SUPPLEMENTARY MATERIAL

A new flavonol from the kino of *Eucalyptus citriodora*

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Abstract

A new flavonol, 6-[1-(*p*-hydroxyphenyl)ethyl]rhamnocitrin (**3**) together with two known compounds, kaempferol (**4**) and 7-*O*-methyl aromadendrin (**5**) were isolated from the kino of *Eucalyptus citriodora* and their structures were elucidated on the basis of spectroscopic methods including 2D NMR experiments. Rhamnocitrin (**1**), 6-[1-(*p*-hydroxyphenyl)ethyl]-7-*O*-methyl aromadendrin (**2**), previously isolated from this plant, and compounds **3–5** were tested for inhibitory activity against 15-lipoxygenase. All compounds exhibited moderate to strong inhibitory activities, of which compounds **2**, **3** and **5** showed stronger inhibitory activity (IC_{50} 19.7±0.5, 29.3±0.9, 31.4±1.0 μ M, respectively) than the positive control quercetin (IC_{50} 37.5±0.8 μ M).

Keywords: *Eucalyptus citriodora*; kino; lipoxygenase; flavonoids

List of Contents

Figure S1. Key HMBC ($\longrightarrow$) correlations of compound **3**

Figure S2. ^1H NMR (500 MHz, $\text{DMSO-}d_6$) spectrum of compound **3**

Figure S3. ^{13}C NMR ($\text{DMSO-}d_6$, lower line) and DEPT 135 (upper line) spectra of compound **3**

Figure S4. ^1H - ^1H COSY spectrum of compound **3**.

Figure S5. HSQC spectrum of compound **3**

Figure S6. HMBC spectrum of compound **3**

Figure S7. NOESY spectrum of compound **3**

Table S1. ^1H and ^{13}C NMR spectroscopic data of **3** (500 and 125 MHz, $\text{DMSO-}d_6$).

Table S2. 15-Lipoxygenase inhibitory activity of compounds **1–5**.

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Table S1. ^1H and ^{13}C NMR spectroscopic data of **3** (500 and 125 MHz, $\text{DMSO-}d_6$).

Table 1. ^1H (500 MHz) and ^{13}C NMR (125 MHz) data of compound 1 in $\text{DMSO-}d_6$ (δ in ppm, J in Hz)						
Position	DEPT	δ_{H} (mult., J)	δ_{C}	HMBC ($\text{H} \rightarrow \text{C}$)	HMQC	NOESY
2	C		147.2			
3	C		136.2		C-3	
4	C		176.3			
5	C		157.2			
6	C		115.8			
7	C		163.2			
8	CH	6.78 (s)	90.7	6, 7, 9, 10	C-8	
9	C		154.6			
10	C		104.0	1'		
1'	C		121.8			
2'/6'	CH	8.08 (d, 8.8)	129.7	2, 4'	C-2', 6'	H-3'/5'
3'/5'	CH	6.93 (d, 8.8)	115.6	1', 4'	C-3', 5'	H-2'/6'
4'	C		159.5			
1''	CH	4.61 (q, 7.2)	31.8	5, 6, 7, 2'', 3'', 7'', 8''	C-1''	H-3''/7'', H-8''
2''	C		135.2		C-2''	
3''/7''	CH	7.06 (d, 8.6)	128.0	1'', 5''	C-3'', 7''	H-4''/6'', H-1''
4''/6''	CH	6.61 (d, 8.6)	114.7	2'', 5''	C-4'', 6''	H-3''/7''
5''	C		155.2			
8''	CH ₃	1.61 (d, 7.2)	17.9	6, 2''		H-1'', H-3''/7''
OCH ₃	CH ₃	3.83 (s)	56.4	7	7-OCH ₃	
3-OH		9.36 (s)				
5-OH		12.88 (s)		5, 6, 10		
4'-OH		10.12 (s)				
5''-OH		9.46 (s)		4'', 6'', 5''		

*Assignments were based on the HMBC, HMQC, COSY, NOESY, and DEPT experiments.

Table S2. 15-Lipoxygenase inhibitory activity of compounds **1–5**.

Compounds	IC ₅₀ (μM)
1	47.5±1.0
2	19.7±0.5
3	29.3±0.9
4	58.8±0.8
5	31.4±1.0
Quercetin	37.5±0.8