

SUPPLEMENTARY MATERIAL

A new cycloartane triterpenoid glycoside from *Souliea vaginata*

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Abstract: One new cycloartane triterpenoid glycoside, soulieoside Q (**1**), together with four known compounds (**2–5**) were isolated from the ethanolic extract of the rhizomes

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of *Souliea vaginata* Maxim. The structure of the new compound was determined by extensive spectroscopic analysis including 1D- and 2D-NMR and HRESIMS, as well as chemical methods. Compound **1** was evaluated for its cytotoxic activities against HepG2 and A549 cancer cell lines.

Keywords: *Souliea vaginata*; Ranunculaceae; cycloartane triterpenoid glycoside

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Table S1. ^1H and ^{13}C NMR spectroscopic data of **1** (600 and 150 MHz, pyridine- d_5).

No.	δ_{H} (J in Hz)	δ_{C} , type	No.	δ_{H} (J in Hz)	δ_{C} , type
1	1.20, m; 1.54, m	32.7, CH ₂	25		70.6, C
2	1.95, m; 2.29 m	30.6, CH ₂	26	1.52, s	28.6, CH ₃
3	3.44, dd (11.4, 4.2)	88.8, CH	27	1.28, s	27.3, CH ₃
4		41.8, C	28	1.43, s	26.2, CH ₃
5	1.61, d (6.0)	48.4, CH	29	1.27, s	16.3, CH ₃
6	1.49, m; 0.64, q (12.0)	21.4, CH ₂	30	0.89, s	20.9, CH ₃
7	1.22, m; 0.99, m	26.9, CH ₂	Xyl-1'	4.83, d (7.2)	106.5, CH
8	1.27, m	48.4, CH	2'	4.24, m	77.4, CH
9		20.0, C	3'	4.14, m	80.2, CH
10		26.8, C	4'	4.14, m	72.0, CH
11	1.09, m; 1.97, m	27.0, CH ₂	5'	4.29, m; 3.66, m	67.5, CH ₂
12	1.68, m; 1.81, m	34.2, CH ₂	Rha-1''	6.55, s	102.0, CH
13		47.2, C	2''	5.05, br s	72.2, CH
14		47.1, C	3''	4.88, dd (9.6, 3.0)	83.9, CH
15	2.98, dd (12.6, 7.8); 1.76, dd (12.6, 4.8)	49.7, CH ₂	4''	4.54, t (9.6)	73.5, CH
16	4.81, m	73.3, CH	5''	4.79, m	70.2, CH
17	2.20, d (7.8)	57.0, CH	6''	1.64, d (6.0)	19.1, CH ₃
18	1.66, s	21.9, CH ₃	Glc-1'''	5.52, d (7.8)	107.4, CH
19	0.24, d (4.0); 0.52, d (4.0)	30.8, CH ₂	2'''	4.11, m	76.4, CH
20		87.1, C	3'''	4.30, m	79.0, CH
21	1.34, s	26.7, CH ₃	4'''	4.30, m	71.8, CH
22	1.68, m; 2.49 m	37.9, CH ₂	5'''	3.98, m	79.1, CH
23	1.89, m; 2.24 m	24.7, CH ₂	6'''	4.47 dd (12.0, 2.4), 4.40 dd (12.0, 4.2)	62.8, CH ₂
24	3.94, t (7.2)	85.3, CH			

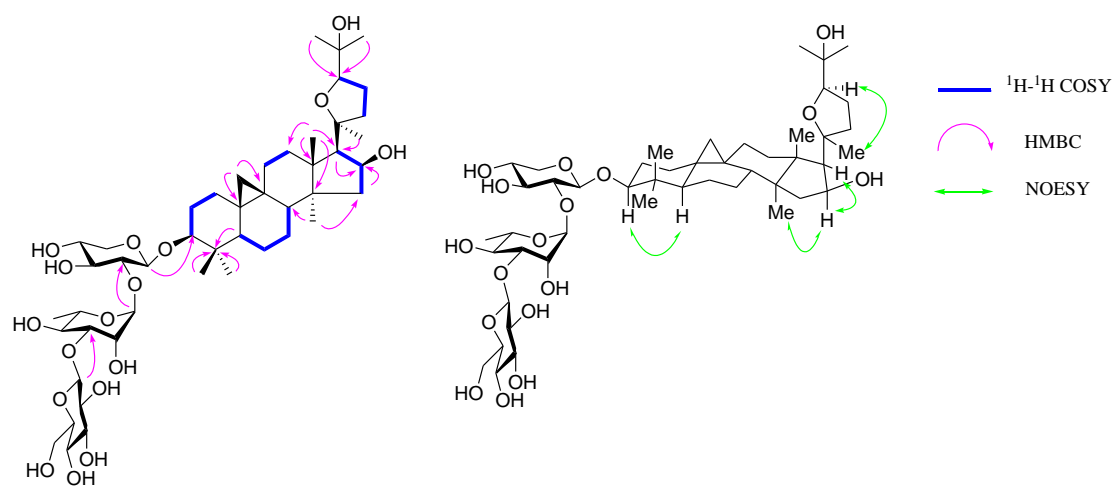


Figure S1. Key HMBC, ^1H - ^1H COSY and NOESY correlations of **1**.

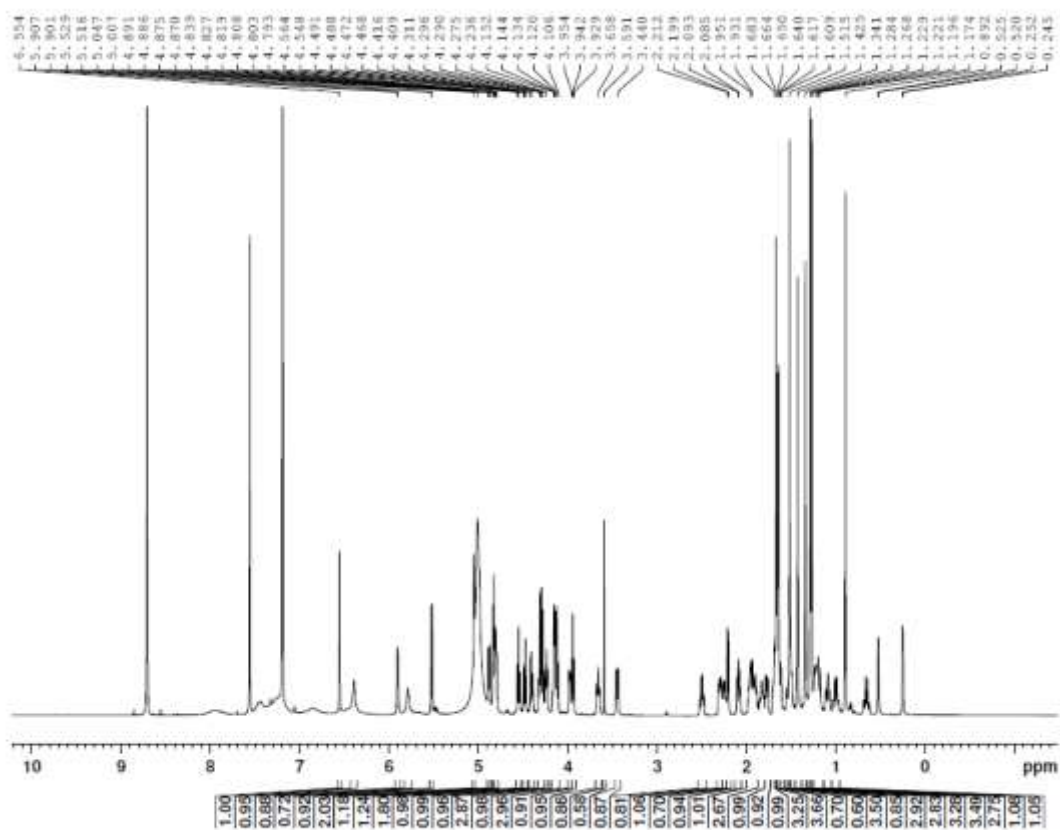


Figure S2. The ^1H NMR (600 MHz, pyridine-d_5) spectrum of the new compound **1**.

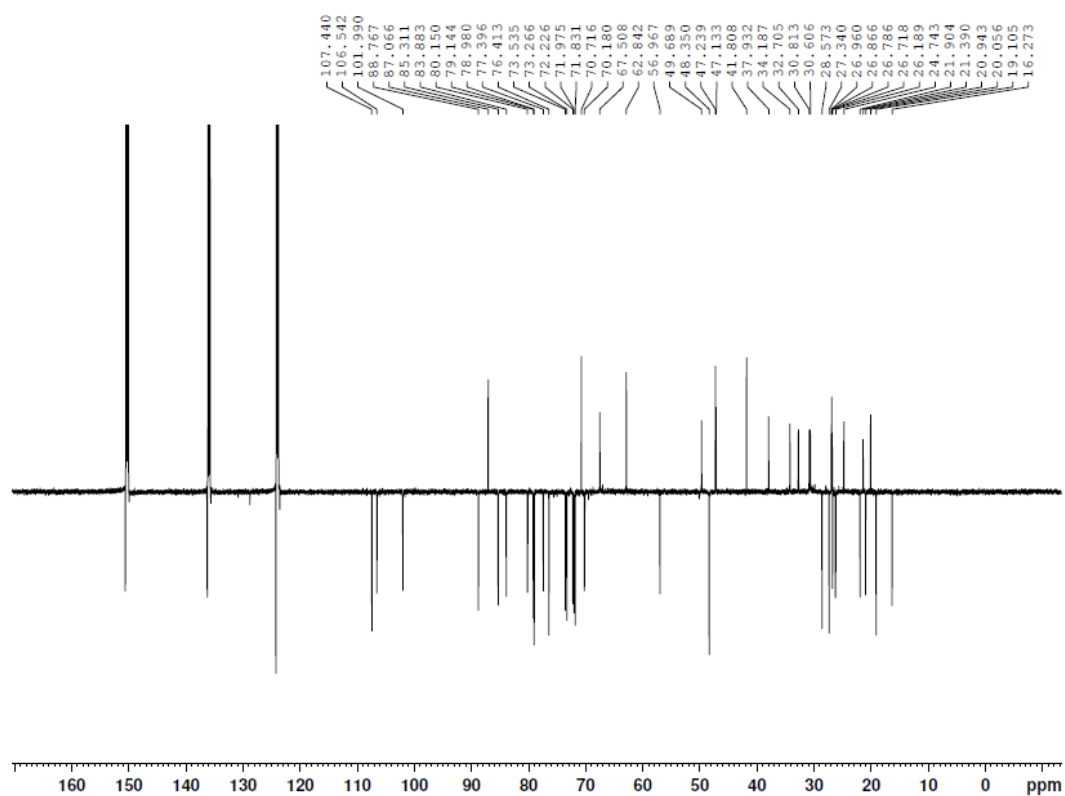


Figure S3. The ^{13}C NMR (APT, 150 MHz, pyridine- d_5) spectrum of the new compound **1**.

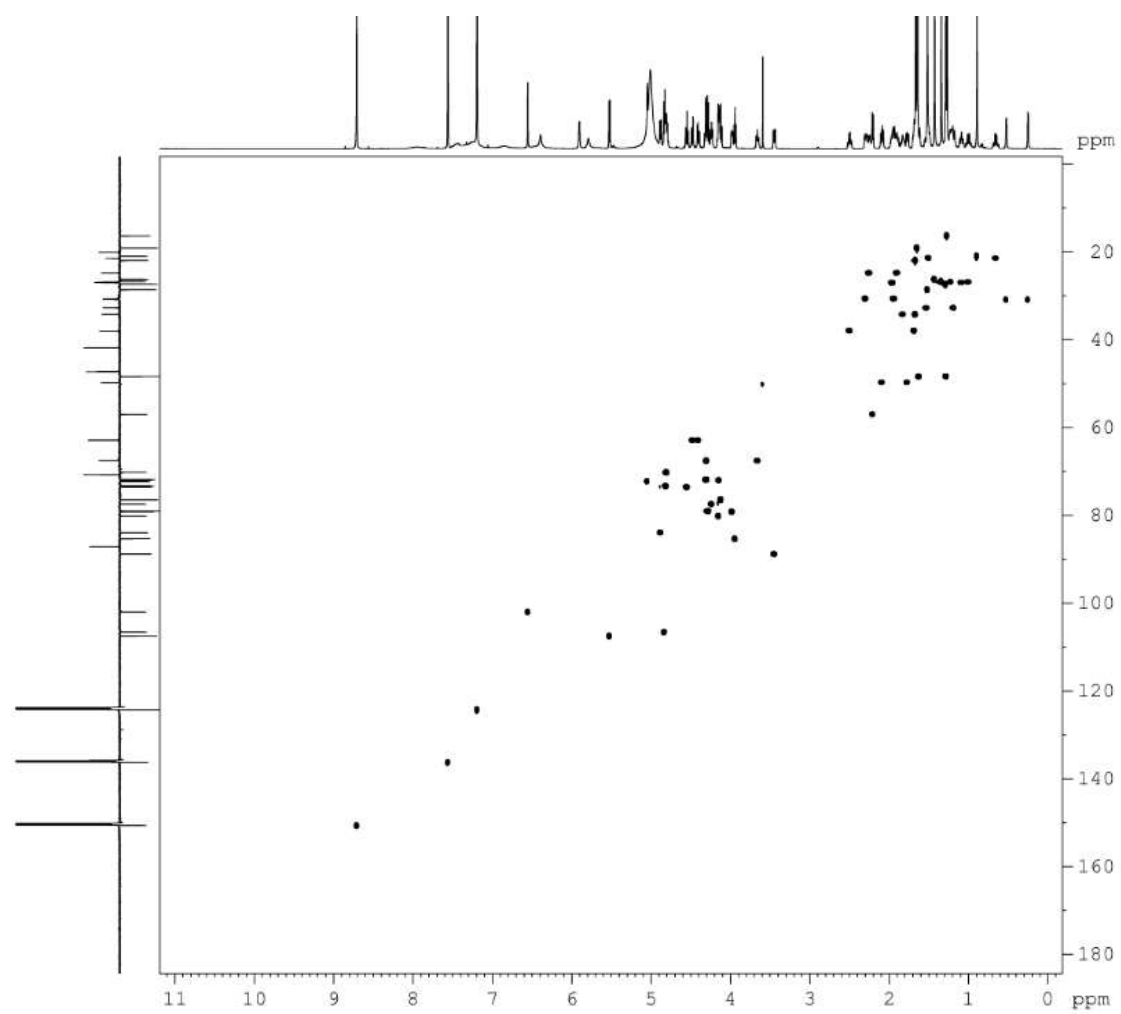


Figure S4. The HSQC spectrum of the new compound **1**.

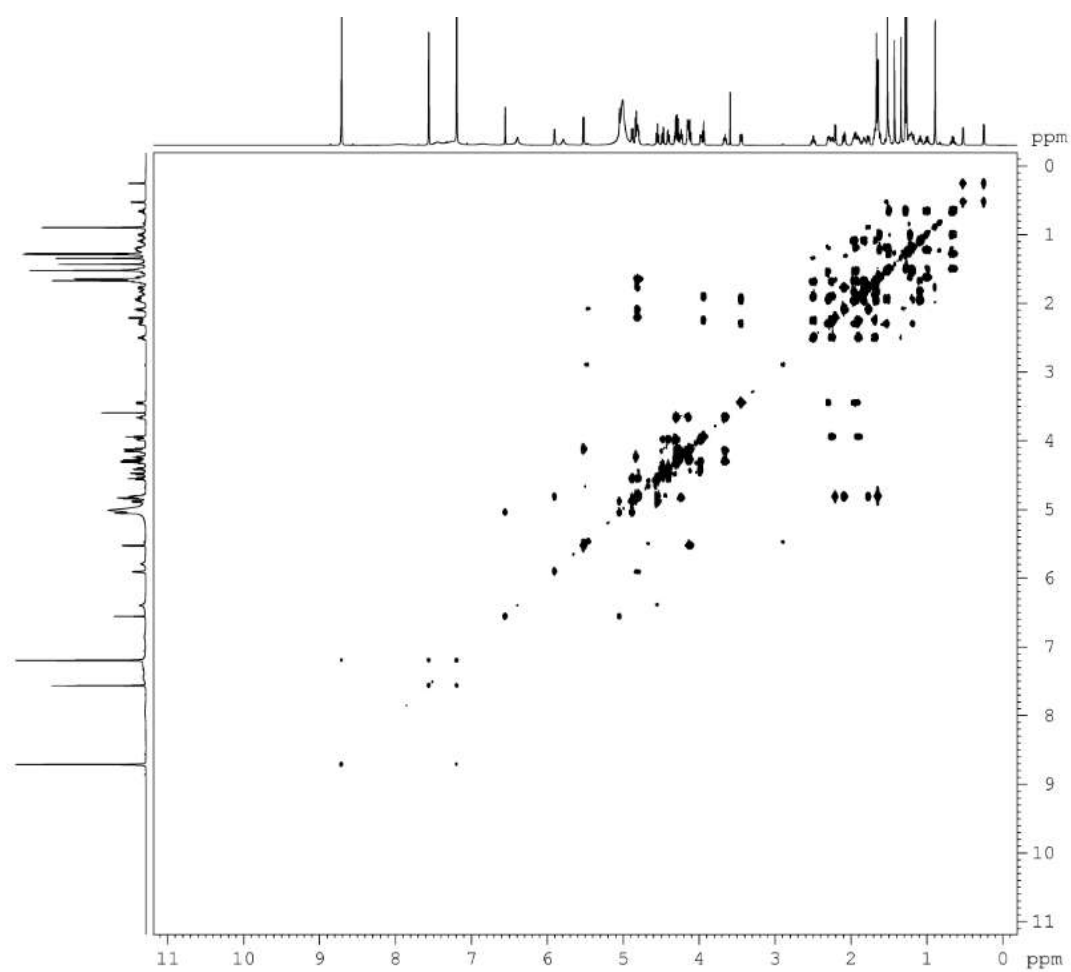


Figure S5. The ^1H - ^1H COSY spectrum of the new compound **1**.

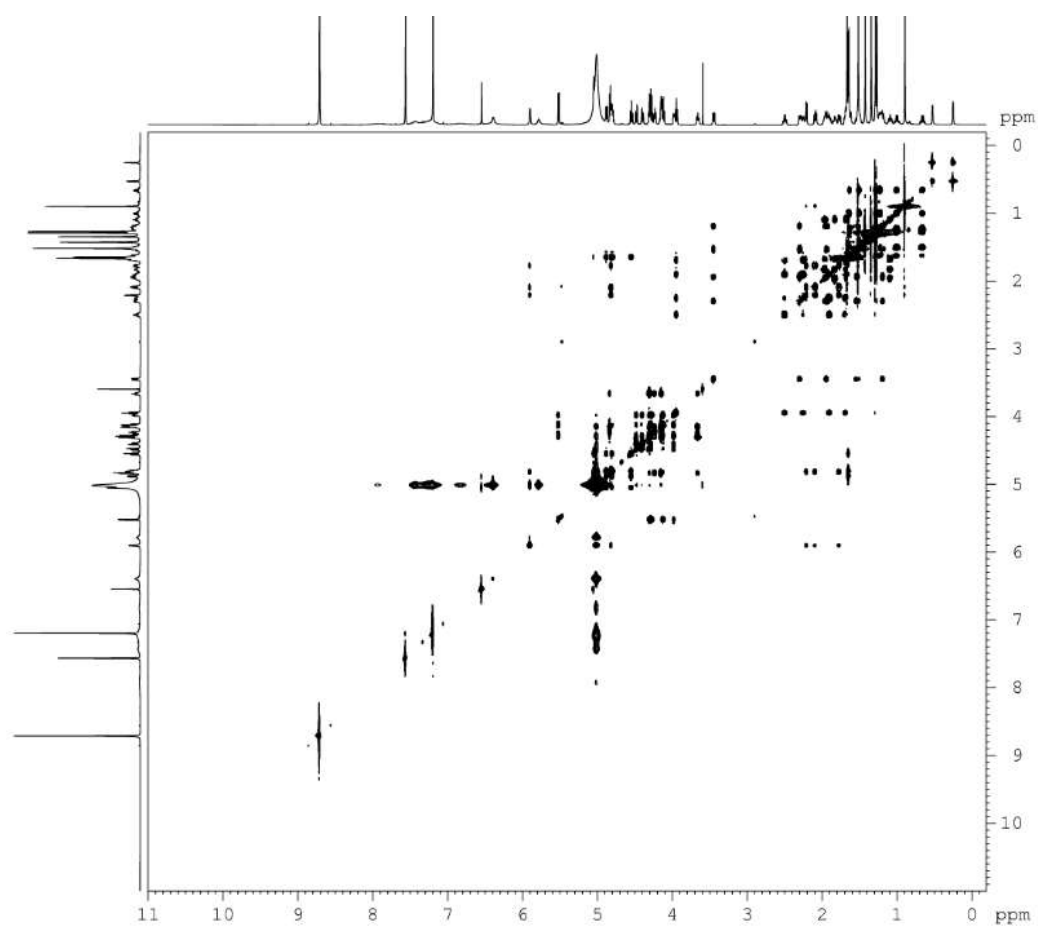


Figure S6. The TOCSY spectrum of the new compound **1**.

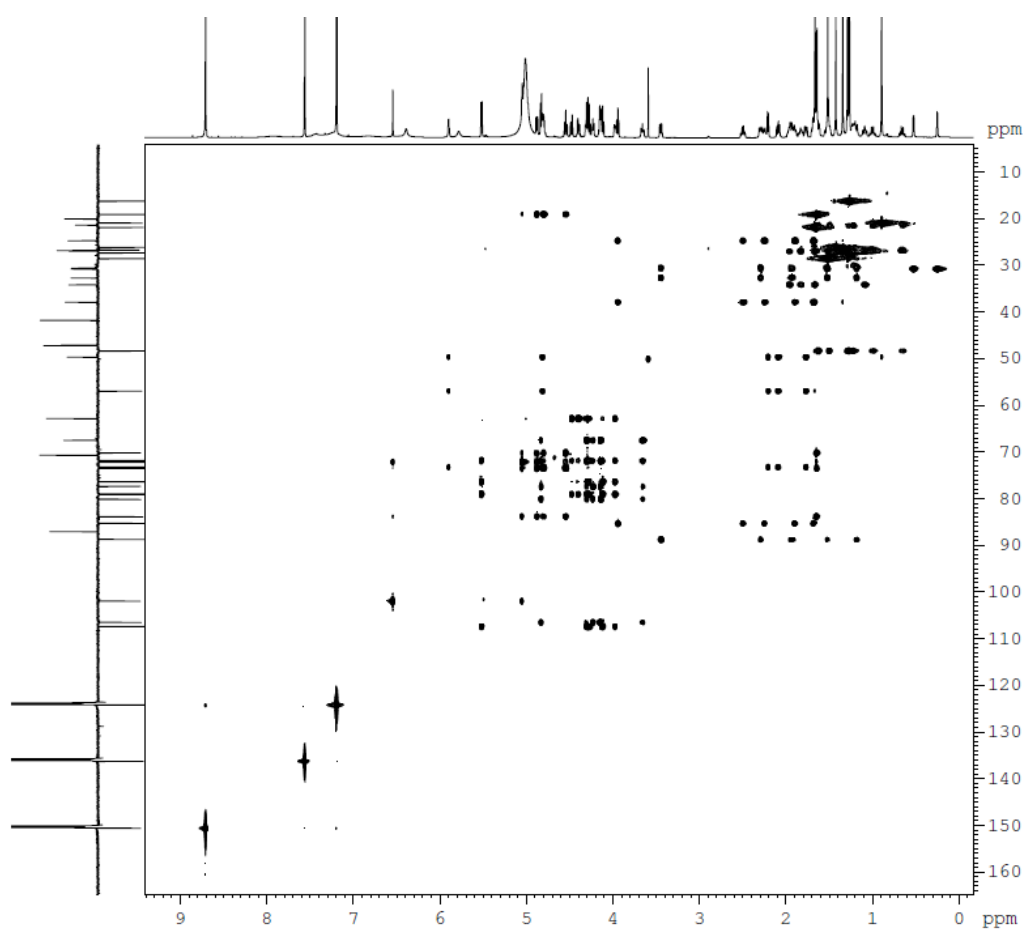


Figure S7. The HSQC-TOCSY spectrum of the new compound **1**.

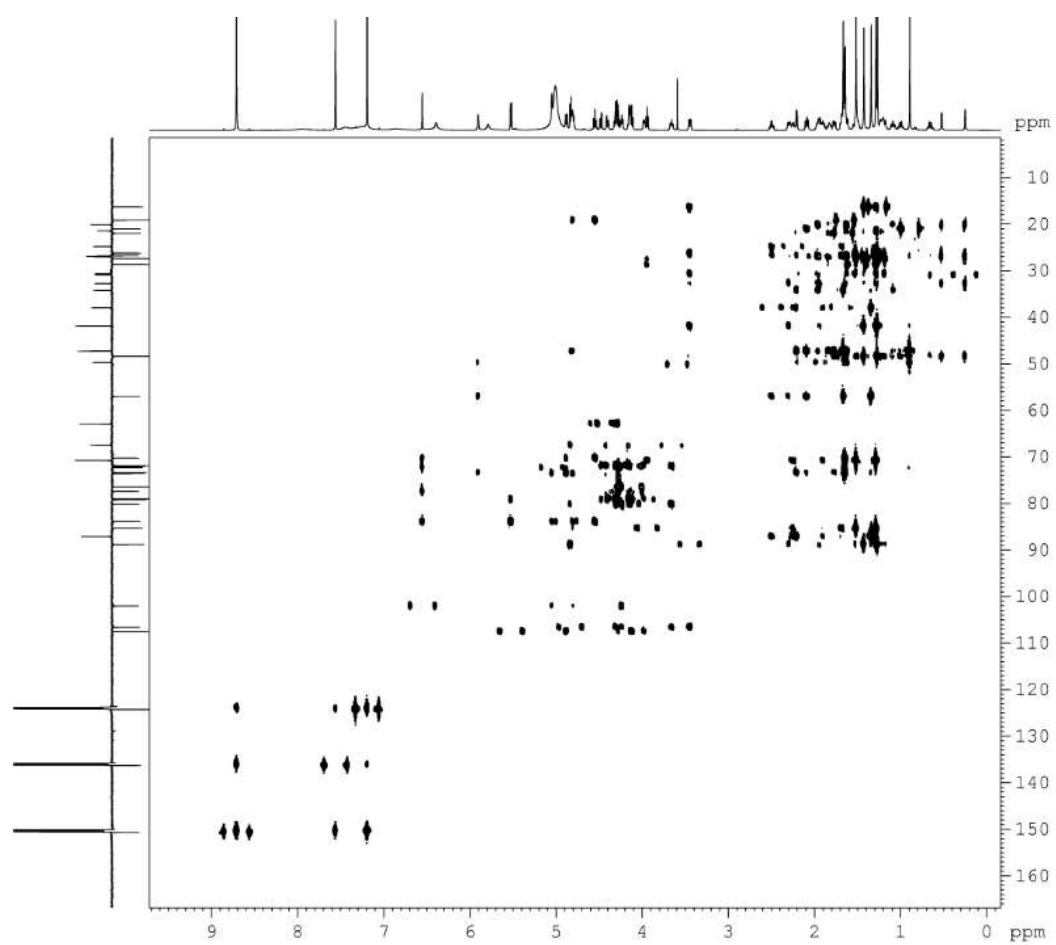


Figure S8. The HMBC spectrum of the new compound **1**.

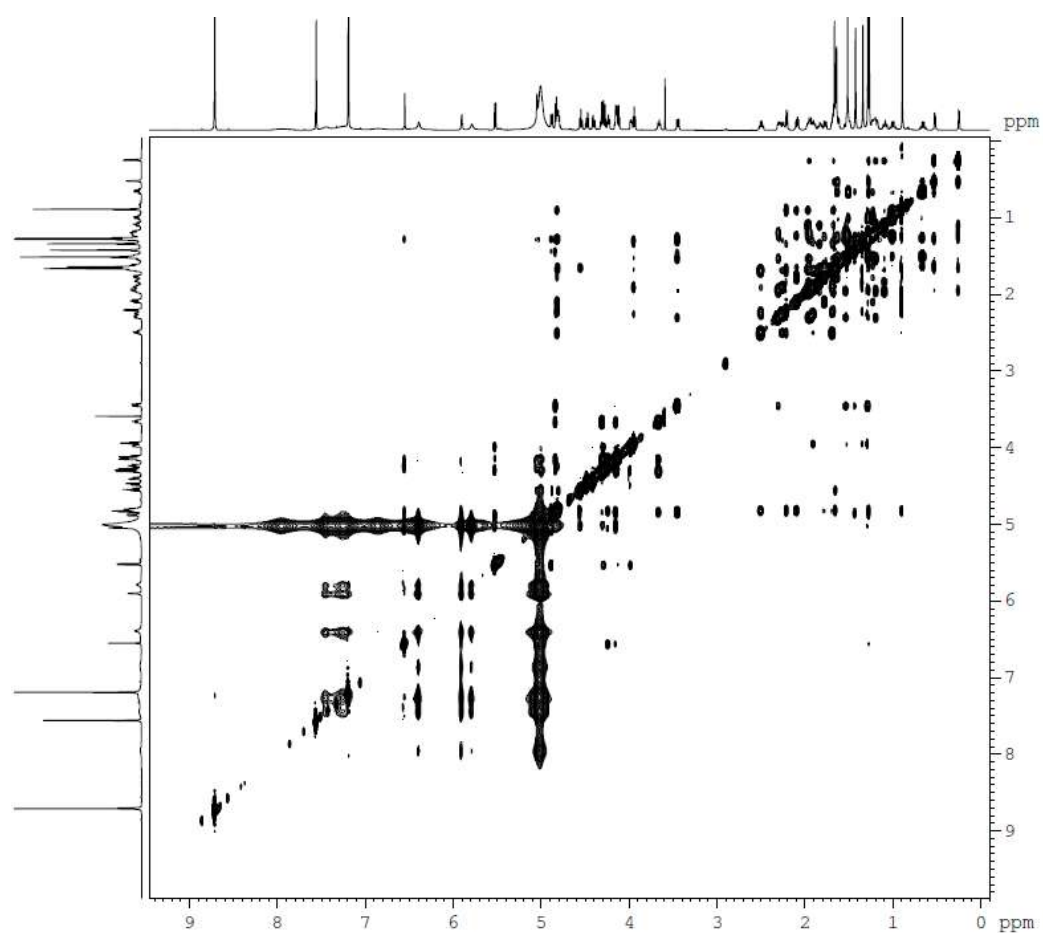


Figure S9. The NOESY spectrum of the new compound **1**.

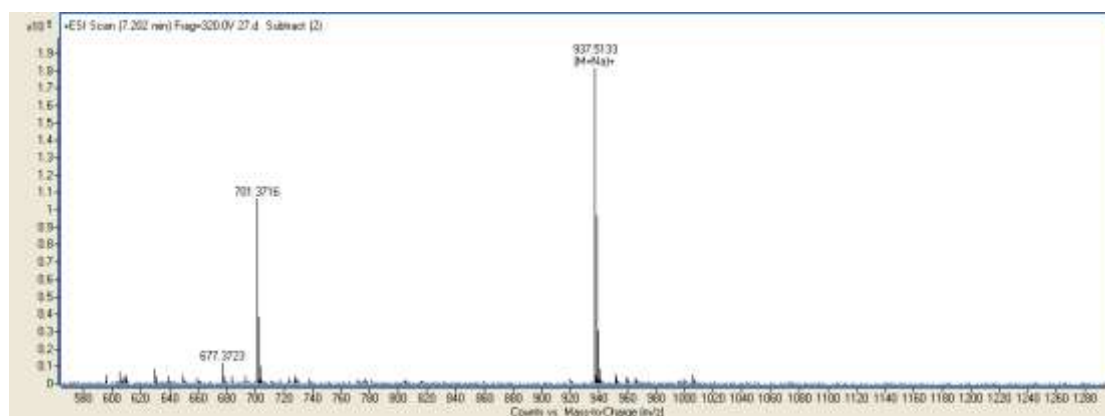


Figure S10. The HRESIMS spectrum of the new compound **1**.

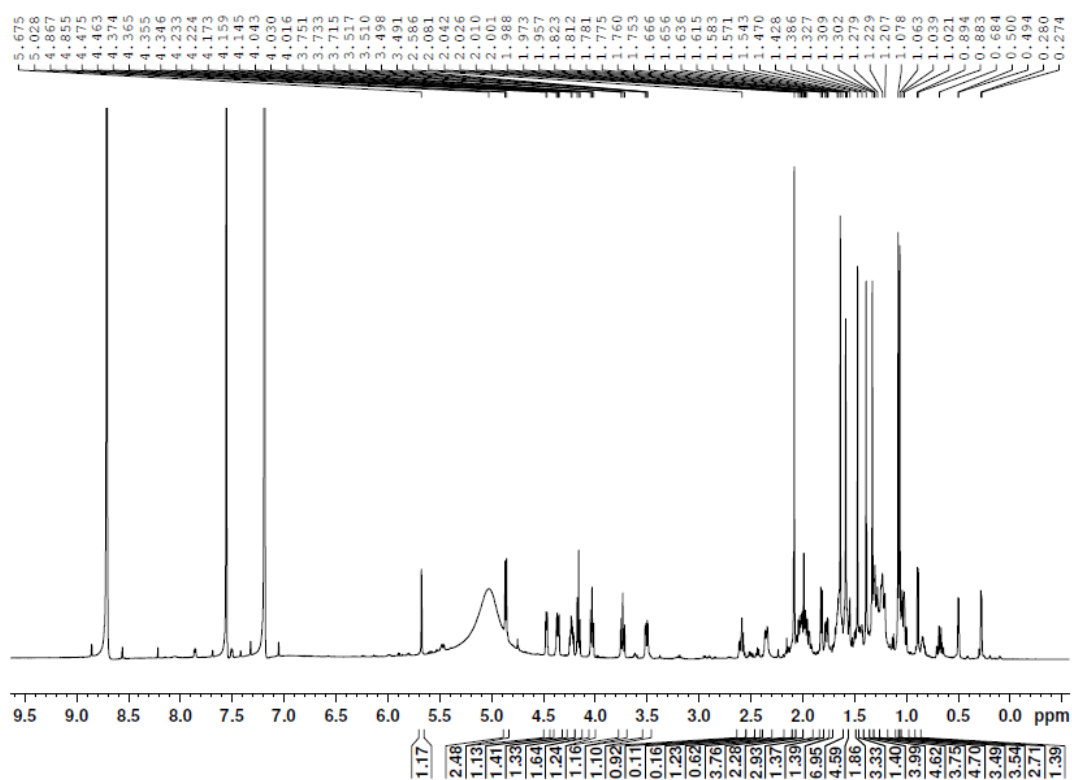


Figure S11. The ¹H NMR (600 MHz, pyridine-*d*₅) spectrum of the known compound **2**.

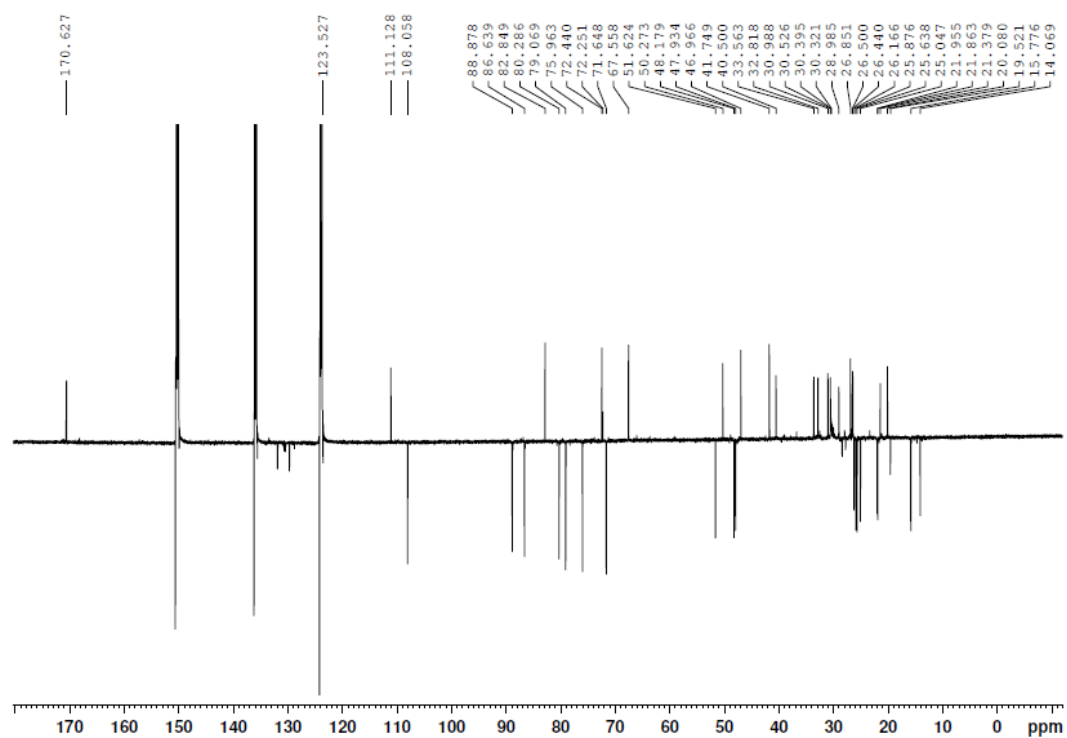


Figure S12. The ^{13}C NMR (150 MHz, pyridine- d_5) spectrum of the known compound **2**.

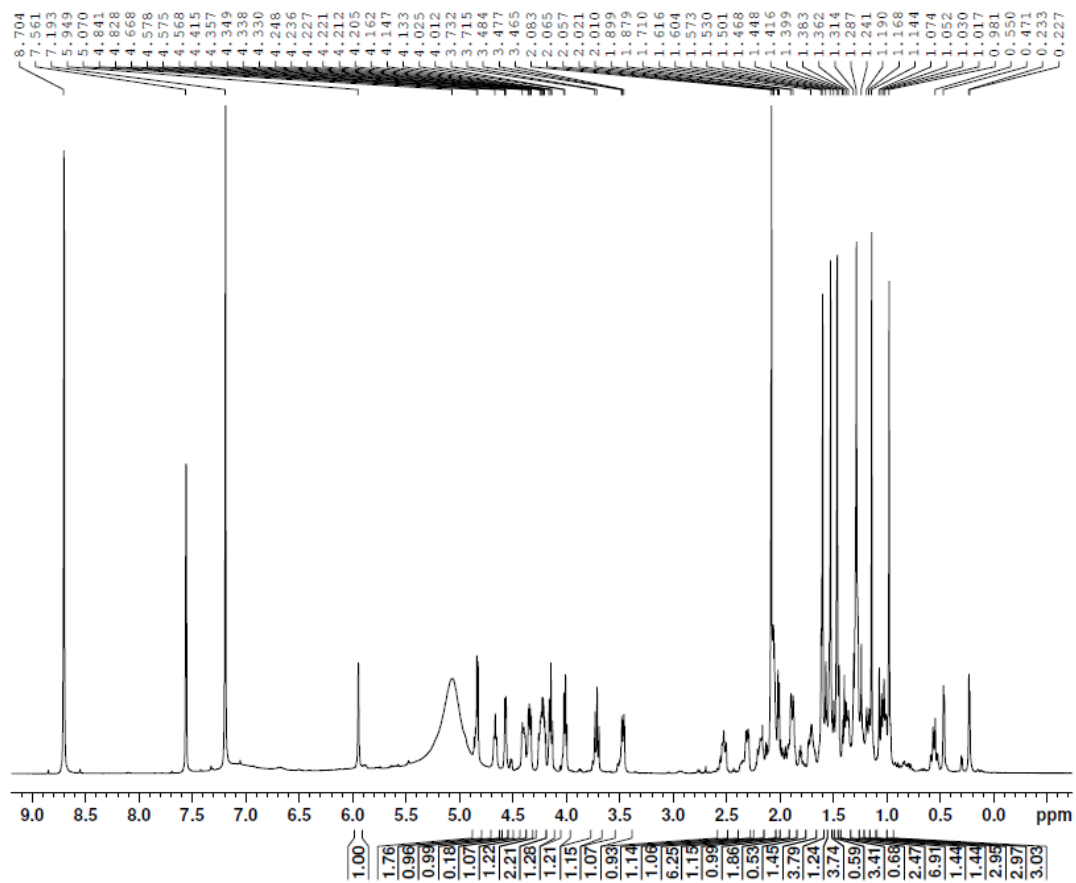


Figure S13. The ^1H NMR (600 MHz, pyridine- d_5) spectrum of the known compound **3**.

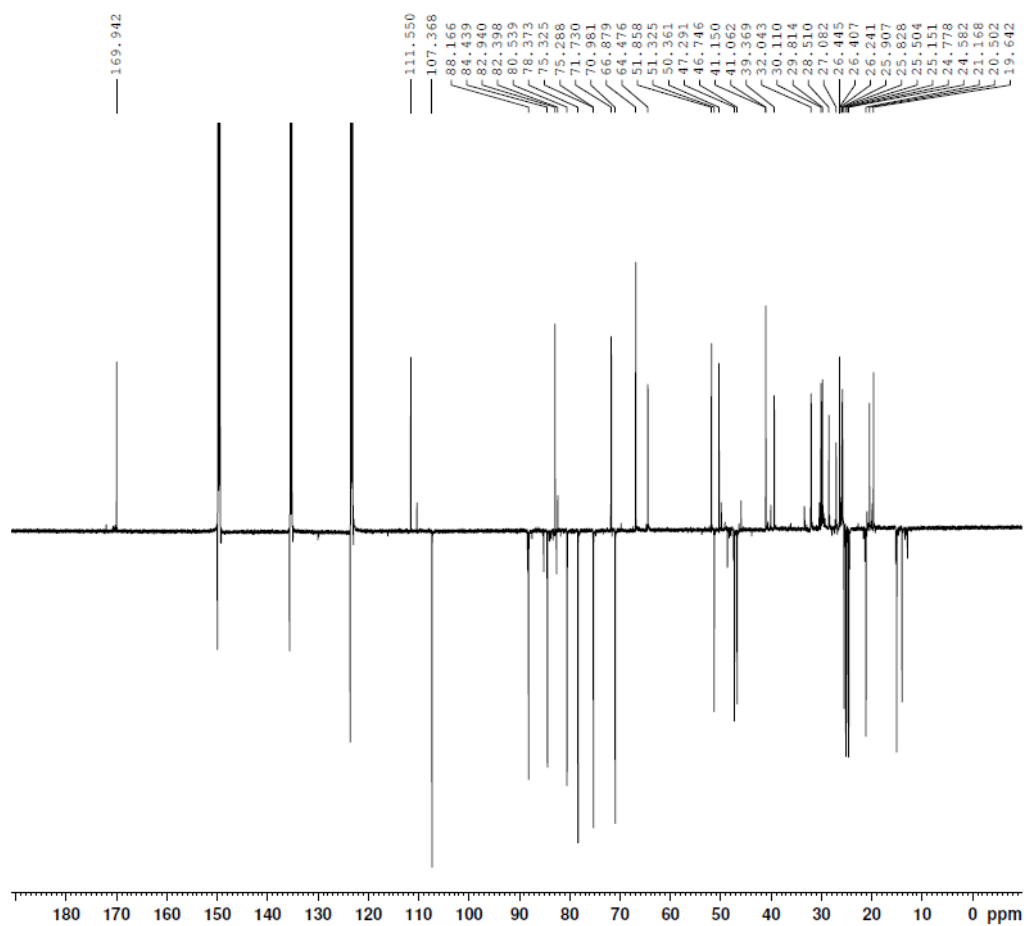


Figure S14. The ^{13}C NMR (150 MHz, pyridine- d_5) spectrum of the known compound **3**.

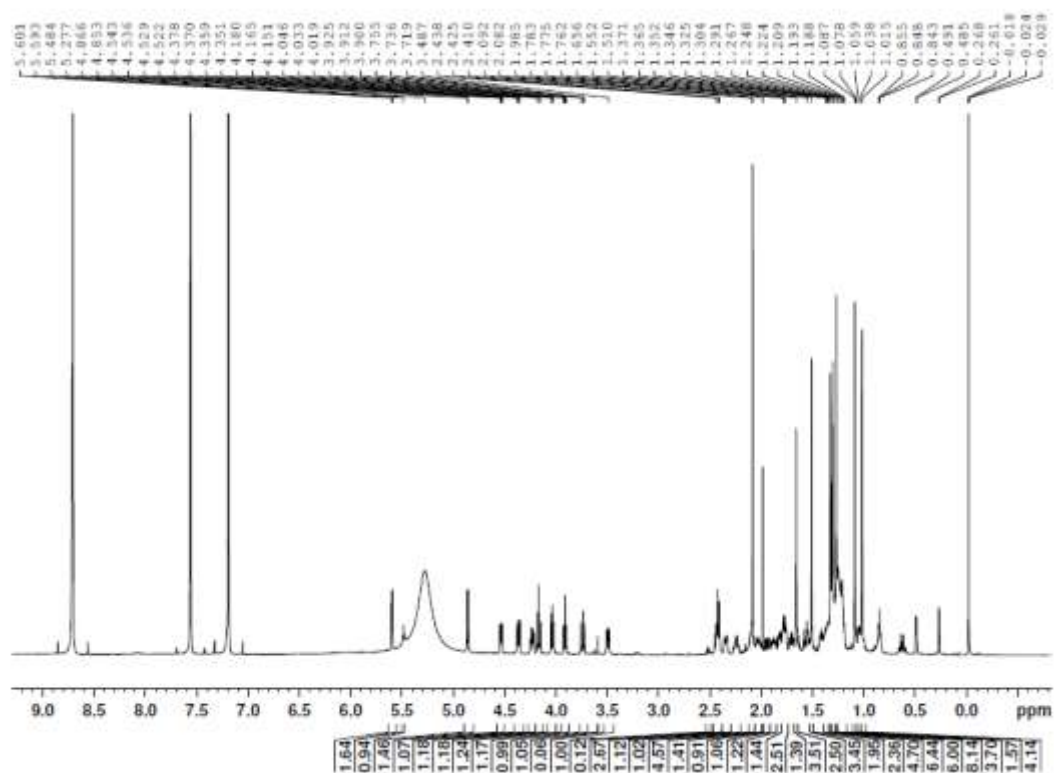


Figure S15. The ^1H NMR (600 MHz, pyridine- d_5) spectrum of the known compound **4**.

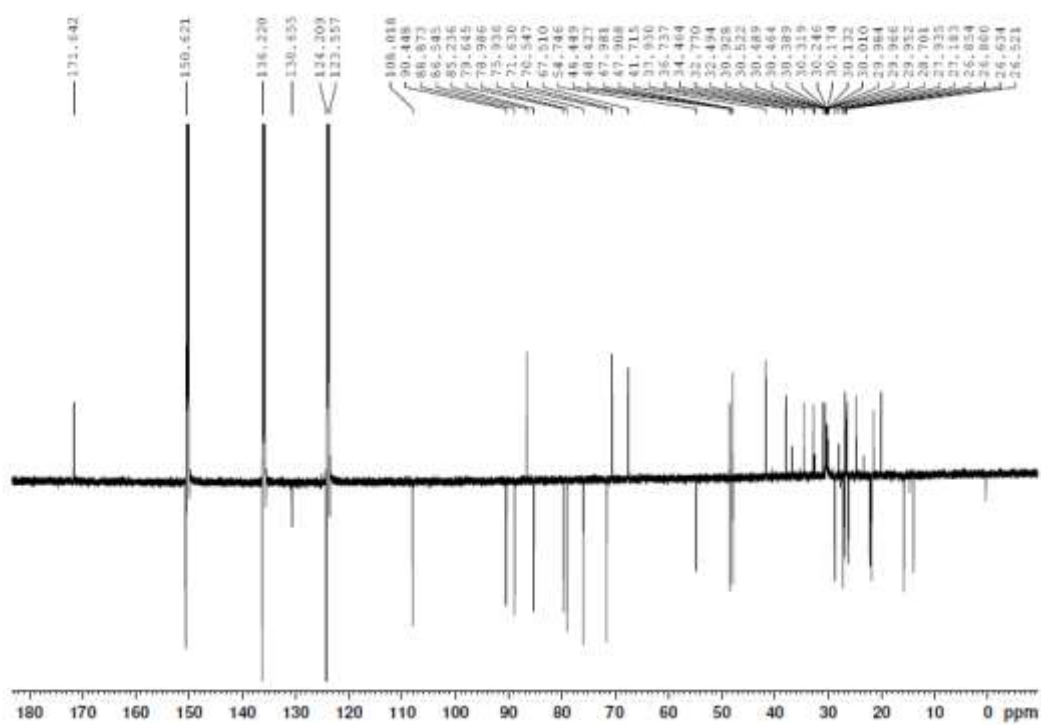


Figure S16. The ^{13}C NMR (150 MHz, pyridine- d_5) spectrum of the known compound **4**.

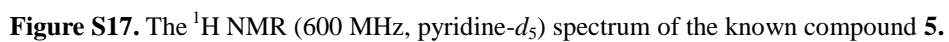


Figure S17. The ^1H NMR (600 MHz, pyridine- d_5) spectrum of the known compound **5**.

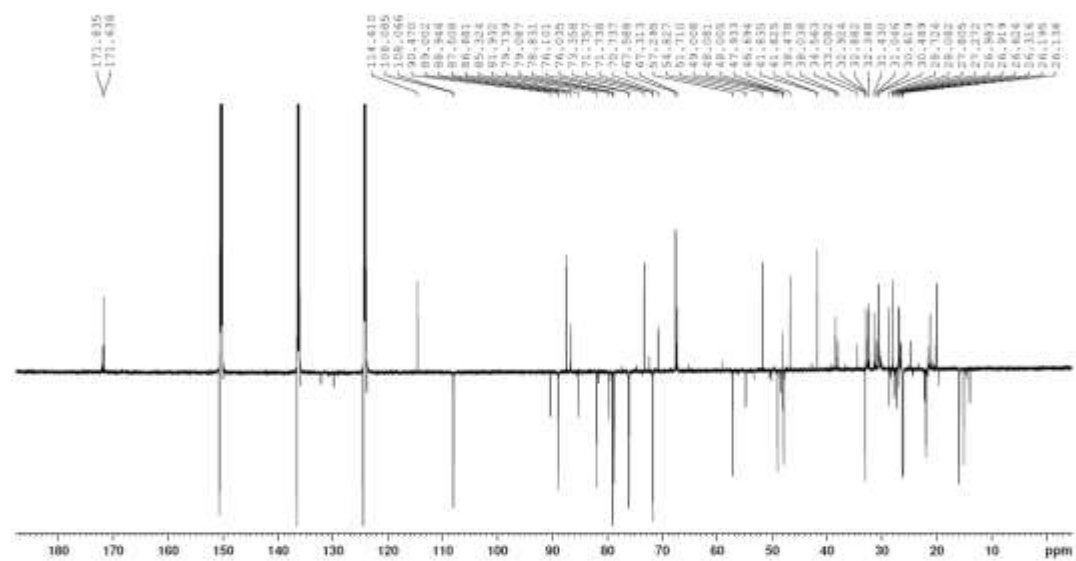


Figure S18. The ^{13}C NMR (150 MHz, pyridine- d_5) spectrum of the known compound **5**.