CHEMICAL CONSTITUENTS OF

DESMOS DUMOSUS, ROXB.

By

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ABSTRACT

The chemical content of the leaves and bark of *Desmos dudosus* has been carried out in this study. The leaves yielded nine isoquinoline type of alkaloids and two flavones.

The isoquinoline alkaloids isolated were pronuciferine 37, stepharine 39, normuciferine 40, (-) - 3 - hydroxynormuciferine 41, norlirioferine 42, asimilobine 43, liriodenine 44, lycamine 45 and O - methylmoschatoline 46.

The flavones were 5 - hydroxy - 6,7 - dimethoxyflavone 47 and 5 - hydroxy - 7,8 - dimethoxyflavone 48.

The same flavones, 47 and 48 and the alkaloids 45 and 46 were also present in the bark of this species. Another two isoquinoline alkaloids, namely O – methylisopilene 49 and discretamine 50, were found only in the bark of *Desmos dudosus*.

All the above compounds were isolated by using chromatographic techniques, whereas the structural formula of the isolated compounds were elucidated using spectroscopic methods such as $^1$H NMR, $^{13}$C NMR, COSY, MS, IR and UV.
ABSTRAK

Di dalam kajian ini, kandungan kimia terhadap pokok Annonaceae (Malaysia) iaitu Desmos dumosus adalah ditentukan. Penyelidikan yang dijalankan adalah pada bahagian daun dan kulit batangnya.

Pada bahagian daun, sembilan alkaloid jenis Isokuinolina dan dua flavon telah ditemui. Alkaloid yang ditemui ialah pronusiferina 37, stefarina 39, normusiferina 40, (-) - 3 - hidroksinornusiferina 41, norlirioferina 42, asimilobina 43, liriodenina 44, lisikamina 45 dan O-metilmoskatolina 46. Manakala flavonnya pula ialah 5 - hidroksi - 6,7 - dimetoksiflavon 47 dan 5 - hidroksi - 7,8 - dimetoksiflavon 48.

Flavon yang sama iaitu 47 dan 48, dan alkaloid 45 dan 46 juga telah ditemui dalam bahagian kulit batang sepsis ini. Dua alkaloid isokuinolina lain, iaitu O-metilisopilina 49 dan diskritamina 50 telah ditemui hanya dalam kulit batang Desmos dumosus.

Kesemua sebatian diatas telah dipisahkan dengan menggunakan teknik kromatografi manakala formula struktur bagi sebatian yang dipisahkan itu dielusidasikan menggunakan kaedah spektroskopi seperti 1H NMR, 13C NMR, COSY, MS, IR dan UV.
ABBREVIATIONS

spp. species
NMR nuclear magnetic resonance
IR infra red
UV ultraviolet
ppm parts per million
nm nanometer
Hz hertz
CHO - C = O

CO - C = O
m/z mass per electron
D₂O deuterated water
CDCl₃ deuterated chloroform
CCl₄ carbon tetrachloride
C₆D₆ deuterated benzene
NaBH₄ natrium borohydride
[O] oxidation
[H] reduction
GCMS gas chromatography mass spectra
OMe OCH₃
dd doublet
d doublet
s singlet
EI electron impact
APCI atmospheric pressure chemical ionization