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PHYTOCHEMICAL STUDIES OF *XYRIS INDICA* LINN. FLOWERS

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พิมพ์ต้นฉบับบทความวิจัยวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

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ได้ทำการแยกสารประกอบจากสิ่งสกัดคลอโรฟอร์มของช่อดอกกระถินทุ่ง Xyris indica Linn. (Xyridaceae) สามารถแยกสารกลุ่ม isocoumarin ชนิดใหม่ได้ 2 ชนิดคือ xyridin A และ B จากการศึกษาทางสเปกโตรสโคปีทำให้ทราบสูตรโครงสร้าง ซึ่งได้แก่ 3-n-propyl-6,7-(methylenedioxy)-1H-2-benzopyran-1-one และ 3-(1'-oxopropyl)-6,7-(methylenedioxy)-1H-2-benzopyran-1-one นอกจากนี้สามารถแยก chrysazin (1,8-dihydroxy-9,10-anthracenedione) และ 3-methoxy-chrysazin (1,8-dihydroxy-3-methoxy-9,10-anthracenedione) และสารชนิดใหม่ที่ยังไม่เคยมีรายงานว่าพบในที่ช่อดอกก่อนคือ 3-hydroxy-chrysazin (1,3,8-trihydroxy-9,10-anthracenedione) และสารพวกสเตอรอยด์ 2 ชนิดได้แก่  $\alpha$ -spinasterol และ stigmasterol พร้อมกันนี้ได้อภิปรายถึงชีวสังเคราะห์ของ xyridin A และ B อีกด้วย

ภาควิชา ..... เกษีชเวท  
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ลายมือชื่อนิสิต ..... ร.ศ.ท.หญิง  
ลายมือชื่ออาจารย์ที่ปรึกษา ..... หน้ ผดุงเจริญ  
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Two new isocoumarins named xyridin A and B were isolated from the chloroform extract of the flowering heads of Xyris indica Linn.(Xyridaceae). Their structures have been established as 3-n-propyl-6,7-(methylenedioxy)-1H-2-benzopyran-1-one and 3-(1'-oxopropyl)-6,7-(methylenedioxy)-1H-2-benzopyran-1-one by means of spectroscopic analyses. Additionally, 3-hydroxy-chrysazin (1,3,8-trihydroxy-9,10-anthracenedione), a new plant constituent has been isolated along with chrysazin (1,8-dihydroxy-9,10-anthracenedione) and 3-methoxy-chrysazin (1,8-dihydroxy-3-methoxy-9,10-anthracenedione) and two known phytosterols,  $\alpha$ -spinasterol and stigmasterol. A possible biogenetic pathway for the formation of the xyridins has been proposed.

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ลายมือชื่อนิสิต..... ร.ท.ท.หญิง สุกרון  
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## ABBREVIATIONS

$\epsilon$ max	=	Molar absorptivity at maximum absorption
br	=	Broad (for NMR spectra)
$^{\circ}\text{C}$	=	Degree Celcius
$^{13}\text{C-NMR}$	=	Carbon-13 Nuclear Magnetic Resonance
cm	=	Centimeter
d	=	Doublet (for NMR spectra)
dd	=	Doublets of doublet (for NMR spectra)
DEPT	=	Distortionless Enhancement by Polarization Transfer
dq	=	Double of quartet (for NMR spectra)
DMSO- $d_6$	=	Dimethyl sulfoxide- $d_6$
$\delta$	=	Chemical shift
EIMS	=	Electron Impact Mass Spectrum
eV	=	Electron volt
g	=	Gram
HMBC	=	Heteronuclear Multiple Bond Connectivity
HREIMS	=	High Resolution Electron Impact Mass Spectrum
Hz	=	Hertz
$^1\text{H-NMR}$	=	Proton Nuclear Magnetic Resonance
IR	=	Infrared
KBr	=	Potassium bromide
kg	=	Kilogram
L	=	Liter
m	=	Meter

m	=	Multiplet (for NMR spectra)
M <sup>+</sup>	=	Molecular ion
λ max	=	Wavelength at maximum absorption
m/z	=	Mass to charge ratio
mg	=	Milligram
MHz	=	Mega Hertz
ml	=	Milliliter
mm	=	Millimeter
m.p.	=	Melting point
MS	=	Mass Spectrum
nm	=	Nanometer
NMR	=	Nuclear Magnetic Resonance
ppm	=	Part per million
q	=	Quartet (for NMR spectra)
s	=	Singlet (for NMR spectra)
t	=	Triplet (for NMR spectra)
TLC	=	Thin layer chromatography
UV	=	Ultraviolet