SUPPLEMENTARY MATERIAL

A new α -pyrone from the mangrove endophytic fungus

***Phomopsis* sp. HNY29-2B**

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Abstract

A new α -pyrone derivative, phomopyrone A (**1**), together with two known compounds (**2–3**), was isolated from the culture of the mangrove endophytic fungus *Phomopsis* sp. HNY29-2B. Their structures were determined by detailed analysis of spectroscopic data. The configuration of **1** was further confirmed by X-ray diffraction. All isolated compounds were evaluated for antibacterial and antioxidative activities. Compound **2** exhibited antibacterial activities with MIC values of 25 and 50 μ M against *Bacillus subtilis* and *Pseudomonas aeruginosa*, and compound **3** showed activities against *Staphylococcus aureus* and *Bacillus subtilis* with MIC values of 25 and 50 μ M, respectively.

Keywords

α -pyrone; endophytic fungus; *Phomopsis* sp.; antibacterial activity

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Table S1. ^1H and ^{13}C NMR data of **1** (500 and 125 MHz, CDCl_3 , δ in ppm).

position	1		
	δ_{C} , type	δ_{H} , mult (J in Hz)	HMBC (H $\rightarrow$ C)
2	164.8, C		
3	104.6, C		
4	167.1, C		
5	91.6, CH	6.12, s	3, 4, 6, 8
6	162.5, C		
7	54.9, CH_2	4.55, s	2, 3, 4
8	127.0, C		
9	131.6, CH	6.73, q (7.2)	6, 10, 11
10	14.5, CH_3	1.86, d (7.2)	8, 9
11	12.3, CH_3	1.90, s	6, 8, 9
4- OCH_3	56.5, CH_3	3.93, s	4

Table S2. Antibacterial biological activities of compounds **1–3**.

compounds	antibacterial activity MIC (μM)		
	<i>B. subtilis</i> ^a	<i>P. aeruginosa</i> ^b	<i>S. aureus</i> ^c
1	>100	>100	>100
2	25	50	>100
3	50	>100	25
ciprofloxacin ^d	0.5	0.5	0.5

^a*Bacillus subtilis*. ^b*Pseudomonas aeruginosa*. ^c*Staphylococcus aureus*.

^dciprofloxacin was tested as positive control.

Figure S1. Selected HMBC (arrow) correlations of phomopyrone A (**1**).

Figure S2. ^1H NMR spectrum of **1** in CDCl_3

Figure S3. ^{13}C NMR spectrum of **1** in CDCl_3

Figure S4. DEPT-90 spectrum of **1** in CDCl_3

Figure S5. DEPT-135 spectrum of **1** in CDCl₃

Figure S6. HSQC spectrum of **1** in CDCl₃

Figure S7. ^1H - ^1H COSY spectrum of **1** in CDCl_3

Figure S8. HMBC spectrum of **1** in CDCl_3

Figure S9. HREIMS spectrum of **1**