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QUINONES FROM ROOTS OF
PRISMATOMERIS SESSILIFLORA AND *DIOSPYROS MONTANA*

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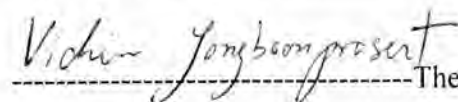
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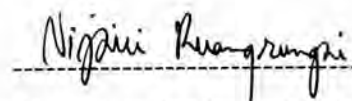

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การศึกษาพฤกษเคมีของรากพญาครุฑ โดยใช้วิธีทางโครมาโตกราฟี สามารถแยกองค์ประกอบทางเคมีจากสิ่งสกัดได้สาร 2 ชนิดเป็นสารในกลุ่มแอนทราควิโนน คือ rubiadin และ rubiadin-1-methyl ether ส่วนการศึกษาพฤกษเคมีของรากมะเกลือป่า สามารถแยกองค์ประกอบทางเคมีจากสิ่งสกัดได้สาร 4 ชนิด ประกอบด้วยสารกลุ่มแนฟโทควิโนน 1 ชนิด คือ diospyrin, อนุพันธ์ของแนฟธาลีน 1 ชนิด คือ 5-hydroxy-4-methoxy-2-naphthaldehyde และสารกลุ่มไตรเทอร์ปีนอยด์ 2 ชนิด คือ lupeol และ betulinic acid การพิสูจน์เอกลักษณ์ทางกายภาพและหาสูตรโครงสร้างทางเคมีของสารทั้งหมดนี้ทำโดยวิเคราะห์ข้อมูลจากสเปกตรัมของ UV, IR, MS, และ NMR ร่วมกับการเปรียบเทียบข้อมูลของสารที่ทราบสูตรโครงสร้างทางเคมีแล้ว นอกจากนี้ยังได้ศึกษาคุณสมบัติทาง NMR ของคาร์บอนทุกอะตอมในสารกลุ่มควิโนนที่แยกได้ทุกชนิด รวมทั้งได้ทำการแก้ไข ^1H NMR assignments ของ rubiadin และ ^1H และ ^{13}C NMR assignments ของ diospyrin

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ลายมือชื่อนิสิต.....
ลายมือชื่ออาจารย์ที่ปรึกษา.....
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SUKANYA DEJ-ADISAI : QUINONES FROM ROOTS OF *PRISMATOMERIS SESSILIFLORA* AND *DIOSPYROS MONTANA* THESIS ADVISOR : ASSOCIATE

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Phytochemical investigation of the roots of *Prismatomeris sessiliflora* Pierre ex Pitard (Rubiaceae) led to the isolation of two pure compounds. They are the anthraquinones rubiadin and rubiadin-1-methyl ether. From the roots of *Diospyros montana* Roxb. (Ebenaceae), four pure compounds were isolated. These compounds are the naphthoquinone diospyrin, the naphthalene derivative 5-hydroxy-4-methoxy-2-naphthaldehyde, and the triterpenoids lupeol and betulinic acid. The structures of all of these isolates were determined by comparison of their UV, IR, MS and NMR properties with previously reported values. The unequivocal ^{13}C NMR assignments of these quinones, including the revision of the ^1H NMR assignments of rubiadin and ^1H and ^{13}C NMR assignments of diospyrin, were reported.

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CONTENTS

	Page
ABSTRACT (Thai).....	iv
ABSTRACT (English).....	v
ACKNOWLEDGEMENTS.....	vi
CONTENTS.....	vii
LIST OF TABLES.....	x
LIST OF FIGURES.....	xii
LIST OF SCHEMES.....	xvii
LIST OF ABBREVIATIONS.....	xviii
CHAPTER	
I INTRODUCTION.....	1
II HISTORICAL	
1. Chemical Constituents of Plants in the Genus <i>Prismatomeris</i>	15
2. Chemical Constituents of <i>Diospyros montana</i>	16
3. Biogenesis of Naturally Occurring Quinones.....	25
III EXPERIMENTAL	
1. Source of Plant Material.....	27
2. General Techniques	
2.1 Analytical Thin Layer Chromatography.....	27
2.2 Preparative Thin Layer Chromatography.....	27
2.3 Column Chromatography	
2.3.1 Quick Column Chromatography.....	28
2.3.2 Flash Column Chromatography.....	28
2.3.3 Gel Filtration Chromatography.....	28
2.4 Spectroscopy	
2.4.1 Ultraviolet (UV) Absorption Spectra.....	29
2.4.2 Infrared (IR) Absorption Spectra.....	29
2.4.3 Mass Spectra (MS).....	29

2.4.4 Proton and Carbon-13 Nuclear Magnetic Resonance (^1H and ^{13}C NMR) Spectra.....	30
2.5 Physical Properties	
2.5.1 Melting Points.....	30
2.5.2 Optical Rotations.....	30
2.6 Solvents.....	30
3. Extraction.....	31
4. Isolation	
4.1 Isolation of Chemical Compounds from <i>Prismatomeris</i> <i>sessiliflora</i>	35
4.1.1 Isolation of PS-A.....	36
4.1.2 Isolation of PS-B.....	38
4.2 Isolation of Chemical Compounds from <i>Diospyros montana</i> ..	39
4.2.1 Isolation of DM-A.....	39
4.2.2 Isolation of DM-B.....	44
4.2.3 Isolation of DM-C.....	44
4.2.4 Isolation of DM-D.....	46
5. Physical and Spectral data of Isolated Compounds	
5.1 Compound PS-A.....	46
5.2 Compound PS-B.....	47
5.3 Compound DM-A.....	48
5.4 Compound DM-B.....	49
5.5 Compound DM-C.....	50
5.6 Compound DM-D.....	51
IV RESULTS AND DISCUSSION	
1. Structure Determination of Compound PS-A.....	53
2. Structure Determination of Compound PS-B.....	57
3. Structure Determination of Compound DM-A.....	60
4. Structure Determination of Compound DM-B.....	67
5. Structure Determination of Compound DM-C.....	71

6. Stucture Determination of Compound DM-D.....	74
V CONCLUSION.....	78
REFERENCES.....	157
VITA.....	162

LIST OF TABLES

Table		Page
1	Distribution of chemical constituents in the genus <i>Prismatomeris</i>	15
2	Chemical constituents of <i>Diospyros montana</i>	16
3	The ratio and volume of solvents for quick column chromatography of chloroform extract from <i>P. sessiliflora</i>	35
4	Combination of fractions from quick column chromatography of chloroform extract from <i>P. sessiliflora</i>	36
5	The ratio and volume of solvents in six portions of quick column chromatography.....	37
6	The ratio and volume of solvents for quick column chromatography of ethyl acetate extract from <i>D. montana</i>	39
7	Combination of fractions from quick column chromatography of ethyl acetate extract from <i>D. montana</i>	40
8	The ratio and volume of solvents in ten portions of column chromatography.....	41
9	The ratio and volume of solvents for quick column chromatography of petroleum ether extract from <i>D. montana</i>	45
10	Combination of fractions from quick column chromatography of petroleum ether extract from <i>D. montana</i>	45
11	Carbon-proton correlations of compound PS-A observed in the HETCOR spectrum.....	54
12	Carbon-proton correlations of compound PS-A observed in the HMBC spectrum.....	55
13	¹ H and ¹³ C NMR spectral data of compound PS-A (in DMSO- <i>d</i> ₆) and rubiadin* (in MeOH- <i>d</i> ₄).....	56
14	Carbon-proton correlations of compound PS-B observed in the HETCOR spectrum.....	58
15	Carbon-proton correlations of compound PS-B observed in the HMBC spectrum.....	58

16	^1H and ^{13}C NMR spectral data of compound PS-B (in $\text{DMSO-}d_6$) and rubiadin-1-methyl ether* (in $\text{DMSO-}d_6$).....	59
17	Carbon-proton correlations of compound DM-A observed in the HMQC spectrum.....	61
18	Carbon-proton correlations of compound DM-A observed in the HMBC spectrum.....	62
19	^1H and ^{13}C NMR spectral data of compound DM-A (in CDCl_3) and diospyrin* (in CDCl_3).....	62
20	Carbon-proton correlations of compound DM-B observed in the HETCOR spectrum.....	69
21	Carbon-proton correlations of compound DM-B observed in the COLOC spectrum.....	69
22	^1H and ^{13}C NMR spectral data of compound DM-B (in CDCl_3) and ^1H spectral data of 5-hydroxy-4-methoxy-2-naphthaldehyde* (in CDCl_3).....	70
23	^1H NMR assignments of compound DM-C (in CDCl_3) and lupeol* (in CDCl_3).....	72
24	The ^{13}C NMR assignments of compound DM-C (in CDCl_3) and lupeol* (in CDCl_3).....	72
25	^1H NMR assignments of compound DM-D (in $\text{DMSO-}d_6$) and betulinic acid* (in CDCl_3).....	75
26	The ^{13}C NMR assignments of compound DM-D (in $\text{DMSO-}d_6$) and betulinic acid* (in CDCl_3).....	75

LIST OF FIGURES

Figure		Page
1	<i>Prismatomeris sessiliflora</i> Pierre ex Pitard.....	13
2	<i>Diospyros montana</i> Roxb.	14
3	EI mass spectrum of compound PS-A.....	79
4	UV spectrum of compound PS-A (in methanol).....	80
5	IR spectrum of compound PS-A (KBr disc).....	81
6a	500 MHz ¹ H NMR spectrum of compound PS-A (in DMSO- <i>d</i> ₆).....	82
6b	500 MHz ¹ H NMR spectrum of compound PS-A (in DMSO- <i>d</i> ₆) (expanded from 2.02 to 13.10 ppm).....	83
7a	75 MHz ¹³ C NMR spectrum of compound PS-A (in DMSO- <i>d</i> ₆).....	84
7b	75 MHz ¹³ C NMR spectrum of compound PS-A (in DMSO- <i>d</i> ₆).....	85
8a	DEPT 135 spectrum of compound PS-A (in DMSO- <i>d</i> ₆).....	86
8b	DEPT 90 spectrum of compound PS-A (in DMSO- <i>d</i> ₆).....	87
9a	HETCOR spectrum of compound PS-A (in DMSO- <i>d</i> ₆).....	88
9b	HETCOR spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 7.0-8.2 ppm, δ_{C} 107.5-137.5 ppm].....	89
10a	HMBC spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 0.00-14.00 ppm, δ_{C} 0-195 ppm].....	90
10b	HMBC spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 1.40-2.80 ppm, δ_{C} 107.5-165 ppm].....	91
10c	HMBC spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 7.00-7.45 ppm, δ_{C} 106-120 ppm].....	92
10d	HMBC spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 7.15-8.25 ppm, δ_{C} 161-191 ppm].....	93
10e	HMBC spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 7.60-8.35 ppm, δ_{C} 125-136 ppm].....	94
10f	HMBC spectrum of compound PS-A (in DMSO- <i>d</i> ₆) [δ_{H} 12.70-13.40 ppm, δ_{C} 105-165 ppm].....	95

11	Structure of compound PS-A.....	56
12	EI mass spectrum of compound PS-B.....	96
13	UV spectrum of compound PS-B (in methanol).....	97
14	IR spectrum of compound PS-B (KBr disc).....	98
15a	500 MHz ^1H NMR spectrum of compound PS-B (in DMSO- d_6).....	99
15b	500 MHz ^1H NMR spectrum of compound PS-B (in DMSO- d_6) (expanded from 2.12 to 8.14 ppm).....	100
16a	75 MHz ^{13}C NMR spectrum of compound PS-B (in DMSO- d_6).....	101
16b	75 MHz ^{13}C NMR spectrum of compound PS-B (in DMSO- d_6) (expanded from 126.5 to 136.2 ppm).....	102
17a	DEPT 90 spectrum of compound PS-B (in DMSO- d_6).....	103
17b	DEPT 135 spectrum of compound PS-B (in DMSO- d_6).....	104
18a	HETCOR spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 1.6-8.8 ppm, δ_{C} 0-200 ppm].....	105
18b	HETCOR spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 7.3-8.3 ppm, δ_{C} 107.5-142.5 ppm].....	106
19a	HMBC spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 0.0-8.5 ppm, δ_{C} 0-200 ppm].....	107
19b	HMBC spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 1.98-2.28 ppm, δ_{C} 121-131 ppm].....	108
19c	HMBC spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 2.0-4.1 ppm, δ_{C} 154-192 ppm].....	109
19d	HMBC spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 7.30-8.15 ppm, δ_{C} 106-142 ppm].....	110
19e	HMBC spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 7.45-8.15 ppm, δ_{C} 124-137 ppm].....	111
19f	HMBC spectrum of compound PS-B (in DMSO- d_6) [δ_{H} 7.35-8.20 ppm, δ_{C} 158-190 ppm].....	112
20	Structure of compound PS-B.....	60
21	EI mass spectrum of compound DM-A.....	113

22	UV spectrum of compound DM-A (in methanol).....	114
23	IR spectrum of compound DM-A (KBr disc).....	115
24	300 MHz ^1H NMR spectrum of compound DM-A (in CDCl_3).....	116
25	75 MHz ^{13}C NMR spectrum of compound DM-A (in CDCl_3).....	117
26	DEPT spectra of compound DM-A (in CDCl_3).....	118
27a	HMQC spectrum of compound DM-A (in CDCl_3).....	119
27b	HMQC spectrum of compound DM-A (in CDCl_3) [δ_{H} 2.15-2.65 ppm, δ_{C} 18-29 ppm].....	120
27c	HMQC spectrum of compound DM-A (in CDCl_3) [δ_{H} 6.6-7.9 ppm, δ_{C} 119-141 ppm].....	121
28a	HMBC spectrum of compound DM-A (in CDCl_3).....	122
28b	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 7.05-7.60 ppm, δ_{C} 14-31 ppm].....	123
28c	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 2.00-2.80 ppm, δ_{C} 118-152 ppm].....	124
28d	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 6.7-7.9 ppm, δ_{C} 111-125 ppm].....	125
28e	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 6.8-7.8 ppm, δ_{C} 110-132 ppm].....	126
28f	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 6.80-7.75 ppm, δ_{C} 162-192 ppm].....	127
28g	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 11.65-12.35 ppm, δ_{C} 111-130 ppm].....	128
28h	HMBC spectrum of compound DM-A (in CDCl_3) [δ_{H} 11.6-12.4 ppm, δ_{C} 156-166 ppm].....	129
29	Structure of compound DM-A.....	67
30	EI mass spectrum of compound DM-B.....	130
31	UV spectrum of compound DM-B (in methanol).....	131
32	IR spectrum of compound DM-B (film).....	132
33	300 MHz ^1H NMR spectrum of compound DM-B (in CDCl_3).....	133

34a	^1H - ^1H COSY spectrum of compound DM-B (in CDCl_3).....	134
34b	^1H - ^1H COSY spectrum of compound DM-B (in CDCl_3) (expanded from 6.8 to 8.0 ppm).....	135
35a	NOESY spectrum of compound DM-B (in CDCl_3).....	136
35b	NOESY spectrum of compound DM-B (in CDCl_3) (expanded from 6.8 to 8.0 ppm).....	137
36	Results from the NOESY experiment of compound DM-B.....	68
37	75 MHz ^{13}C NMR spectrum of compound DM-B (in CDCl_3).....	138
38	DEPT spectra of compound DM-B (in CDCl_3).....	139
39	HETCOR spectrum of compound DM-B (in CDCl_3).....	140
40a	COLOC spectrum of compound DM-B (in CDCl_3).....	141
40b	COLOC spectrum of compound DM-B (in CDCl_3) [δ_{H} 6.6-10.4 ppm, δ_{C} 94.5-196.6 ppm].....	142
41	Structure of compound DM-B.....	71
42	EI mass spectrum of compound DM-C.....	143
43	IR spectrum of compound DM-C (KBr disc).....	144
44a	300 MHz ^1H NMR spectrum of compound DM-C (in CDCl_3).....	145
44b	300 MHz ^1H NMR spectrum of compound DM-C (in CDCl_3) (expanded from 0.40 to 5.30 ppm).....	146
45a	75 MHz ^{13}C NMR spectrum of compound DM-C (in CDCl_3).....	147
45b	75 MHz ^{13}C NMR spectrum of compound DM-C (in CDCl_3)..... (expanded from 12 to 153 ppm)	148
46	DEPT spectra of compound DM-C (in CDCl_3).....	149
47	Structure of compound DM-C.....	74
48	EI mass spectrum of compound DM-D.....	150
49	IR spectrum of compound DM-D (KBr disc).....	151
50a	300 MHz ^1H NMR spectrum of compound DM-D (in $\text{DMSO}-d_6$)...	152
50b	300 MHz ^1H NMR spectrum of compound DM-D (in $\text{DMSO}-d_6$)... (expanded from 0.55 to 4.88 ppm)	153
51a	75 MHz ^{13}C NMR spectrum of compound DM-D (in $\text{DMSO}-d_6$)....	154

51b	75 MHz ^{13}C NMR spectrum of compound DM-D (in $\text{DMSO-}d_6$)... (expanded from 11 to 200 ppm)	155
52	DEPT spectra of compound DM-D (in $\text{DMSO-}d_6$).....	156
53	Structure of compound DM-D.....	77

LIST OF SCHEMES

Scheme		Page
1	Separation of <i>Prismatomeris sessiliflora</i> Pierre ex Pitard.....	33
2	Separation of <i>Diospyros montana</i> Roxb.	34
3	Mass fragmentation of compound DM-A.....	65
4	Mass fragmentation of naphthoquinone monomer.....	66

LIST OF ABBREVIATIONS

br	=	Broad (for NMR spectra)
<i>c</i>	=	concentration
°C	=	Degree Celsius
CDCl ₃	=	Deuterated chloroform
CHCl ₃	=	Chloroform
cm	=	Centimeter
COLOC	=	Long-Range Heteronuclear Chemical Shift Correlation
¹³ C NMR	=	Carbon-13 nuclear magnetic resonance
COSY	=	Correlation spectroscopy
1-D	=	One dimensional
2-D	=	Two dimensional
d	=	doublet (for NMR spectra)
dd	=	doublet of doublet (for NMR spectra)
ddd	=	doublet of doublet of doublet (for NMR spectra)
DEPT	=	Distortionless Enhancement by Polarization Transfer
DMSO- <i>d</i> ₆	=	Deuterated dimethylsulfoxide
δ	=	Chemical Shift
EIMS	=	Electron Impact Mass Spectrum
EtOAc	=	Ethyl acetate
g	=	Gram
HETCOR	=	Heteronuclear Chemical Shift Correlation
¹ H NMR	=	Proton nuclear magnetic resonance
HMBC	=	¹ H-detected Heteronuclear Multiple Bond Coherence
HMQC	=	¹ H-detected Heteronuclear Multiple Quantum Coherence
Hz	=	Hertz
IR	=	Infrared spectrum
<i>J</i>	=	Coupling constant
kg	=	Kilogram

L	=	Liter
λ_{\max}	=	Wavelength at maximal absorption
ϵ	=	Molar absorptivity
M^+	=	Molecular ion
m	=	multiplet (for NMR spectra)
MeOH	=	Methanol
mg	=	Milligram
MHz	=	Megahertz
min	=	Minute
ml	=	Millimeter
m/z	=	Mass to charge ratio
MS	=	Mass spectrometry
No.	=	Number
nm	=	Nanometer
NMR	=	Nuclear magnetic resonance
NOE	=	Nuclear Overhauser Effect
NOESY	=	Nuclear Overhauser Effect Correlation Spectroscopy
ppm	=	part per million
Pet. ether	=	Petroleum ether
ν_{\max}	=	Wave number at maximal absorption
s	=	Singlet (for NMR spectra)
t	=	Triplet (for NMR spectra)
TLC	=	Thin layer chromatography
PTLC	=	Preparative-Thin layer chromatography
UV	=	Ultraviolet