Supplementary Data

Oligostilbenoids from *Vatica lowii* King (Dipterocarpaceae) and their chemotaxonomic significance

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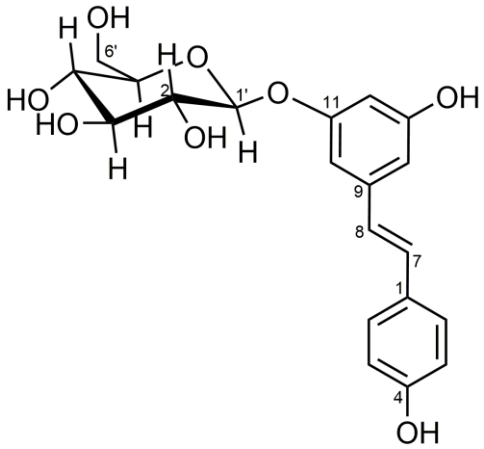
Piceid (1)



$[\alpha]_D$: -65° (c=0.1, MeOH)

Molecular formula : $C_{20}H_{22}O_8$

UV λ_{max} (MeOH) : 225, 298 nm

IR ν_{max} (KBr) : 3379 (OH); 1655 cm^{-1} (C=C Ar)

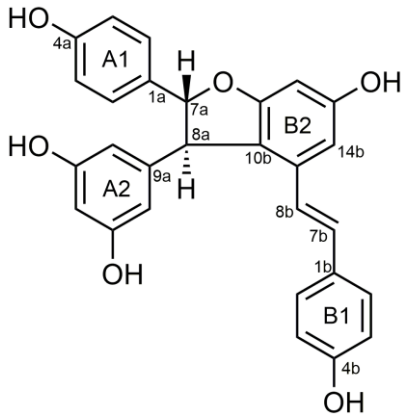
NMR data of compound **1**

No	δ_H (*mult.*, J in Hz)		δ_C	
	1*	**1****	**1***	**1****
1	-	-	129.9	130.0
2,6	7.42 (d, 8.4)	7.39 (d, 8.6)	128.8	128.0
3,5	6.83 (d, 8.4)	6.72 (d, 8.6)	116.4	115.6
4	-	-	158.3	157.3
7	7.10 (d, 16.4)	7.05 (d, 17.2)	129.6	128.6
8	6.92 (d, 16.4)	6.85 (d, 17.2)	126.4	125.2
9	-	-	140.8	139.4
10	6.80 (t, 1.8)	6.70 (dd, 1.8, 1.8)	103.8	102.8
11	-	-	159.4	158.4
12	6.45 (t, 1.8)	6.32 (dd, 1.8, 1.8)	106.4	104.7
13	-	-	160.3	158.9
14	6.66 (t, 1.8)	6.55 (dd, 1.8, 1.8)	108.2	107.2
1'	4.93 (d, 7.7)	4.80 (d, 7.0)	102.0	100.7
2'	3.45 (m)	3.44 (m)	74.7	73.3
3'	3.51 (m)	3.50 (m)	77.9	76.7
4'	3.43 (m)	3.43 (m)	71.4	69.8
5'	3.54 (m)	3.52 (m)	78.1	77.2
6a'	3.92 (d, 11.7)	3.90 (d, 12.0)	62.7	60.7
6b'	3.72 (dd, 11.7, 1.8)	3.72 (d, 12.0, 1.8)	62.7	60.7

* measured in acetone-d_6

** measured in DMSO-d_6 (Orsini et al. 1997)

(-)-ε-viniferin (2)



$[\alpha]_D$: -63º (c=0.1, MeOH)

Molecular formula : $C_{28}H_{22}O_6$

UV λ_{max} (MeOH) : 225, 323 nm

IR ν_{max} (KBr) : 3366 (OH); 1604, 1444 cm^{-1} (C=C Ar)

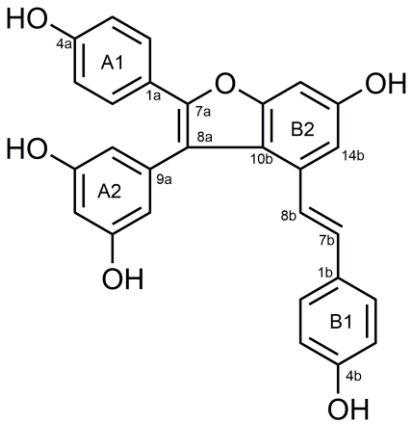
NMR data of compound **2**

No	δ_H (*mult.*, J in Hz)		δ_C	
	2*	**2****	**2***	**2****
1a	-	-	133.7	133.8
2a,6a	7.21 (*d*, 8.8)	7.19 (*d*, 8.0)	127.9	127.8
3a,5a	6.83 (*d*, 8.8)	6.80 (*d*, 8.0)	116.1	116.0
4a	-	-	158.3	158.0
7a	5.42 (*d*, 5.4)	5.40 (*d*, 5.0)	93.9	93.8
8a	4.48 (*d*, 5.4)	4.44 (*d*, 5.0)	57.1	57.0
9a	-	-	147.4	147.3
10a,14a	6.23 (*br s*)	6.22 (*br s*)	106.9	106.9
11a	-	-	159.9	159.7
12a	6.23 (*br s*)	6.22 (*br s*)	102.1	101.9
13a	-	-	159.9	159.7
1b	-	-	129.8	130.0
2b,6b	7.18 (*d*, 8.8)	7.15 (*d*, 8.0)	128.7	128.6
3b,5b	6.72 (*d*, 8.8)	6.71 (*d*, 8.0)	116.3	116.1
4b	-	-	158.3	158.0
7b	6.92 (*d*, 16.4)	6.91 (*d*, 16.0)	123.4	123.3
8b	6.71 (*d*, 16.4)	6.65 (*d*, 16.0)	130.0	130.1
9b	-	-	136.3	136.3
10b	-	-	119.8	119.7
11b	-	-	162.4	162.3
12b	6.32 (*d*, 1.8)	6.30 (*d*, 2.0)	96.8	96.7
13b	-	-	159.6	159.4
14b	6.73 (*d*, 1.8)	6.70 (*d*, 2.0)	104.1	104.1

* measured in acetone-d_6

** measured in acetone-d_6 (Oshima et al. 1995)

Viniferifuran (3)



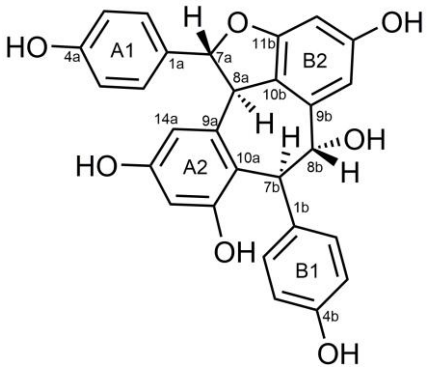
Molecular formula : $C_{28}H_{20}O_6$

NMR data of compound **3**

No	δ_H (*mult.*, J in Hz)		δ_C	
	3[*]	**3**[**]	**3**[*]	**3**[**]
1a	-	-	123.8	123.8
2a,6a	7.42 (*d*, 8.8)	7.42 (*d*, 8.8)	128.7	128.4
3a,5a	6.82 (*d*, 8.8)	6.69 (*d*, 8.8)	116.2	116.2
4a	-	-	160.0	158.4
7a	-	-	154.0	150.6
8a	-	-	117.0	117.4
9a	-	-	140.8	138.7
10a	6.52 (*d*, 2.2)	6.40 (*d*, 2.2)	108.6	110.2
11a	-	-	159.7	160.6
12a	6.25 (*t*, 2.2)	6.47 (*t*, 2.2)	105.6	103.1
13a	-	-	159.7	160.6
14a	6.52 (*d*, 2.2)	6.40 (*d*, 2.2)	108.6	110.2
1b	-	-	131.9	130.7
2b,6b	7.07 (*d*, 8.8)	6.98 (*d*, 8.8)	129.1	128.8
3b,5b	6.81 (*d*, 8.8)	6.65 (*d*, 8.8)	116.4	116.3
4b	-	-	158.3	158.2
7b	6.98 (*d*, 16.1)	6.94 (*d*, 16.3)	123.3	123.3
8b	6.85 (*d*, 16.1)	6.85 (*d*, 16.3)	129.9	129.3
9b	-	-	133.1	133.3
10b	-	-	122.5	122.5
11b	-	-	158.2	156.4
12b	6.83 (*d*, 1.8)	6.80 (*d*, 2.0)	102.7	97.3
13b	-	-	158.2	156.5
14b	7.34 (*d*, 1.8)	6.99 (*d*, 2.0)	105.6	107.4

[*] measured in acetone-d_6
[**] measured in methanol-d_4 (Ito et al. 1999)

Hemsleyanol A (4)



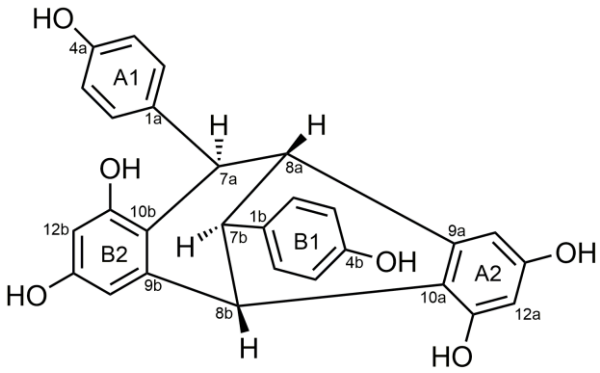
$[\alpha]_D$: +12º (c=0.1, MeOH)
Molecular formula : $C_{28}H_{22}O_7$
UL λ_{max} (MeOH) : 220, 232, 284 nm
IR ν_{max} (KBr) : 3302 (OH); 1611, 1454 cm^{-1} (C=C Ar)

NMR data of compound **4**

No	δ_H (*mult.*, J in Hz)		δ_C	
	4*	**4****	**4***	**4****
1a	-	-	134.0	133.8
2a,6a	7.48 (d, 8.3)	7.48 (d, 8.3)	130.7	130.4
3a,5a	6.91 (d, 8.3)	6.94 (d, 8.3)	116.7	116.4
4a	-	-	155.8	155.6
7a	5.74 (d, 9.6)	5.75 (d, 9.8)	94.3	93.3
8a	5.38 (d, 9.6)	5.41 (d, 9.8)	52.4	51.9
9a	-	-	141.8	141.4
10a	-	-	118.7	118.4
11a	-	-	158.8	158.3
12a	6.15 (br s)	6.24 (br s)	102.1	102.0
13a	-	-	156.8	156.6
14a	6.14 (br s)	6.23 (br s)	106.6	106.6
1b	-	-	135.7	135.2
2b,6b	6.66 (d, 8.3)	6.72 (d, 8.3)	130.8	130.5
3b,5b	6.44 (d, 8.3)	6.48 (d, 8.3)	115.1	114.9
4b	-	-	159.0	158.5
7b	5.04 (d, 5.8)	5.07 (d, 5.9)	49.5	49.3
8b	4.70 (d, 5.8)	4.76 (br d)	79.0	78.4
8b (OH)	4.68 (br s)	4.45 (br s)	79.0	78.4
9b	-	-	140.6	140.9
10b	-	-	118.5	118.1
11b	-	-	161.0	160.7
12b	6.00 (d, 1.9)	6.04 (d, 2.0)	96.6	96.2
13b	-	-	159.0	158.5
14b	5.67 (d, 1.9)	5.70 (d, 2.0)	108.7	108.2

* measured in methanol-d_4
** measured in acetone -d_6 (Ito et al. 2000b)

(-)-Ampelopsin F (5)



$[\alpha]_D$: -28º (c=0.1, MeOH)

Molecular formula : $C_{28}H_{22}O_6$

UL λ_{max} (MeOH) : 220, 232, 284 nm

IR ν_{max} (KBr) : 3302 (OH); 1611, 1454 cm^{-1} (C=C Ar)

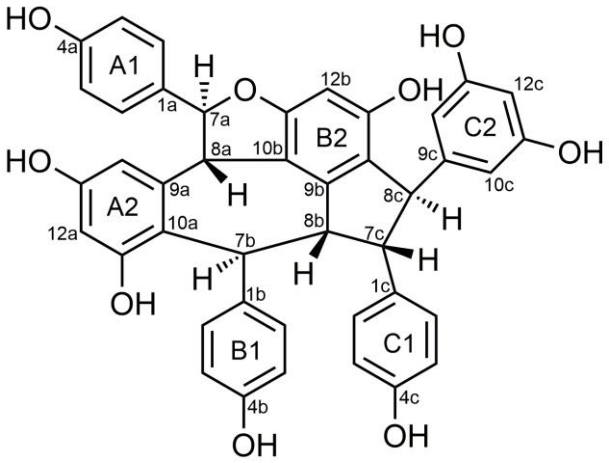
NMR data of compound **5**

No	δ_H (*mult.*, J in Hz)		δ_C	
	5*	**5****	**5***	**5****
1a	-	-	139.1	138.4
2a,6a	7.01 (d, 8.8)	7.08 (d, 8.5)	130.1	129.8
3a,5a	6.68 (d, 8.8)	6.76 (d, 8.5)	115.7	115.5
4a	-	-	156.2	156.1
7a	4.08 (d, 1.5)	4.18 (d, 1.5)	47.6	47.1
8a	3.21 (br s)	3.34 (br s)	59.3	58.2
9a	-	-	147.5	147.2
10a	-	-	128.7	127.7
11a	-	-	153.2	153.1
12a	6.00 (d,1.8)	6.07 (d, 1.9)	101.9	101.7
13a	-	-	158.5	158.5
14a	6.37 (d, 1.8)	6.51 (d, 1.9)	104.3	104.0
1b	-	-	136.1	135.3
2b	6.72 (d,8.4)	6.78 (d, 8.5)	129.4	129.1
3b	6.50 (d,8.4)	6.58 (d, 8.5)	115.6	115.4
4b	-	-	156.1	156.1
7b	3.55 (br s)	3.64 (br s)	50.9	50.4
8b	4.01 (br s)	4.12 (br s)	49.8	49.6
9b	-	-	147.8	147.5
10b	-	-	114.0	113.2
11b		-	158.1	157.7
12b	6.07 (d,1.8)	6.17 (d, 2.4)	101.9	101.6
13b	-	-	157.1	157.0
14b	6.34 (d,1.8)	6.44 (d, 2.4)	105.7	105.5

* measured in methanol-d_4

** measured in acetone-d_6 (Luo et al. 2001)

Vaticanol A (6)



$[\alpha]_D$: -169º (c=0.1, MeOH)

Molecular formula : $C_{42}H_{32}O_9$

UV λ_{max} (MeOH) : 216, 236, 284 nm

IR ν_{max} (KBr) : 3369 (OH); 1612, 1451 cm^{-1} (C=C Ar)

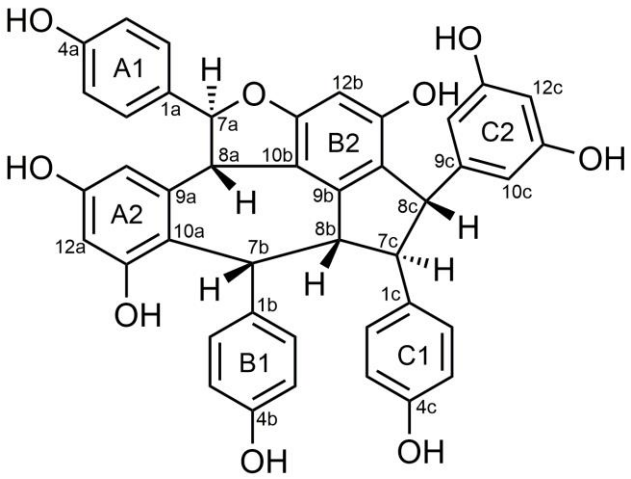
NMR data of compound **6**

No	δ_H (*mult.*, J in Hz)		δ_C	
	6[*]	**6**[**]	**6**[*]	**6**[**]
1a	-	-	134.5	134.4
2a,6a	7.27 (d, 8.8)	7.28 (d, 8.8)	128.1	128.0
3a,5a	6.82 (d, 8.8)	6.83 (d, 8.8)	116.1	116.0
4a	8.45 (br s)	8.42 (br s)	157.9	157.9
7a	6.16 (d, 4.0)	6.18 (br d, 3.9)	86.7	86.5
8a	4.47 (d, 4.0)	4.51 (d, 3.9)	50.4	50.3
9a	-	-	144.8	144.7
10a	-	-	119.4	119.3
11a	7.38 (br s)	7.31 (br s)	158.0	157.7
12a	6.07 (d, 2.2)	6.09 (d, 2.4)	101.4	101.3
13a	7.92 (br s)	7.95 (br s)	156.5	156.3
14a	6.46 (d, 2.2)	6.48 (d, 2.4)	103.4	103.3
1b	-	-	138.8	138.7
2b,6b	7.05 (d, 8.8)	7.07 (d, 8.8)	129.4	129.2
3b,5b	6.58 (d, 8.8)	6.60 (d, 8.8)	115.4	115.4
4b	8.03 (br s)	8.00 (br s)	155.9	155.7
7b	5.14 (br s)	5.17 (br s)	36.1	36.0
8b	4.49 (d, 7.3)	4.52 (d, 7.3)	48.7	48.6
9b	-	-	145.0	144.9
10b	-	-	118.7	118.6
11b	-	-	160.0	159.9
12b	6.20 (br s)	6.22 (s)	95.4	95.3
13b	8.02 (br s)	7.97 (br s)	155.6	155.4

14b	-	-	122.3	122.2
1c	-	-	135.9	135.8
2c,6c	6.53 (d, 8.8)	6.55 (d, 8.8)	129.7	129.6
3c,5c	6.35 (d, 8.8)	6.37 (d, 8.8)	115.9	114.9
4c	7.90 (br s)	7.89 (br s)	156.6	156.4
7c	3.62 (d, 7.3)	3.65 (d, 7.3)	64.5	64.3
8c	4.16 (br s)	4.20 (br s)	57.6	57.5
9c	-	-	147.6	147.5
10c,14c	6.24 (d, 2.2)	6.27 (d, 2.0)	106.8	106.7
11c,13c	8.10 (br s)	8.09 (br s)	159.4	159.2
12c	6.18 (t, 2.2)	6.21 (t, 2.0)	101.3	101.2

* measured in acetone-d_6
** measured in acetone-d_6 (Tanaka et al. 2000a)

Vaticanol E (7)



$[\alpha]_D$: +191º (c=0.1, MeOH)

Molecular formula : $C_{42}H_{32}O_9$

UV λ_{max} (MeOH) : 216, 292 nm

IR ν_{max} (KBr) : 3295 (OH); 1606, 1453 cm^{-1} (C=C Ar)

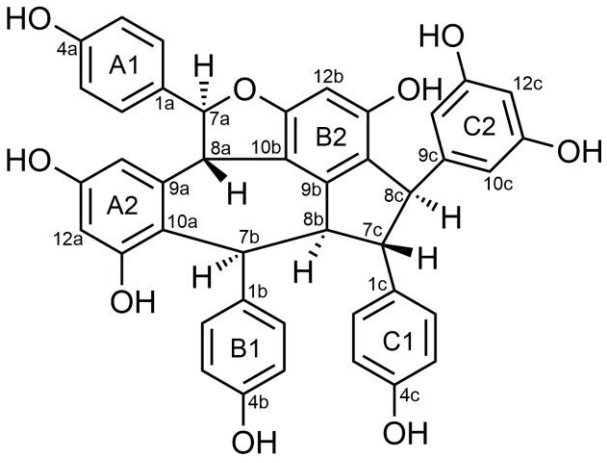
NMR data of compound **7**

No	δ_H (*mult.*, J in Hz)		δ_C	
	7*	**7****	**7***	**7****
1a	-	-	133.6	133.5
2a,6a	7.50 (d, 8.3)	7.77 (d, 8.3)	130.9	130.6
3a,5a	6.93 (d, 8.3)	6.99 (d, 8.3)	116.7	116.4
4a	-	-	159.0	158.6
7a	5.63 (d, 9.3)	5.66 (d, 9.3)	96.4	95.6
8a	5.38 (d, 9.3)	5.35 (d, 9.3)	52.6	52.3
9a	-	-	140.6	140.4
10a	-	-	124.2	123.5
11a	-	-	158.5	157.9

12a	6.03 (d, 2.3)	6.15 (d, 2.0)	102.0	102.0
13a	-	-	156.2	156.3
14a	6.02 (d, 2.3)	6.12 (br d, 2.0)	108.0	108.0
1b	-	-	133.5	132.8
2b,6b	5.97 (d, 8.5)	6.05 (d, 8.6)	133.3	132.9
3b,5b	6.27 (d, 8.5)	6.32 (d, 8.6)	113.8	113.7
4b	-	-	155.8	155.9
7b	4.79 (d, 2.8)	4.83 (d, 2.9)	42.9	42.4
8b	4.28 (dd, 9.8, 2.8)	4.30 (dd, 8.3, 2.9)	51.7	51.2
9b	-	-	144.7	144.1
10b	6.19 (d, 2.0)	6.30 (d, 2.0)	116.3	116.0
11b	-	-	160.4	160.4
12b	6.05 (s)	6.08 (s)	96.5	96.3
13b	-	-	155.8	155.6
14b	-	-	124.7	123.8
1c	-	-	130.9	130.3
2c,6c	7.14 (d, 8.3)	7.20 (d, 8.6)	131.6	131.3
3c,5c	6.79 (d, 8.3)	6.85 (d, 8.6)	115.5	115.4
4c	-	-	156.2	156.3
7c	3.94 (t, 9.8)	4.07 (dd, 10.3, 8.3)	58.6	58.1
8c	3.51 (t, 9.8)	3.59 (d, 10.3)	51.6	51.2
9c	-	-	148.9	148.1
10c,14c	6.19 (d, 2.0)	6.30 (d, 2.0)	108.0	107.6
11c,13c	-	-	159.0	159.3
12c	6.03 (t, 2.3)	6.13 (t, 2.0)	101.3	101.7

* measured in methanol-d_4
** measured in acetone-d_6 (Ito et al. 2000a)

Pauciflorol B (8)



$[\alpha]_D$: +20º (c=0.1, MeOH)

Molecular formula : $C_{42}H_{32}O_9$

UV λ_{max} (MeOH) : 216, 296 nm

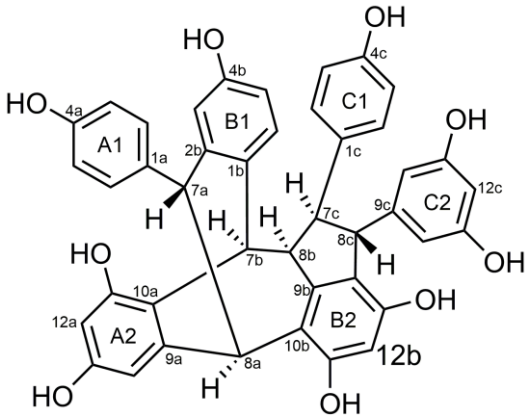
IR ν_{max} (KBr) : 3181 (OH); 1598, 1451 cm^{-1} (C=C Ar)

NMR data of compound **8**

No	δ_H (*mult.*, J in Hz)		δ_C	
	8[*]	**8**[**]	**8**[*]	**8**[**]
1a	-	-	130.9	130.1
2a,6a	7.16 (d, 8.5)	7.26 (d, 8.6)	130.5	129.5
3a,5a	6.74 (d, 8.5)	6.81 (d, 8.6)	116.5	115.4
4a	-	-	158.9	157.9
7a	5.75 (d, 11.6)	5.84 (d, 11.7)	91.2	89.9
8a	4.30 (d, 11.6)	4.47 (d, 11.9)	~48.6	48.1
9a	-	-	141.9	141.0
10a	-	-	125.7	124.1
11a	-	-	156.3	155.1
12a	6.22 (d, 2.0)	6.35 (d, 2.0)	101.4	101.0
13a	-	-	156.8	156.1
14a	5.98 (br d, 2.0)	6.17 (br d, 2.2)	105.7	105.3
1b	-	-	134.0	132.7
2b,6b	7.13 (d, 8.0)	7.19 (d, 8.5)	130.6	129.8
3b,5b	6.64 (d, 8.0)	6.69 (d, 8.5)	115.5	114.8
4b	-	-	155.8	155.1
7b	5.16 (d, 3.3)	5.28 (d, 3.3)	37.8	36.8
8b	3.65 (br d, 11.6)	3.66 (m)	52.8	51.8
9b	-	-	144.8	143.4
10b	-	-	116.2	115.3
11b	-	-	159.5	158.8
12b	6.08 (s)	6.15 (s)	96.7	96.0
13b	-	-	154.9	154.0
14b	-	-	121.5	120.3
1c	-	-	133.4	132.1
2c,6c	6.96 (d, 8.0)	7.02 (d, 8.5)	130.3	129.3
3c,5c	6.69 (d, 8.0)	6.74 (d, 8.5)	115.9	115.2
4c	-	-	156.8	156.1
7c	3.70 (dd, 11.6, 9.3)	3.76 (dd, 11.6, 9.3)	62.9	61.4
8c	4.17 (d, 9.3)	4.25 (d, 9.3)	58.4	56.7
9c	-	-	147.5	146.1
10c,14c	6.12 (s)	6.20 (s)	106.5	106.7
11c,13c	-	-	159.0	158.5
12c	6.10 (t, 2.0)	6.19 (s)	101.6	101.1

[*] measured in methanol-d_4
[**] measured in acetone-d_6 (Ito et al. 2003)

Vaticanol G (9)



$[\alpha]_D$	: +149° (c=0.1, MeOH)
Molecular formula	: $C_{42}H_{32}O_9$
UV λ_{max} (MeOH)	: 216, 236, 280 nm
IR ν_{max} (KBr)	: 3368 (OH); 1611, 1449 cm^{-1} (C=C Ar)

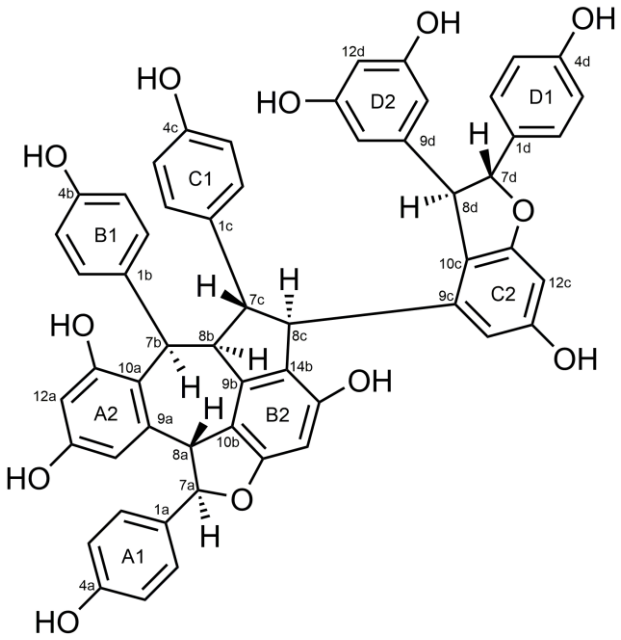
NMR data of compound **9**

No	δ_H (*mult.*, J in Hz)		δ_C	
	9*	**9****	**9***	**9****
1a	-	-	140.0	140.0
2a,6a	6.42 (br s)	6.42 (br s)	130.3	130.0
3a,5a	6.45 (br s)	6.45 (br s)	114.8	114.8
4a	8.00 (br s)	7.93 (br s)	158.6	155.6
7a	4.52 (d, 3.7)	4.55 (d, 3.4)	57.2	57.2
8a	4.60 (d, 3.7)	4.63 (d, 3.4)	50.4	50.3
9a	-	-	142.0	142.0
10a	-	-	126.1	126.2
11a	8.16 (br s)	8.08 (br s)	153.3	153.3
12a	6.17 (d, 2.2)	6.20 (d, 2.4)	101.7	101.8
13a	7.72 (br s)	7.68 (br s)	156.0	155.9
14a	5.64 (d, 2.6)	5.67 (d, 2.4)	111.5	111.5
1b	-	-	129.3	129.3
2b	-	-	141.9	141.8
3b	6.05 (d, 2.6)	6.08 (d, 2.4)	119.5	119.5
4b	8.00 (br s)	7.49 (br s)	154.9	154.9
5b	5.74 (dd, 8.4, 2.9)	5.76 (dd, 8.3, 2.4)	112.9	112.9
6b	5.99 (d, 8.8)	6.02 (d, 8.3)	135.1	135.1
7b	4.86 (d, 2.6)	4.89 (d, 2.0)	42.8	42.8
8b	3.83 (dd, 7.0, 2.2)	3.86 (dd, 7.0, 2.0)	53.9	53.9
9b	-	-	147.1	147.1
10b	-	-	117.6	117.7
11b	8.63 (br s)	8.54 (br s)	155.1	155.1
12b	6.45 (br s)	6.47 (s)	102.0	102.0
13b	7.71 (br s)	7.67 (br s)	153.1	153.1

14b	-	-	121.9	122.0
1c	-	-	137.2	137.2
2c	5.92 (br s)	5.92 (br s)	127.6	127.5
3c	5.97 (br s)	5.98 (br s)	114.3	114.3
4c	8.00 (br s)	7.94 (br s)	156.6	156.5
5c	6.66 (br s)	6.68 (br s)	116.2	116.2
6c	7.13 (br s)	7.12 (br s)	130.7	130.7
7c	3.49 (d, 7.0)	3.52 (d, 7.0)	63.1	63.0
8c	4.07 (br s)	4.11 (s)	57.1	57.1
9c	-	-	147.8	147.7
10c,14c	5.93 (d, 2.2)	5.97 (d, 2.4)	106.5	106.5
11c,13c	8.08 (br s)	8.04 (br s)	159.2	159.1
12c	6.08 (t, 2.2)	6.12 (t, 2.4)	101.1	101.1

* measured in acetone-d_6
** measured in acetone-d_6 (Ito et al. 2001)

Vaticanol B (10)



$[\alpha]_D$: -28° (c=0.1, MeOH)

Molecular formula : $C_{56}H_{42}O_{12}$

UV λ_{max} (MeOH) : 216, 236, 284 nm

IR ν_{max} (KBr) : 3368 (OH); 1614, 1450 cm^{-1} (C=C Ar)

NMR data of compound **10**

No	δ_H (*mult.*, J in Hz)		δ_C	
	10*	**10****	**10***	**10****
1a	-	-	130.8	130.8
2a,6a	7.22 (d, 8.8)	7.23 (d, 8.8)	130.2	130.2
3a,5a	6.79 (d, 8.8)	6.79 (d, 8.8)	115.4	116.0

4a-OH	8.54 (s)	8.48 (s)	158.6	158.5
7a	5.76 (d, 11.7)	5.77 (d, 11.7)	90.5	90.4
8a	4.42 (d, 11.0)	4.44 (d, 11.7)	48.9	48.8
9a	-	-	141.8	141.8
10a	-	-	124.5	124.5
11a-OH	8.21 (s)	8.17 (s)	155.7	155.7
12a	6.27 (d, 2.2)	6.29 (d, 2.0)	101.6	101.6
13a-OH	8.08 (s)	8.06 (s)	156.8	156.7
14a	6.16 (d, 2.2)	6.12 (d, 2.0)	105.8	105.8
1b	-	-	133.5	133.5
2b,6b	7.15 (d, 8.4)	7.17 (d, 8.8)	130.7	130.7
3b,5b	6.68 (d, 8.4)	6.70 (d, 8.8)	115.5	115.5
4b-OH	8.21 (s)	8.16 (s)	155.9	155.9
7b	5.18 (d, 3.3)	5.21 (d, 3.9)	37.1	37.1
8b	3.09 (dd, 11.3, 3.3)	3.13 (dd, 11.3, 3.9)	53.2	53.1
9b	-	-	143.3	143.2
10b	-	-	115.9	115.7
11b	-	-	158.8	158.8
12b	6.02 (s)	6.05 (s)	96.5	96.5
13b-OH	7.58 (s)	7.45 (s)	155.0	154.9
14b	-	-	122.2	122.1
1c	-	-	131.4	131.4
2c,6c	6.37 (d, 8.4)	6.42 (d, 8.8)	129.3	129.2
3c,5c	6.49 (d, 8.8)	6.52 (d, 8.8)	116.0	115.8
4c-OH	7.94 (s)	7.90 (s)	156.4	156.3
7c	4.09 (dd, 11.3, 10.1)	4.10 (dd, 11.3, 10.7)	57.6	57.6
8c	4.54 (d, 10.1)	4.55 (d, 10.7)	49.2	49.3
9c	-	-	141.7	141.6
10c	-	-	123.5	123.3
11c	-	-	161.7	161.7
12c	6.25 (d, 2.2)	6.21 (d, 2.0)	95.6	95.6
13c-OH	8.22 (s)	8.19 (s)	159.4	159.4
14c	6.45 (d, 2.2)	6.49 (d, 2.0)	107.0	107.0
1d	-	-	134.7	134.7
2d,6d	7.18 (d, 8.8)	7.19 (d, 8.8)	128.3	128.2
3d,5d	6.76 (d, 8.8)	6.78 (d, 8.8)	116.1	115.9
4d-OH	8.42 (s)	8.37 (s)	158.0	157.9
7d	5.35 (d, 5.1)	5.38 (d, 4.7)	94.7	94.6
8d	4.67 (d, 5.1)	4.68 (d, 4.7)	57.6	57.5
9d	-	-	148.1	147.9
10d,14d	6.09 (d, 2.5)	6.10 (d, 2.4)	107.6	107.5
11d,13d-OH	8.05 (s)	8.01 (s)	159.9	159.8
12d	6.26 (t, 2.2)	6.30 (t, 2.4)	102.2	102.2

* measured in acetone-d_6
** measured in acetone-d_6 (Tanaka et al. 2000a)