SUPPLEMENTARY MATERIAL

A new dihydrofurocoumarin from the fruits of *Pandanus tectorius* Parkinson ex Du Roi

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Asbract: From the fruit of *Pandanus tectorius* Parkinson ex Du Roi, one new dihydrofurocoumarin, named pandanusin A (**1**) and fifteen known compounds, including one furanocoumarin (**2**), two coumarins (**3**, **4**), four lignans (**5-8**), one neolignan (**9**), two flavonoids (**10**, **11**), three phenolics (**12-14**), one monoglyceride (**15**) and one monosaccharide (**16**) were isolated by various chromatography methods. Among them, compounds (**3-5**) were obtained from the *Pandanus* genus for the first time and compounds (**9-14**, **16**) were reported from this species for the first time. Their structures were elucidated by HR-ESI-MS, NMR 1D and 2D experiments and comparison with previous reported data. The α -glucosidase inhibitory activity of all compounds was measured. The isolated compounds (**1-12**, **14**) showed better α -glucosidase inhibitory activity (IC_{50} = 42.2, 36.5, 84.7, 73.2, 40.8, 26.7, 76.5, 33.8, 68.1, 14.4, 22.1, 81.5, 43.8 μ M, respectively) than the standard drug acarbose (IC_{50} = 214.5 μ M).

Keywords: *Pandanus tectorius*; pandanusin A; α -glucosidase inhibition

List of supporting information

Table S1. α -Glucosidase inhibition of compounds **1-16**.

Figure S1. Chemical structures and selected HMBC, NOESY correlations of **1**

Figure S2. ^1H -NMR spectrum (500 MHz) of compound **1** in Acetone- d_6 .

Figure S3. ^{13}C -NMR spectrum (125 MHz) of compound **1** in Acetone- d_6 .

Figure S4. DEPT spectrum of compound **1** in Acetone- d_6 .

Figure S5. HSQC spectrum of compound **1** in Acetone- d_6 .

Figure S6. HMBC spectrum of compound **1** in Acetone- d_6 .

Figure S7. NOESY spectrum of compound **1** in Acetone- d_6 .

Figure S8. HR-ESI-MS spectrum of compound **1** in Acetone- d_6 .

Figure S9. CD spectrum of compound **1** in Methanol.

Table S1. α -Glucosidase inhibitory activity of the isolated compounds **1-16**.

Compound	Inhibition (I%)				
	250 μ M	100 μ M	50 μ M	25 μ M	10 μ M
1		68.4 $\pm$ 2.7	54.9 $\pm$ 0.28	38.9 $\pm$ 2.1	-
2		83.8 $\pm$ 1.6	71.1 $\pm$ 2.7	32.0 $\pm$ 3.0	-
3	91.3 $\pm$ 2.1	58.7 $\pm$ 1.3	26.8 $\pm$ 2.2	3.1 $\pm$ 1.4	-
4	95.4 $\pm$ 2.3	64.1 $\pm$ 1.5	39.2 $\pm$ 1.1	4.8 $\pm$ 1.6	-
5		96.9 $\pm$ 0.4	63.3 $\pm$ 0.8	27.0 $\pm$ 1.6	21.5 $\pm$ 3.0
6	94.1 $\pm$ 2.6	75.5 $\pm$ 1.7	63.4 $\pm$ 1.2	46.2 $\pm$ 1.3	29.8 $\pm$ 2.0
7		58.6 $\pm$ 2.0	36.7 $\pm$ 1.3	7.7 $\pm$ 1.7	-
8		98.2 $\pm$ 1.0	88.3 $\pm$ 1.2	29.1 $\pm$ 1.3	10.1 $\pm$ 2.6
9		72.9 $\pm$ 0.61	36.9 $\pm$ 3.0	22.3 $\pm$ 2.6	12.8 $\pm$ 2.6
10		99.5 $\pm$ 1.0	78.6 $\pm$ 4.6	71.0 $\pm$ 3.7	41.2 $\pm$ 3.3
11	97.2 $\pm$ 3.2	90.9 $\pm$ 2.2	74.9 $\pm$ 1.4	56.0 $\pm$ 1.4	27.3 $\pm$ 1.4
12		77.5 $\pm$ 2.8	11.8 $\pm$ 2.4	4.5 $\pm$ 2.2	-
13	50.79 $\pm$ 0.47	20.3 $\pm$ 2.7			
14		90.9 $\pm$ 0.4	63.3 $\pm$ 0.8	29.0 $\pm$ 1.6	19.8 $\pm$ 3.0
15	-	-	-	-	-
16	-	-	-	-	-
^a Acarbose	59.8 $\pm$ 1.2	21.2 $\pm$ 2.2	9.8 $\pm$ 1.4	3.2 $\pm$ 1.7	-

- Not shown inhibitory activity.

^a Positive control.

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