CHEMICAL CONSTITUENTS OF *AGLAIA LANUGINOSE*. KING

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ABSTRACT

Aglaia is a small genus of trees that belong to the family Meliaceae. They are widely distributed in India, Malay Peninsula and throughout Indomalesia. The chemistry of *Aglaia* has been extensively investigated and most of the researches done on these plants focused on their effect as insecticides, antifeedant, growth inhibitors, cytotoxicity and others. The dichloromethane extract from the bark of *Aglaia lanuginose* were studied.

The chromatographic separation on both of the extracts gave ten compounds. The compounds isolated were identified as eichlerialactone **102**, methyl eichlerianate **103**, cabraleone **104**, ocotillone **105**, 4-hydroxycinnamyl acetate **106**, cabralealactone **107**, eichlerianic acid **108,** shoreic acid **109** and the sterols, sitosterol **110** and stigmasterol **111**. 4-Hydroxycinnamyl acetate **106** is reported for the first time in Meliaceae family.

ABSTRAK

Aglaia merupakan tumbuhan daripada famili Meliaceae. Ianya banyak didapati di sekitar kawasan benua India, Kepulauan Melayu dan Indomalesia. Banyak penyelidik telah menjalankan kajian kimia terhadap tumbuhan daripada genus ini. Disamping itu para penyelidik juga sangat giat menjalankan penyelidikan terhadap kesannya sebagai bahan antiserangga, antifedan, agen pembantutan pertumbuhan, komponen sitotoksik dan lain- lain lagi. Dalam kajian kimia ini ekstrak diklorometana dan heksana untuk kulit pokok *Aglaia lanuginose* telah diselidiki.

Pemisahan secara kromatografi dari kedua-dua ekstrak ini telah menghasilkan sepuluh komponen. Komponen tersebut telah dikenalpastikan sebagai eichlerialakton **102**, metil eichlerianat **103**, cabraleon **104**, ocotillon **105**, 4-hidroksisinamil asetat **106**, cabralealacton **107**, asid eichlerianik **108,** asid shoreik **109,** sitosterol **110** dan stigmasterol **111** juga telah berjaya dipisahkan. Sebatian 4-Hidroksisinamil asetat **106** adalah yang pertama kali dilaporkan dalam famili Meliaceae.

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ABBREVIATIONS

α	Alpha
β	Beta
γ	Gamma
λ	Lambda (maximum wavelength)
μ	Micro
$CDCl_3$	Deuterated chloroform
cm^{-1}	Per centimeter
COSY	H-H correlation spectroscopy
δ	Chemical shift
DEPT	Distortionless enhancement by polarisation transfer
d	Doublet
dd	Doublet of doublet
m/z	Mass of ratio

NMR	Nuclear magnetic resonance
^{1}H	Proton NMR
^{13}C	Carbon-13 NMR
g	gram
HMBC	Heteronuclear multiple bond correlation
HMQC	Heteronuclear multiple quantum coherence
L	Litre
Me	Methyl
MHz	Megahertz
mL	Mililitre
nm	Nanometer
H	Hydrogen
Hz	Hertz
IR	Infrared
UV	Ultraviolet
J	Coupling constant (Hz)
m	Multiplet
LCMS	Liquid chromatography mass spectroscopy
IC_{50}	Concentration needed for inhibition of 50% activity
OH	Hydroxyl
ppm	Parts per million
s	Singlet
HPLC	High performance liquid chromatography
TLC	Thin layer chromatography
CC	Column chromatography