moderately exhibited activities in anti HIV-RT assays.



(1) $R_1=1$, 1-dimethylallyl, $R_2=OH$, $R_3=OMe$, $R_4=R_5=H$ (4)

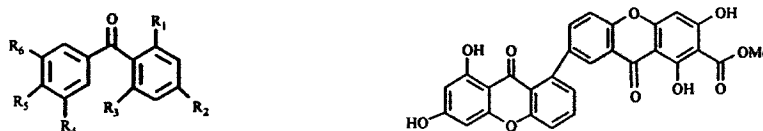
(2) $R_1=R_2=R_5=H$, $R_3=R_4=OMe$

(3) $R_1=R_3=R_5=OMe$, $R_2=OH$, $R_4=H$

(5)

(6)

The stems were isolated into the following compounds : three new benzophenones derivative(7-9), one new xanthone dimer (10) and five known compounds (maclurin, 1,3,5,6-tetrahydroxyxanthone, 1,3,6,7-tetrahydroxyxanthone, (-) epicatechin and 2,4,6,3',5'-penta-hydroxybenzophenone). Most compounds showed moderated cytotoxicity against several human cell lines i.e. P-388, KB, Col-2, BCA-1, Lu-1.



(7) $R_1=R_3=OMe$, $R_2=R_5=R_6=OH$, $R_4=H$

(8) $R_1=R_3=OMe$, $R_2=R_4=R_6=OH$, $R_5=H$

(9) $R_1=R_3=R_5=R_6=OH$, $R_2=OMe$, $R_4=H$

(10)

The structures were elucidated on the basis of spectroscopic techniques.