SUPPLEMENTARY MATERIAL

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

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\section*{Abstract}
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 \(\alpha\)-glucosidase inhibitory activity of all compounds was measured. The isolated compounds (1-12, 14) showed better \(\alpha\)-glucosidase inhibitory activity (IC\textsubscript{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 \(\mu\)M, respectively) than the standard drug acarbose (IC\textsubscript{50} = 214.5 \(\mu\)M).

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

- Not shown inhibitory activity.
- Positive control.
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