SUPPLEMENTARY MATERIAL

Pleosporalone A, the first azaphilone characterized with aromatic A-ring from a marine-derived *Pleosporales* sp. fungus

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Abstract

A fungal strain, *Pleosporales* sp. CF09-1, was isolated from marine sediment collected from the Bohai Sea. A novel azaphilone derivative, named pleosporalone A (**1**), along with two known analogues, cohaerins A and B (**2** and **3**) were obtained and identified from the culture extract of *Pleosporales* sp. CF09-1. Their planar structures were elucidated by detailed analysis of spectroscopic data and by comparison with related known compounds. Pleosporalone A (**1**) represent the first azaphilone derivative characterized with A-ring aromatization. Compound **1** showed strong antifungal activity against three plant pathogenic fungi *Botrytis cinerea*, *Rhizopus oryzae* and *Phytophthora capsici* with the MIC values of 0.39, 0.78 and 0.78 μ M, respectively.

Keywords: marine sediment; *Pleosporales* sp.; azaphilone derivative; antifungal activity

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Table S1. ^1H NMR and ^{13}C NMR data of **1** and Thunberginol B

No.	1 (CD_3OD , 500 MHz)		Thunberginol B ($\text{DMSO}-d_6$, 270 MHz) ^a

	^1H	^{13}C	^1H	^{13}C
1	-	168.8	-	165.8
3	-	151.5	-	152.8
4	6.50 (1H, s)	110.3	7.11 (1H, s)	100.7
4a	-	138.1	-	140.2
5	6.43 (1H, s)	103.1	6.48 (1H, d, $J = 2.0$ Hz)	103.3
6	-	165.2	-	165.0
7	-	112.3	6.31 (1H, d, $J = 2.0$ Hz)	101.5
8	-	162.0	-	162.7
8a	-	99.7	-	98.0
9	2.12 (3H, s)	8.1	-	-
10	-	121.7	-	122.5
11	-	140.1	7.27 (1H, d, $J = 2.0$ Hz)	112.3
12	6.77 (1H, d, $J = 7.5$ Hz)	122.3	-	145.7
13	7.14 (1H, dd, $J = 8.0, 7.5$ Hz)	131.6	-	147.8
14	6.73 (1H, d, $J = 8.0$ Hz)	114.3	6.85 (1H, d, $J = 8.0$ Hz)	116.1
15	-	157.1	7.22 (1H, dd, $J = 8.0, 2.0$ Hz)	117.1
16	2.26 (3H, s)	20.1		

^a Yoshikawa M, Harada E, Naitoh Y, Inoue K, Matsuda H, Shimoda H, Yamahara J, Murakami N. 1994. Development of bioactive functions in hydrangeae dulcis folium. III. On the antiallergic and antimicrobial principles of hydrangeae dulcis folium. (1). Thunberginol A, B, and F. Chem Pharm Bull. 42:2225-2230.

Figure S1. ¹H NMR (500 MHz, CDCl₃) spectrum of **1**

Figure S2. ¹³C NMR (125 MHz, CDCl₃) spectrum of **1**

Figure S3. HMQC (CDCl₃) spectrum of **1**

Figure S4. COSY (CDCl₃) spectrum of **1**

Figure S5. HMBC (CDCl₃) spectrum of **1**

Figure S6. COSY (—) and key HMBC (→) correlations of **1**.

Figure S7. ESIMS spectrum of 1

Figure S8. HRESIMS spectrum of 1