

สารเคมีจากฟองน้ำทะเลของไทย

Acanthella cavernosa Dendy



นางสาว ชนิษฐา ดีประหลาด

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาเภสัชศาสตรมหาบัณฑิต

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CHEMICAL CONSTITUENTS FROM A THAI MARINE SPONGE,

Acanthella cavernosa Dendy

Miss Khanittha Deepralard

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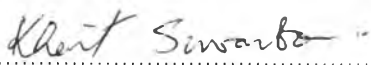
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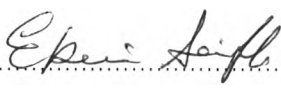
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พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

ชนิดรูปร่างที่ประหลาด : สารเคมีจากฟองน้ำทะเลของไทย *Acanthella cavernosa* Dendy. (CHEMICAL CONSTITUENTS FROM A THAI MARINE SPONGE, *Acanthella cavernosa* Dendy) อ. ที่ปรึกษา : อ.ดร. รุทธิ สุทธิศรี, อ.ที่ปรึกษา
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จากการสกัดแยกสารเคมีจากฟองน้ำทะเลของไทย *Acanthella cavernosa* Dendy สามารถแยกสารชนิดใหม่ในกลุ่มคาลิฮินอลโคเทอปีนได้ 2 ชนิด คือ 1,5,6-tri-*epi*-kalihinol I และ 10-*epi*-kalihinol J และสารในกลุ่มเดียวกันที่มีการศึกษาแล้วอีก 1 ชนิด คือ kalihinol Y การพิสูจน์เอกลักษณ์และหาสูตรโครงสร้างทางเคมีของสารที่สกัดแยกได้ ทำโดยการวิเคราะห์ ข้อมูลทางสเปกโทรสโกปี จาก UV, IR, MS, 1-D และ 2-D NMR ร่วมกับการเปรียบเทียบข้อมูลกับสารอื่นที่มีสูตรโครงสร้างทางเคมีที่สัมพันธ์กัน

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KHANIT'THA DEEPRALARD : CHEMICAL CONSTITUENTS FROM A THAI MARINE SPONGE, *Acanthella cavernosa* Dendy. THESIS ADVISOR : RUT'T

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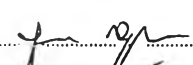
Two new kalihinol type diterpenes, 1,5,6-tri-*epi*-kalihinol I and 10-*epi*-kalihinol J, and one known compound, kalihinol Y, were isolated from a Thai marine sponge, *Acanthella cavernosa* Dendy. The identification and structure elucidation of the isolated compounds were accomplished by the analysis of the UV, IR, MS, 1-D and 2-D NMR spectral data, as well as comparison with the data from other related compounds.

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ABBREVIATIONS

$[\alpha]_D$	=	specific optical rotation
APCI	=	Atmospheric Pressure Chemical Ionization
br d	=	broad doublet
br s	=	broad singlet
br t	=	broad triplet
$^{\circ}\text{C}$	=	degree celsius
$^{13}\text{C-NMR}$	=	Carbon-13 Nuclear Magnetic Resonance
CDCl_3	=	deuterated chloroform
CH_2Cl_2	=	dichloromethane
CHCl_3	=	chloroform
cm	=	centimeter
COSY	=	Correlated Spectroscopy
δ	=	chemical shift
1-D	=	one dimensional
2-D	=	two dimensional
d	=	doublet
dd	=	doublet of doublets
ddd	=	doublet of doublet of doublets
DEPT	=	Distortionless Enhancement by Polarization Transfer
dt	=	doublet of triplets
ϵ	=	molar absorptivity
eV	=	electron volt
g	=	gram
$^1\text{H-NMR}$	=	Proton Nuclear Magnetic Resonance
HETCOR	=	Heteronuclear correlation spectroscopy
HMBC	=	^1H -detected Heteronuclear Multiple Bond Coherence
HSQC	=	^1H -detected High Sensitive Quantum Coherence

Hz	=	hertz
IR	=	Infrared
J	=	coupling constant
kg	=	kilogram
l	=	liter
λ	=	wavelength (nm)
M^+	=	molecular ion
m/z	=	mass-to-charge ratio
MeOH	=	methanol
MHz	=	megahertz
mg	=	milligram
ml	=	milliliter
MS	=	Mass Spectrum
ν_{\max}	=	wavenumber at maximum absorption
NMR	=	Nuclear Magnetic Resonance
NOESY	=	Nuclear Overhauser Effect Correlated Spectroscopy
q	=	quartet
s	=	singlet
sp.	=	species
t	=	triplet
TLC	=	Thin Layer Chromatography