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PHYTOCHEMICAL STUDY OF *SIPHONODON CELASTRINEUS* GRIFF. ROOT

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Thesis Co-advisor	-

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นายโชคชัย เนียมโภคะ : การศึกษาทางพฤกษเคมีของรากมะดูก. (Phytochemical study of *Siphonodon celastrineus* Griff. Root) อ. ที่ปรึกษา : รศ.ดร. รพีพล ภโววาท, 132 หน้า. ISBN 974-03-1666-2.

จากรากของมะดูก (*Siphonodon celastrineus* Griff. วงศ์ Celastraceae) สามารถสกัดแยกสารชนิดใหม่ในกลุ่ม oleanane triterpene ได้ 1 ชนิด คือ 3β -acetoxy-11α-benzoyl-13β-hydroxyolean-12-one ซึ่งได้ตั้งชื่อว่า siphonodone กับสารที่เคยมีรายงานแล้ว 2 ชนิด คือ β-sitosterol และ pristimerin การพิสูจน์เอกลักษณ์และการหาสูตรโครงสร้างทางเคมีของสารเหล่านี้ทำโดยการวิเคราะห์ข้อมูลทางสเปกโตรสโคปีชนิดต่างๆ ร่วมกับการเปรียบเทียบข้อมูลกับสารอื่นที่มีสูตรโครงสร้างทางเคมีที่สัมพันธ์กัน

ภาควิชา เภสัชพฤกษศาสตร์
สาขาวิชา เภสัชพฤกษศาสตร์
ปีการศึกษา 2544

ลายมือชื่อนิสิต .....
ลายมือชื่ออาจารย์ที่ปรึกษา .....
ลายมือชื่ออาจารย์ที่ปรึกษาร่วม .....

437 65698 33 : MAJOR PHARMACEUTICAL BOTANY

KEY WORD: *SIPHONODON CELASTRINEUS* GRIFF./ CELASTRACEAE / SIPHONODONE / OLEANANE / TRITERPENE

CHOKCHAI NIAMPOKA : THESIS TITLE. PHYTOCHEMICAL STUDY OF *SIPHONODON CELASTRINEUS* GRIFF. ROOT. THESIS ADVISOR : ASSOCIATE PROFESSOR RAPEPOL BAVOVADA , Ph.D. 132 pp. ISBN 974-03-1666-2.

From the root of *Siphonodon celastrineus* Griff. (family Celastraceae), a new oleanane triterpene , 3β-acetoxy-11α-benzoyl-13β-hydroxyolean-12-one , named siphonodone , was isolated together with two known compounds, β- sitosterol and pristimerin. The identification and structure elucidation of the isolated compounds were established by analysis of the spectroscopic data , as well as comparison with the data of other structurally related compounds.

Department of Pharmaceutical Botany
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ABBREVIATIONS

br	= broad (for NMR spectra)
c	= concentration (mg / 100 ml)
^{o}C	= degree Celsius
CC	= column chromatography
$CDCl_3$	= deuterochloroform
$CHCl_3$	= chloroform
cm	= centimeter
^{13}C-NMR	= carbon- 13 nuclear magnetic resonance
COSY	= correlation spectroscopy
d	= doublet (for NMR spectra)
dt	= doublet of triplets (for NMR spectra)
DEPT	= distortionless enhancement by polarlization transfer
EI – MS	= electron impact mass spectrum
EtOAc	= ethyl acetate
eV	= electron volt
FAB – MS	= fast atom bombardment mass spectrometry
frs	= fractions
g	= gram
HMBC	= proton – detected heteronuclear multiple bond connectivity
HMQC	= proton – detected heteronuclear quantum coherence
^{1}H – NMR	= proton nuclear magnetic resonance
H_2SO_4	= sulfuric acid
Hz	= hertz
IR	= infrared
J	= coupling constant
KBr	= potassium bromide
m	= meter
m	= multiplet (for NMR spectra)
$[M]^{+}$	= molecular ion

MeOH	= methanol
MHz	= megahertz
mg	= milligram
ml	= milliliter
mm	= millimeter
MS	= mass spectrum
m / z	= mass per charge ratio
Na	= sodium
NBA	= *m*-nitrobenzyl alcohol
nm	= nanometer
NMR	= nuclear magnetic resonance
No.	= number
NOE	= nuclear Overhauser effect
ppm	= part per million
rel. int.	= relative intensity (for MS spectra)
s	= singlet (for NMR spectra)
td	= triplet of doublets (for NMR spectra)
TLC	= thin layer chromatography
TMS	= tetramethylsilane
UV	= ultraviolet
$[\alpha]_D$	= specific rotation at 589 nm
ε	= molar absorptivity
δ	= chemical shift
λ_{max}	= wave length at maximum absorption
ν_{max}	= wave number at maximum absorption