Supporting Information to:

Antioxidant Lignans from *Mananthes patentiflora*
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Structure Elucidation of Compound 1

The molecular formula of 1 was determined as C$_{20}$H$_{18}$O$_8$ by positive-ion HR-ESI-MS at m/z = 409.0904 [M + Na]$^+$. Its IR (1657 cm$^{-1}$) and UV (295 nm) absorbance suggested the presence of a conjugated ketone. The $^1$H-NMR data (Table 1) of 1 showed characteristic signals of tetrahydrofuranoid lignans with two methine protons ($\delta_{H}$ = 2.84, 4.19), two oxymethylene groups [($\delta_{H}$ = 3.75, 3.67, each 1H) and ($\delta_{H}$ = 4.25, 4.20, each 1H)], and one oxymethine ($\delta_{H}$ = 4.67). The doublet at $\delta_{H}$ = 4.67 (1H, d, $J$ = 9.0 Hz) was assigned to the oxybenzylic proton H-7' in a trans configuration to H-8' ($\delta_{H}$ = 2.84). The $^1$H-NMR spectrum of 1 exhibited five aromatic proton resonances. Three of them at $\delta_{H}$ = 6.98 (1H, s), 6.86 (1H, d, $J$ = 8.0 Hz), 6.78 (1H, d, $J$ = 8.0 Hz) and two dioxymethylene protons at 5.96 (2H, s) indicated that 1 contained a piperonyl unit [4]. And the piperonyl unit attached at C-7' was confirmed by the HMBC correlation between H-6' ($\delta_{H}$ = 6.86) and C-7' ($\delta_{C}$ = 83.5) (see Fig. 2). The other two of them at $\delta_{H}$ = 7.44 (1H, d, $J$ = 8.5 Hz) and 6.52 (1H, d, $J$ = 8.5 Hz) suggested the presence of 1,2,3,4-tetrasubstituted aromatic unit in 1. The correlation of H-6 ($\delta_{H}$ = 7.44, d, $J$ = 8.5 Hz)/C-7 ($\delta_{C}$ = 204.0) and H-8 ($\delta_{H}$ = 4.19, m)/C-7 ($\delta_{C}$ = 204.0) in HMBC indicated that the 1,2,3,4-tetrasubstituted aromatic unit linked to C-8 via a ketone unit. In the ROESY spectrum, the correlation between H-7'/H-9'a, H-8'/H-9'b, and H-9'a/H-8 indicated that H-8 was in trans configuration to H-8'. The relative configuration of 1 at C-7', C-8' and C-8 was suggested to be identical with those of (−)-sesaminone (1a) (see Fig. 1 and ref. [3]), based on the similarity in chemical shifts, coupling constants and optical rotation value. Thus, compound 1 was established as (−)-2-hydroxysesaminone.