SUPPLEMENTARY MATERIAL

New α -Glucosidase Inhibiting Anthracenone from the Barks of *Harungana madagascariensis* Lam.

Ismail B. Onajobi^{a,b}, Achyut Adhikari^{b*}, Shabbir Hussain^b, Kulsoom Javaid^b, Obasola E. Fagade^c and I. A. Oladosu^d

^a Department of Microbiology, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria.

^b H. E. J. Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Karachi-75270, Pakistan.

^c Environmental and Biotechnology Unit, Department of Microbiology, University of Ibadan, Ibadan, Nigeria.

^d Department of Chemistry, University of Ibadan, Ibadan, Nigeria.

*achyutraj05@gmail.com

Abstract

Two new 10-hydroxy-9(10H)-anthracenone, madagascenone A (**1**) and B (**2**) were isolated from the barks of *Harungana madagascariensis* Lam. The structures of the compounds were determined by using 1D- and 2D- NMR and mass spectroscopic techniques. Both of the compounds showed an *in vitro* α -glucosidase inhibition with IC_{50} = 69.9 $\pm$ 4.21 and 122.3 $\pm$ 1.13 μ M, respectively, more potent than the standard acarbose (IC_{50} = 840 $\pm$ 1.23 μ M).

Keywords: *Harungana madagascariensis*, madagascenone A and B, α -Glucosidase Inhibition

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Table S1: ^{13}C - and ^1H -NMR chemical shift values of compounds **1** and **2** (ppm, MeOD and CDCl_3 , 125 and 500 MHz), respectively.

1			2	
C. No.	δ_{C}	δ_{H} (J, Hz)	δ_{C}	δ_{H} (J, Hz)
1	164.7	-	167.3	-
2	103.0	6.32 s	98.1	6.42 s
3	161.7	-	167.0	-
4	122.6	-	117.3	-
4a	148.6	-	137.1	-
5	119.8	6.77 s	129.4	-
6	141.2	-	147.9	-
7	132.2	-	119.9	6.83 s
8	161.7	-	161.1	-
8a	121.5	-	112.7	-
9	193.3	-	191.4	-
9a	113.7	-	108.5	-
10	61.7	5.84 s	61.8	5.80 s
10a	143.7	-	143.3	-
11	24.6	3.50 d (6.1)	27.2	3.35 d (6.2)
12	124.2	4.96 t (6.1)	122.9	5.03 t (6.2)
13	132.3	-	131.6	-
14	18.1	1.82 s	18.1	1.84 s
15	26.0	1.70 s	26.3	1.32 s
16	27.9	3.75 d (6.2)	29.7	3.08 dd (7.6, 15.7) 3.75 dd (9.0, 15.7)
17	124.5	5.07 t (6.2)	94.8	4.57 dd (7.6, 9.0)
18	133.1	-	78.2	-
19	17.9	1.85 s	24.7	1.23 s
20	25.9	1.75 s	25.6	1.70 s
21	20.9	2.31 s	64.1	3.68 q (6.5)
22	-	-	15.2	1.34 t (6.5)
23	-	-	20.9	2.33 s
1-OH	-	12.39 s	-	12.26 s
8-OH	-	12.30 s	-	12.21 s

Figure S1 : Key HMBC correlations of compound **1** and **2**.

Figure S2 : Key NOESY correlations of compounds **1** and **2**.

Figure S3: FAB ($^{-ve}$) MS spectrum of compound **1** (madagascanthranol A)

Figure S4: FAB ($^{+ve}$) MS Spectrum of Compound **1**

Figure S5: ^1H -NMR (500 MHz, MeOD) spectrum of compound **1**.

Figure S6: ¹³C-NMR (125 MHz, MeOD) spectrum of compound **1**.

Figure S7: HSQC spectrum of compound **1**.

Figure S8: HMBC spectrum of compound **1**.

Figure S9: FAB (^{-}Ve) MS spectrum of compound **2**

Figure S10: ^1H -NMR (500 MHz, CDCl_3) spectrum of compound **2**.

Figure S11: ¹³C-NMR (150 MHz, CDCl₃) spectrum of compound 2.

Figure S12: HSQC spectrum of compound **2**.

Figure S13: HMBC spectrum of compound 2.