Supporting Information

Anti-influenza Virus Polyketides from the Acid-tolerant Fungus *Penicillium purpurogenum* JS03-21

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List of Supporting Information

Anti-influenza A Virus (H1N1) Bioassay

The antiviral activity against H1N1 was evaluated by the CPE inhibition assay. Confluent MDCK cell monolayers were firstly incubated with influenza virus (A/Puerto Rico/8/34 (H1N1), PR/8) at 37 ºC for 1 h. After removing the virus dilution, cells were maintained in infecting media (RPMI 1640, 4 μg/mL of trypsin) containing different concentrations of test compounds at 37 ºC. After 48 h incubation at 37 ºC, the Cells were fixed with 100 μL of 4% formaldehyde for 20 min at room temperature. After removal of the formaldehyde, the cells were stained with 0.1% crystal violet for 30 min. The plates were washed and dried, and the intensity of crystal violet staining for each well was measured in a microplate reader (Bio-Rad, USA) at 570 nm. The IC_{50} was calculated as the compound concentration required inhibiting influenza virus yield at 48 h post-infection by 50%. Ribavirin was used as the positive control with the IC_{50} values of 100.8 μM.

The 18S rRNA sequence data of *Penicillium purpurogenum* JS03-21

ACTTTCCTCTAATGACCAAGTTTGACCAACTTTCCGGCTCTGGGCGGTCGTTGCCAACCCCCCTGAGCC
AGTCCGAAGGCCTCACTGAGCCATTCAATCGGTAGTAGCGACGGGCGGTGTGTACAAAGGGCAGGGA
CGTAATCGGCACGAGCTGATGACTCGTGCCTACTAGGCATTCCTCGTTGAAGAGCAATAATTGCAATGC
TCTATCCCCAGCACGACAGGGTTTAACAAGATTACCCAGGCCTCTCGGCCAAGGTGATGTACTCGCTG
GCCCTGTCAGTGTAGCGCGCGTGCGGCCCAGAACATCTAAGGGCATCACAGACCTGTTATTGCCACGT
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AGGAGCCCCGAGGGGCATTGGTTTTTTATCTAATAAATACACCCCTTCCGAAGTCGGGGTTTTGCGCAT
GTATTAGCTCTAGAATTACCACAGGTATCCATGTAGTAGGGTACTATCAAATAAACGATAACTGATTTAAT
GAGCCATTCGCAGTTTCACGGTACAAGAGTGCTTATAACCTA

Figure S1. CD curves of compounds **1**−**3**

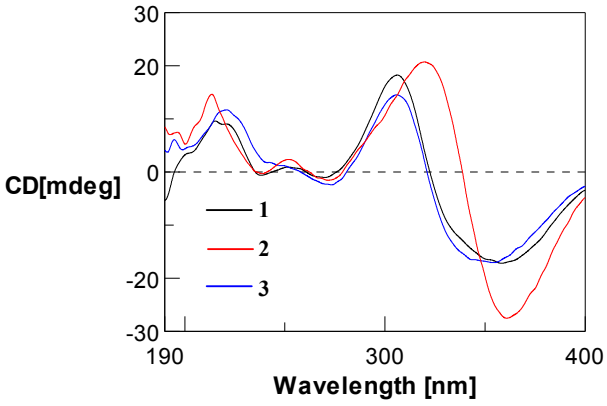


Figure S2. The ^{1}H NMR spectrum of purpurquinone A (**1**) in DMSO

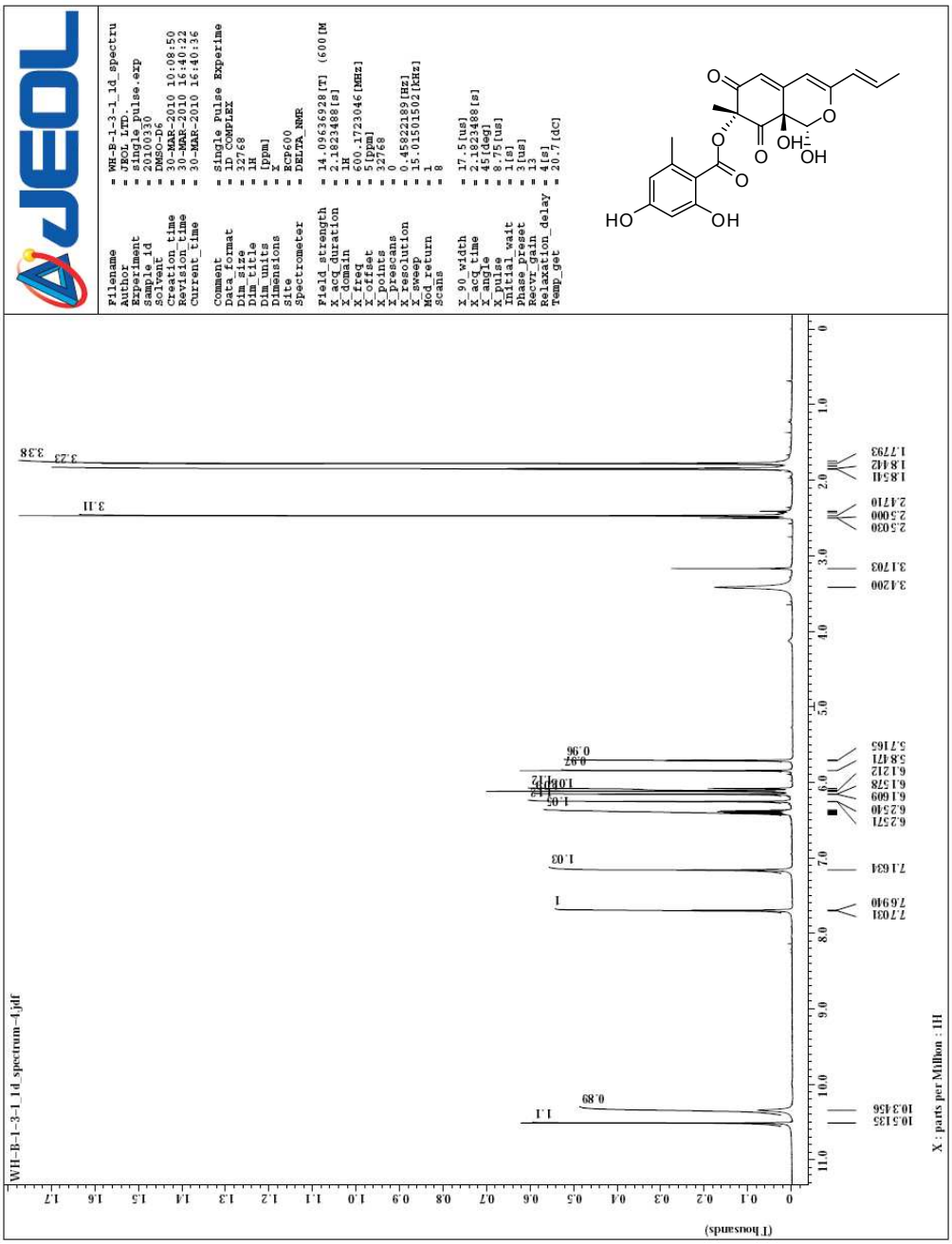


Figure S3. The ^{13}C NMR spectrum of purpurquinone A (**1**) in DMSO

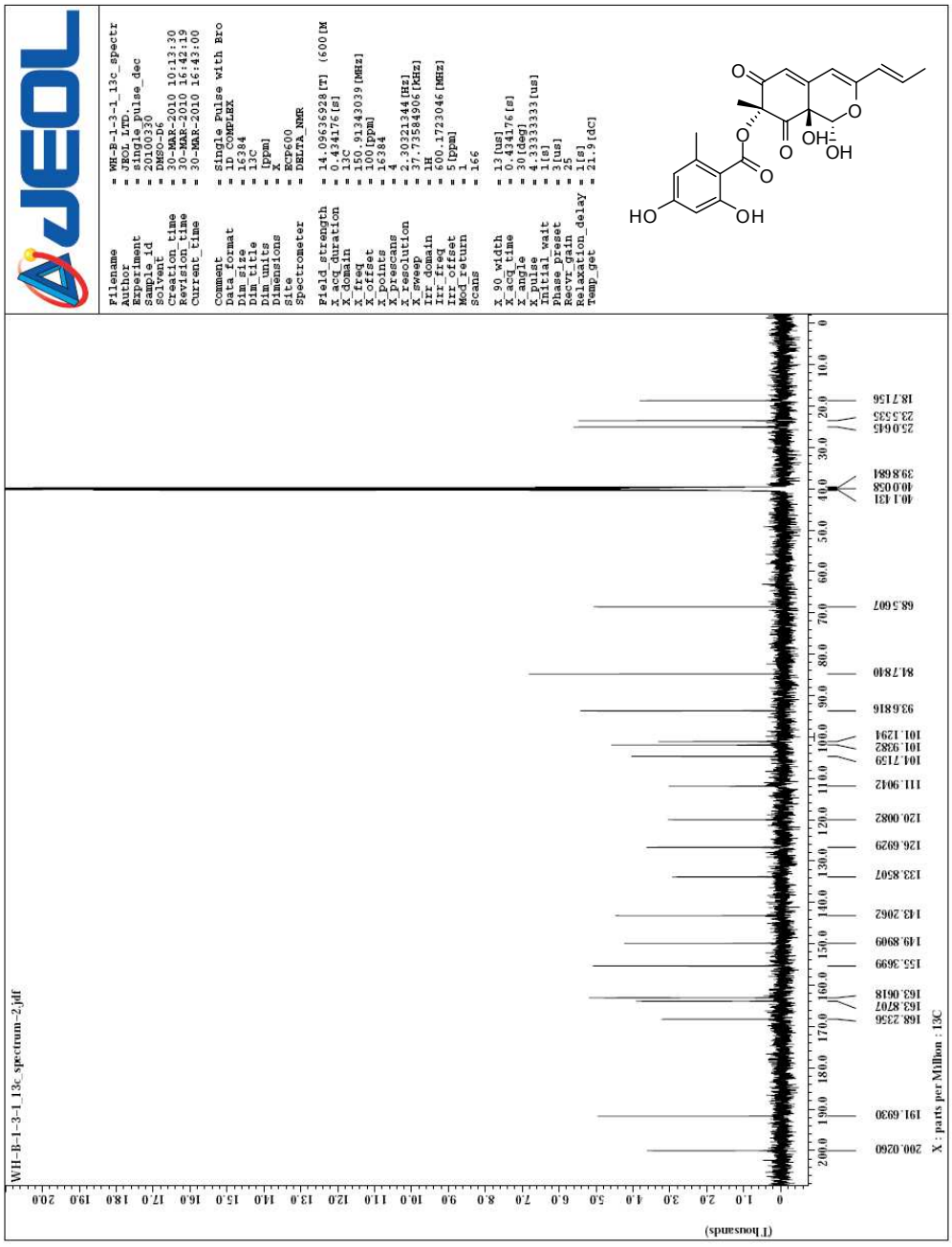


Figure S4. The DEPT spectrum of purpurquinone A (**1**) in DMSO

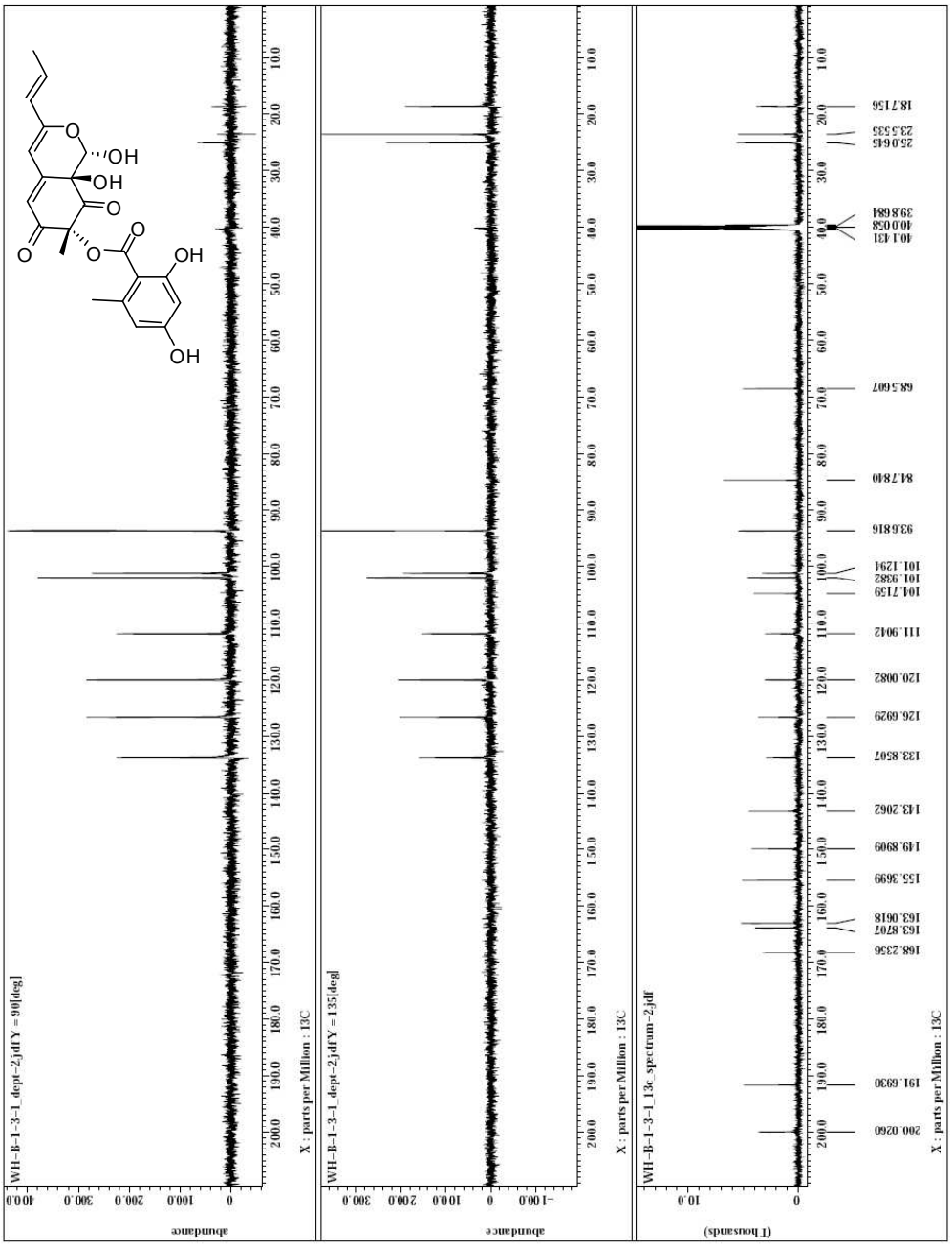


Figure S5. The HMQC spectrum of purpurquinone A (**1**) in DMSO

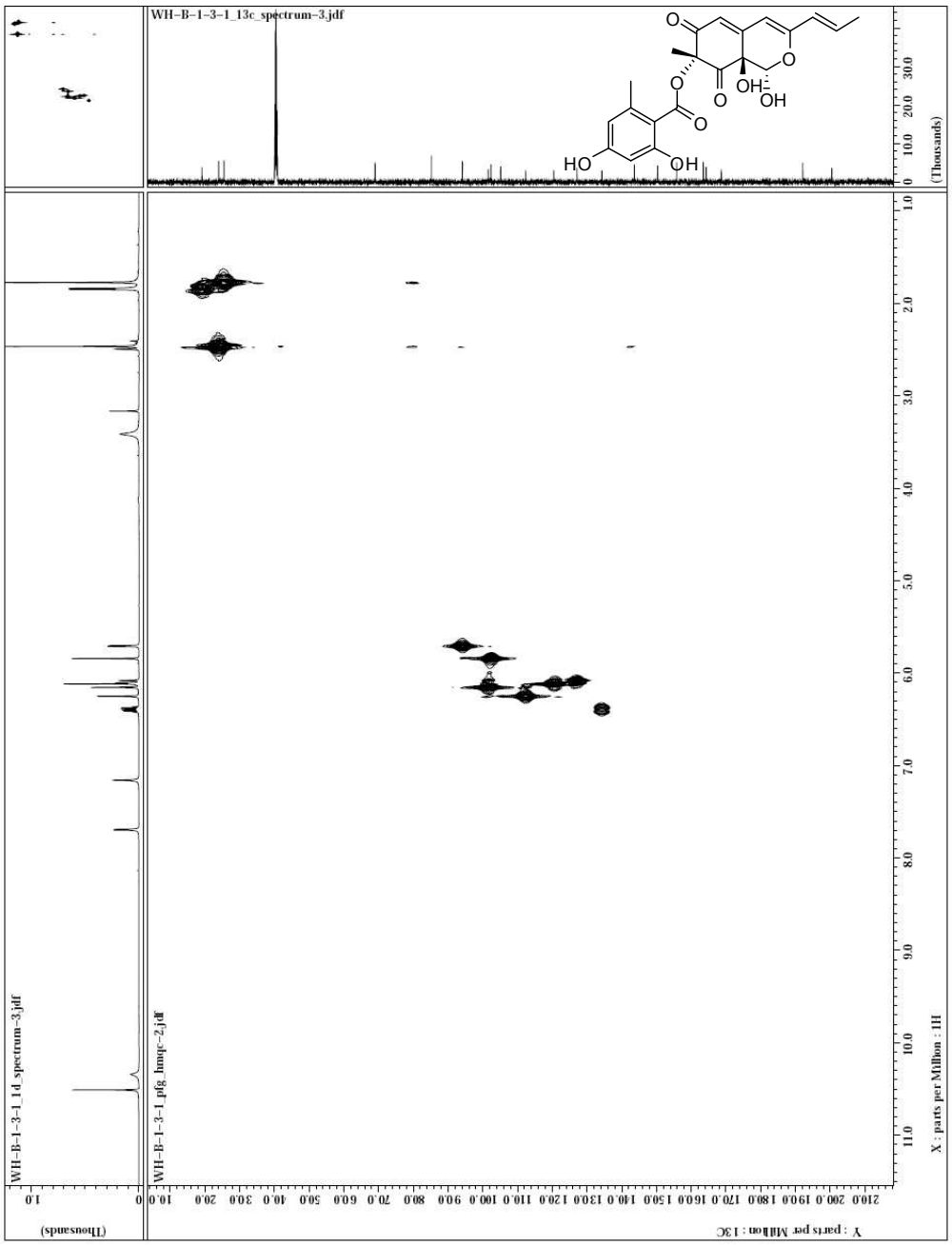


Figure S6. The ^{1}H-^{1}H COSY spectrum of purpurquinone A (**1**) in DMSO

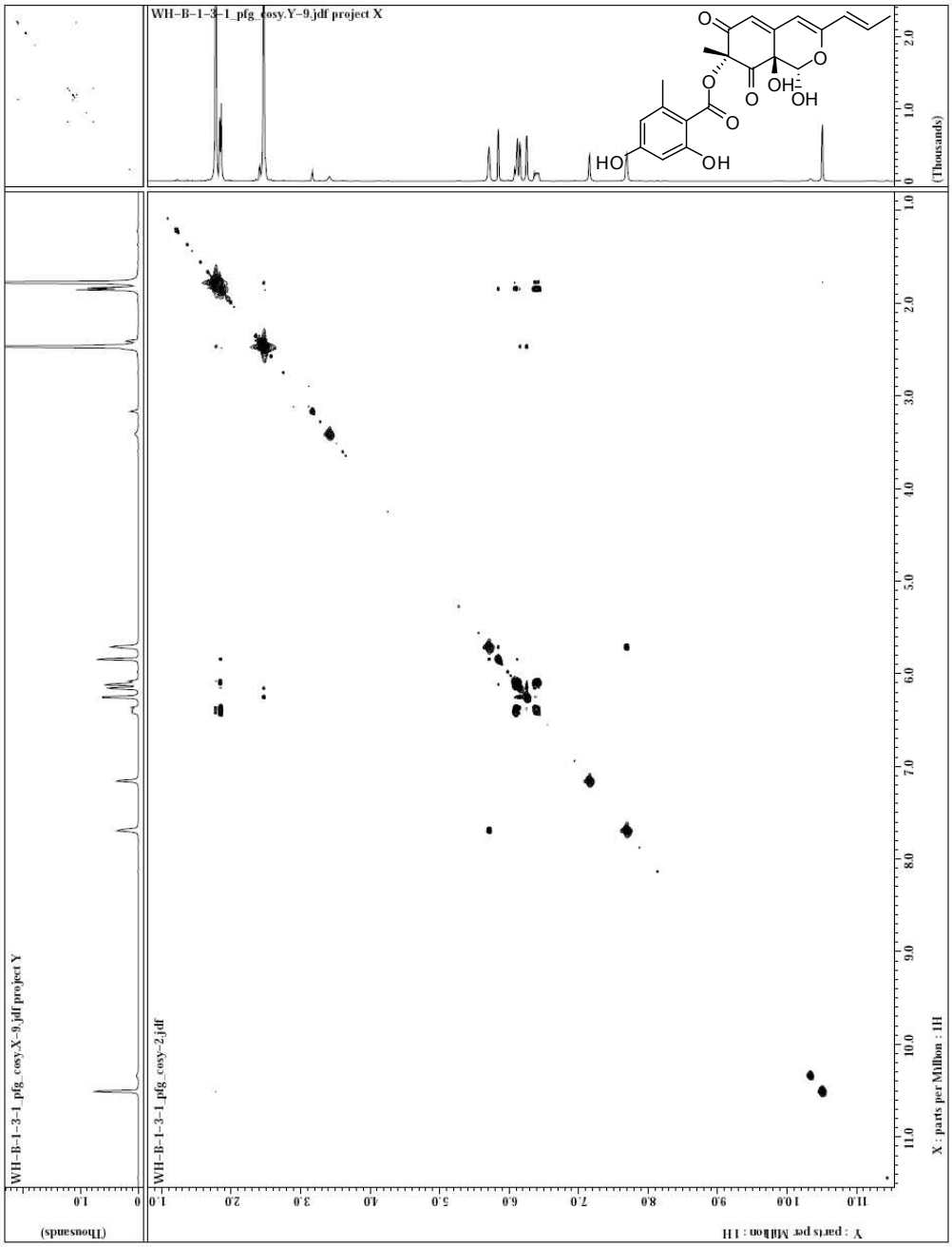


Figure S7. The HMBC spectrum of purpurquinone A (**1**) in DMSO

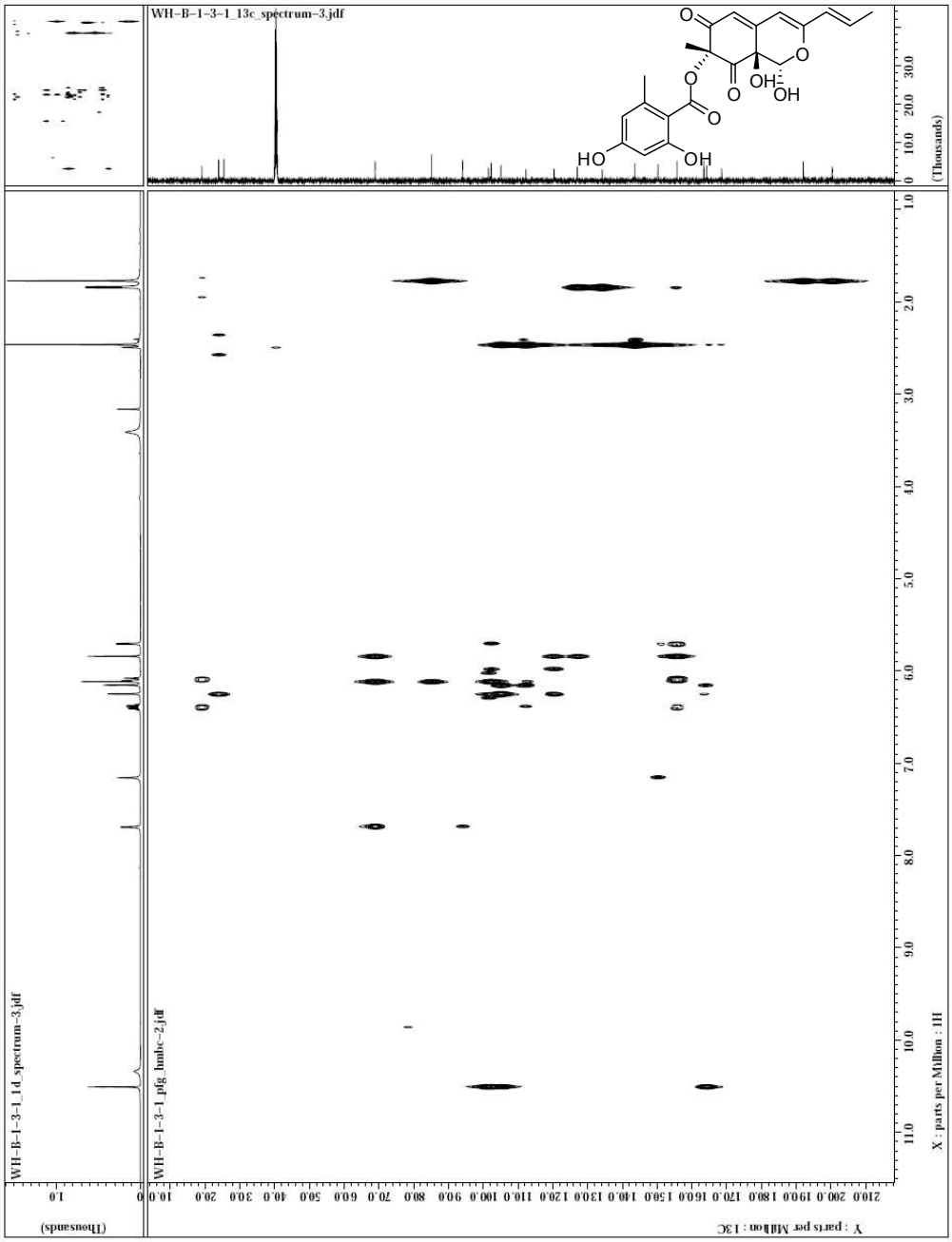


Figure S8. The NOESY spectrum of purpurquinone A (**1**) in DMSO

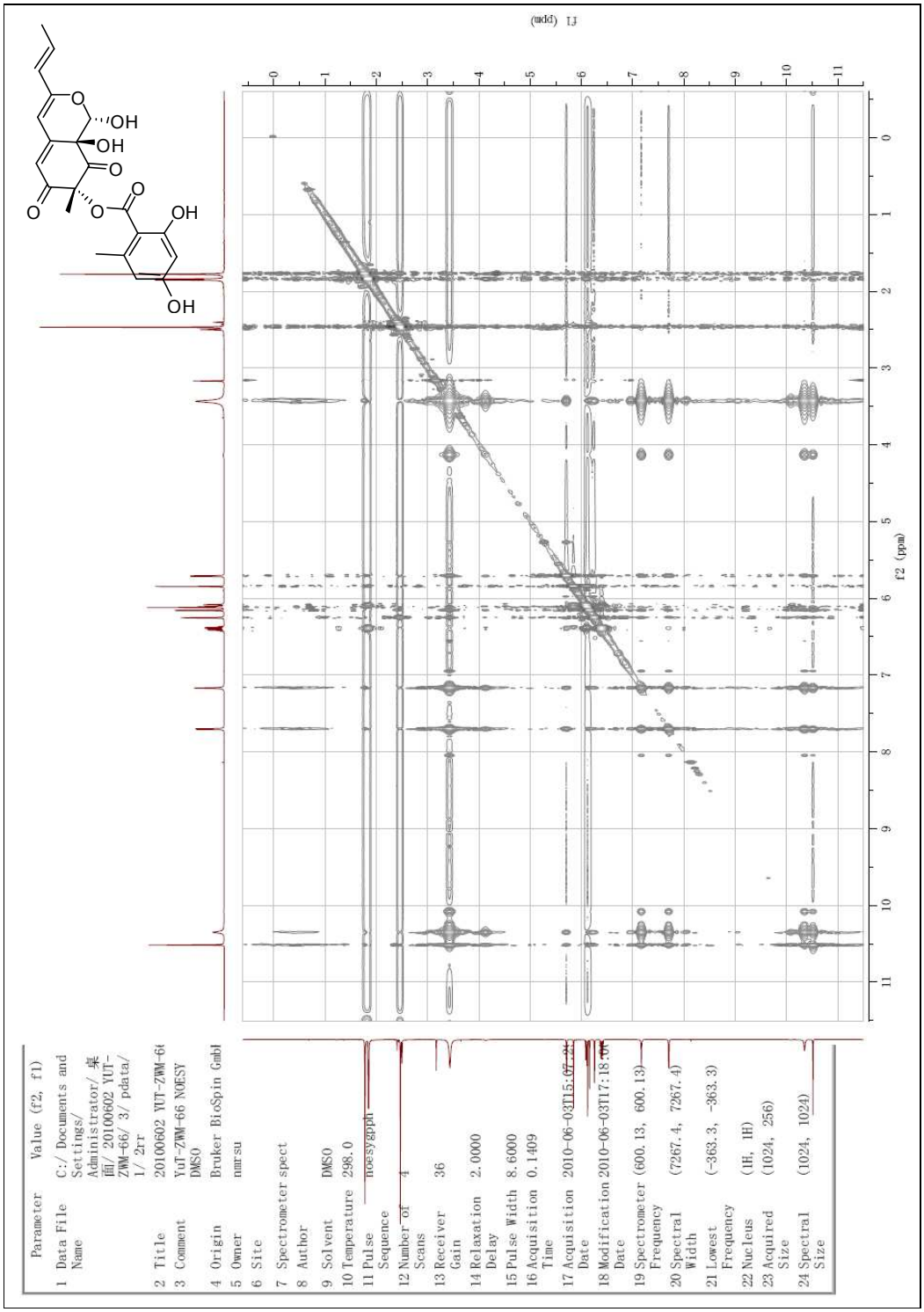


Figure S9. The ^{1}H NMR spectrum of purpurquinone B (**2**) in DMSO

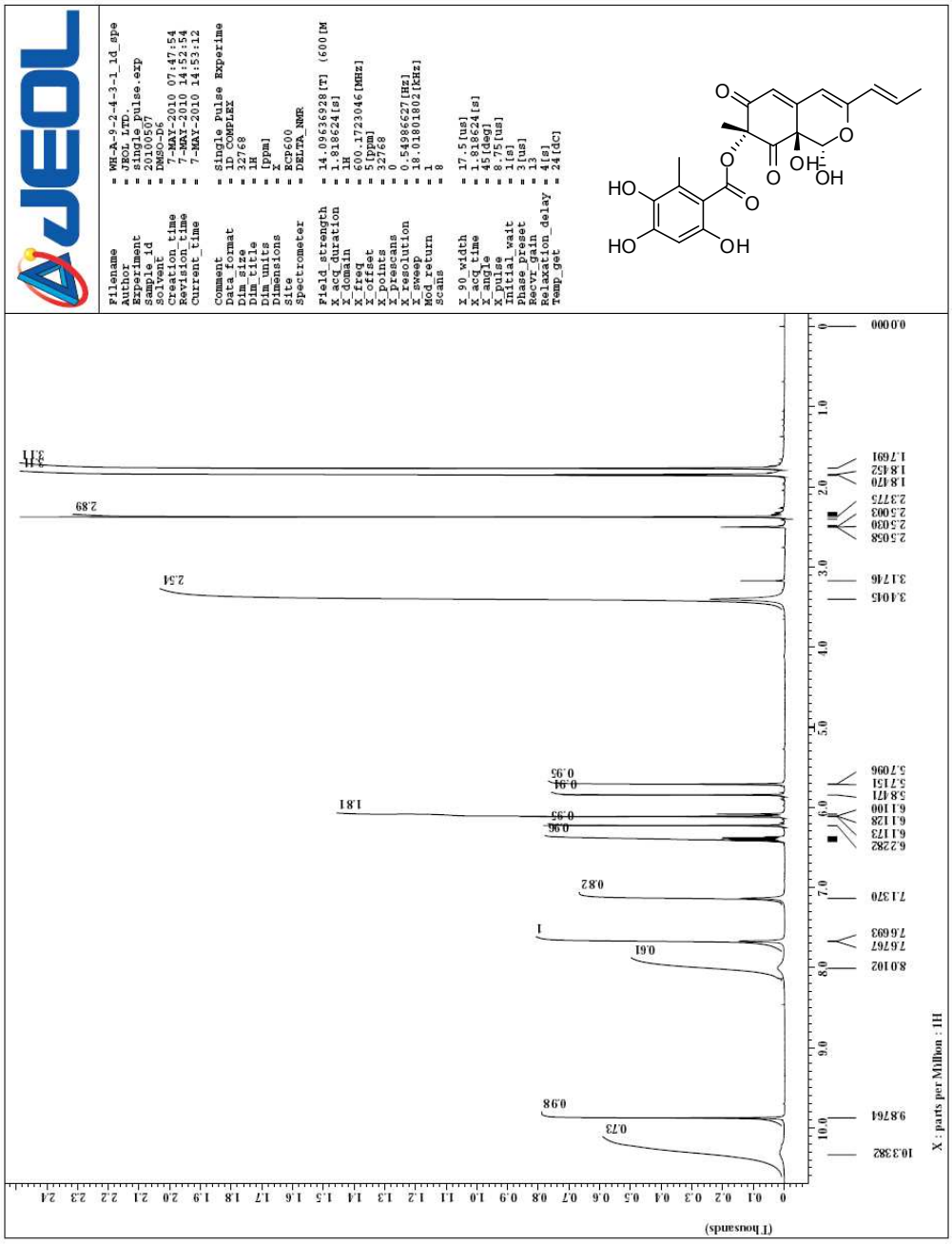


Figure S10. The ^{13}C NMR spectrum of purpurquinone B (**2**) in DMSO

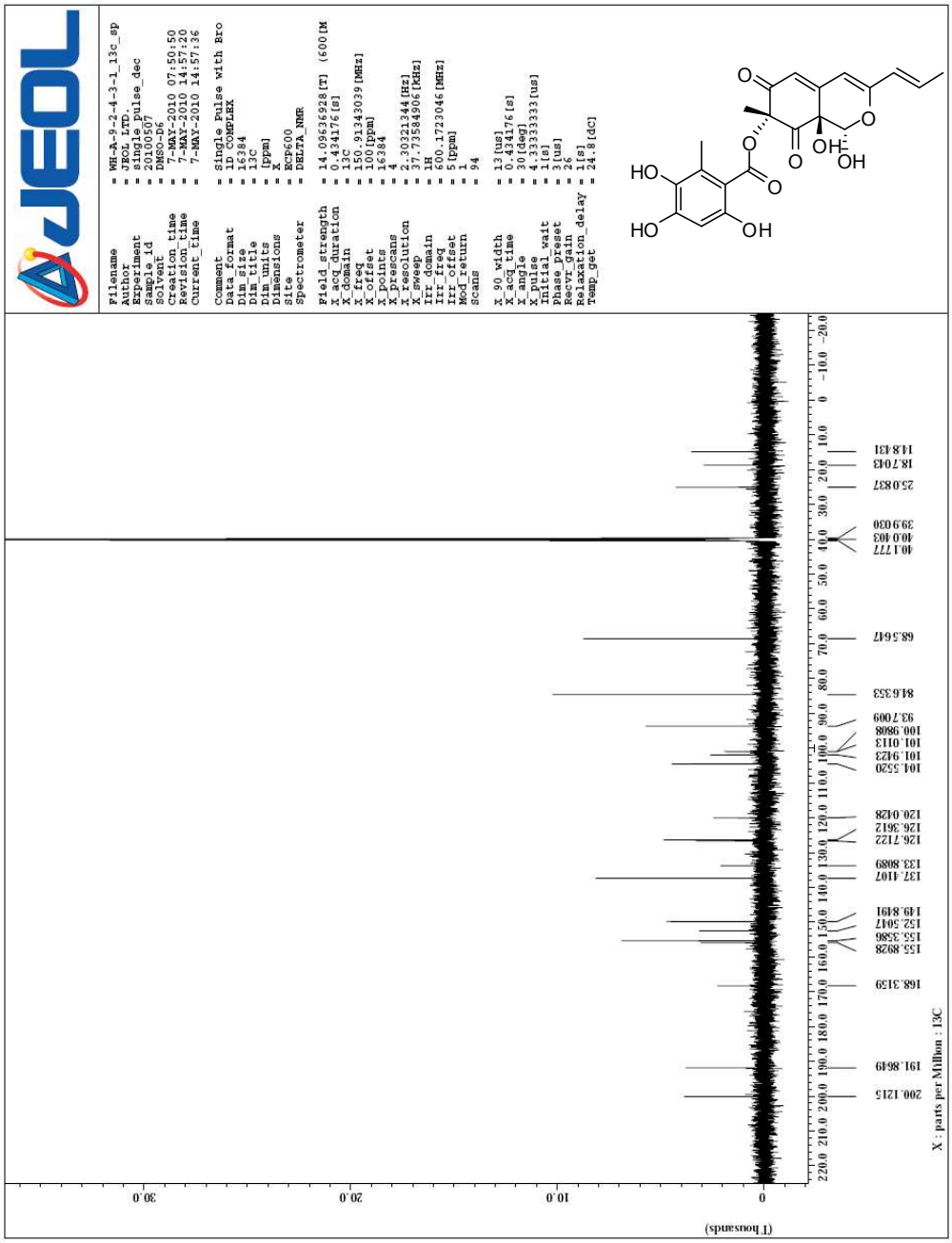


Figure S11. The DEPT spectrum of purpurquinone B (**2**) in DMSO

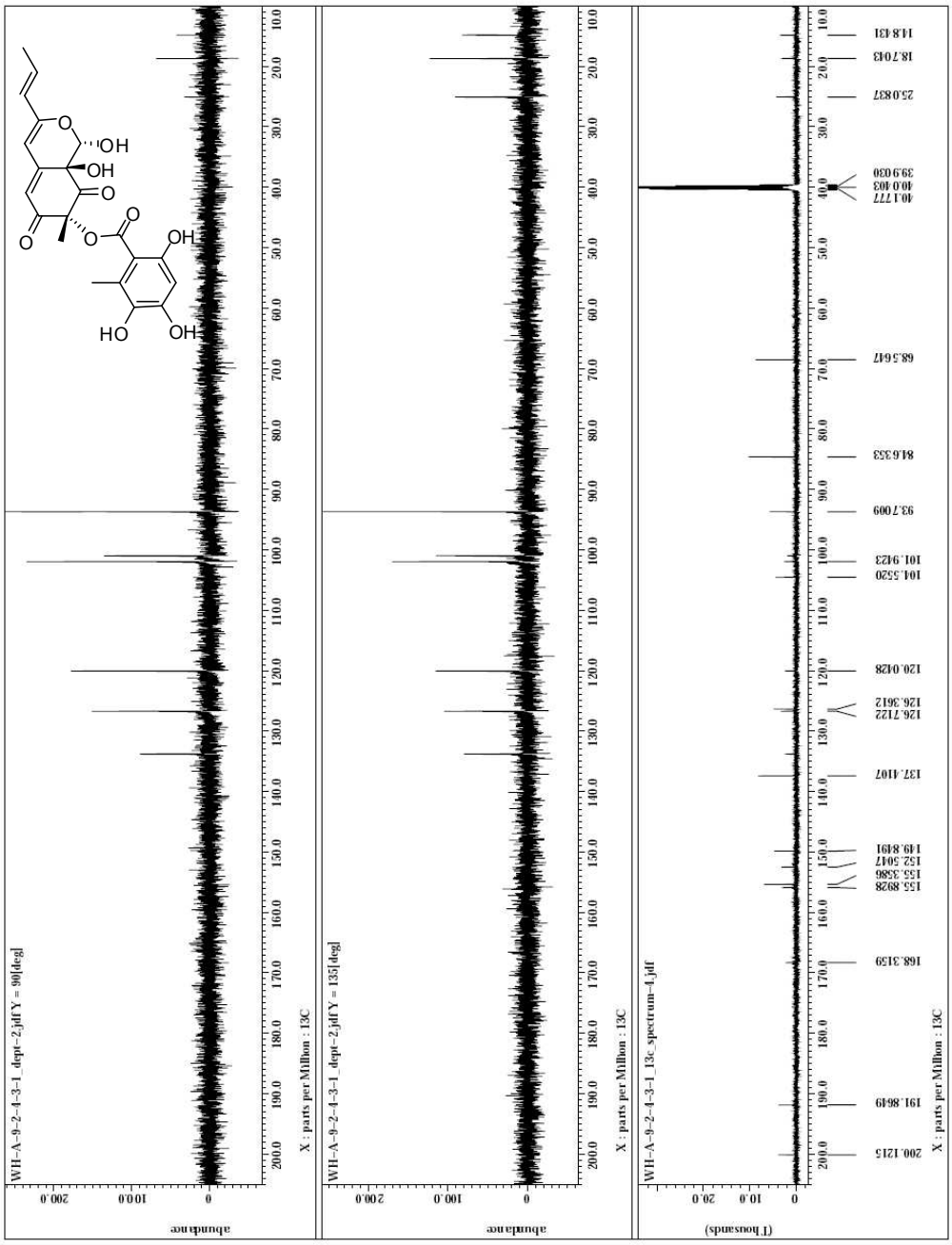


Figure S12. The HMQC spectrum of purpurquinone B (**2**) in DMSO

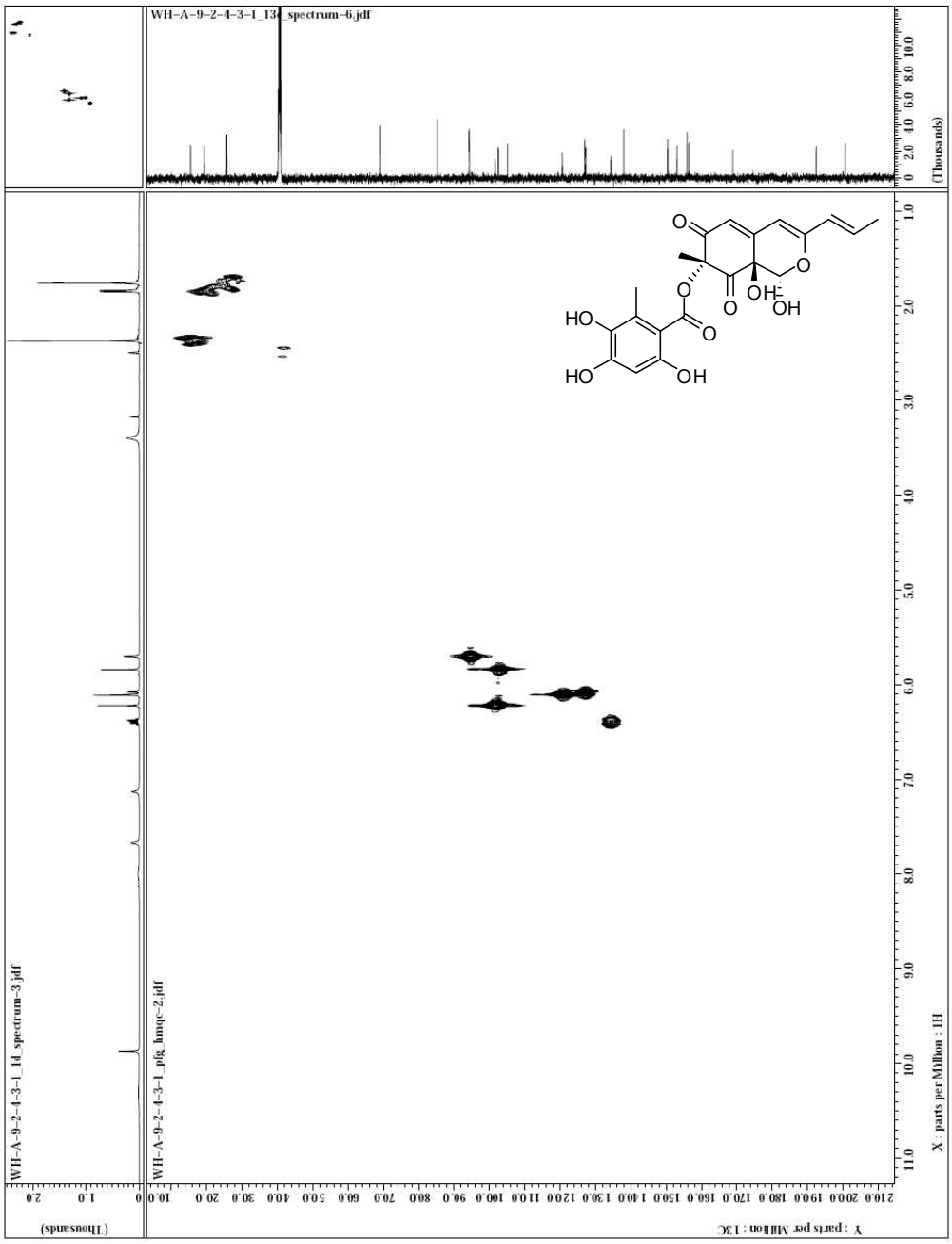


Figure S13. The ^{1}H-^{1}H COSY spectrum of purpurquinone B (**2**) in DMSO

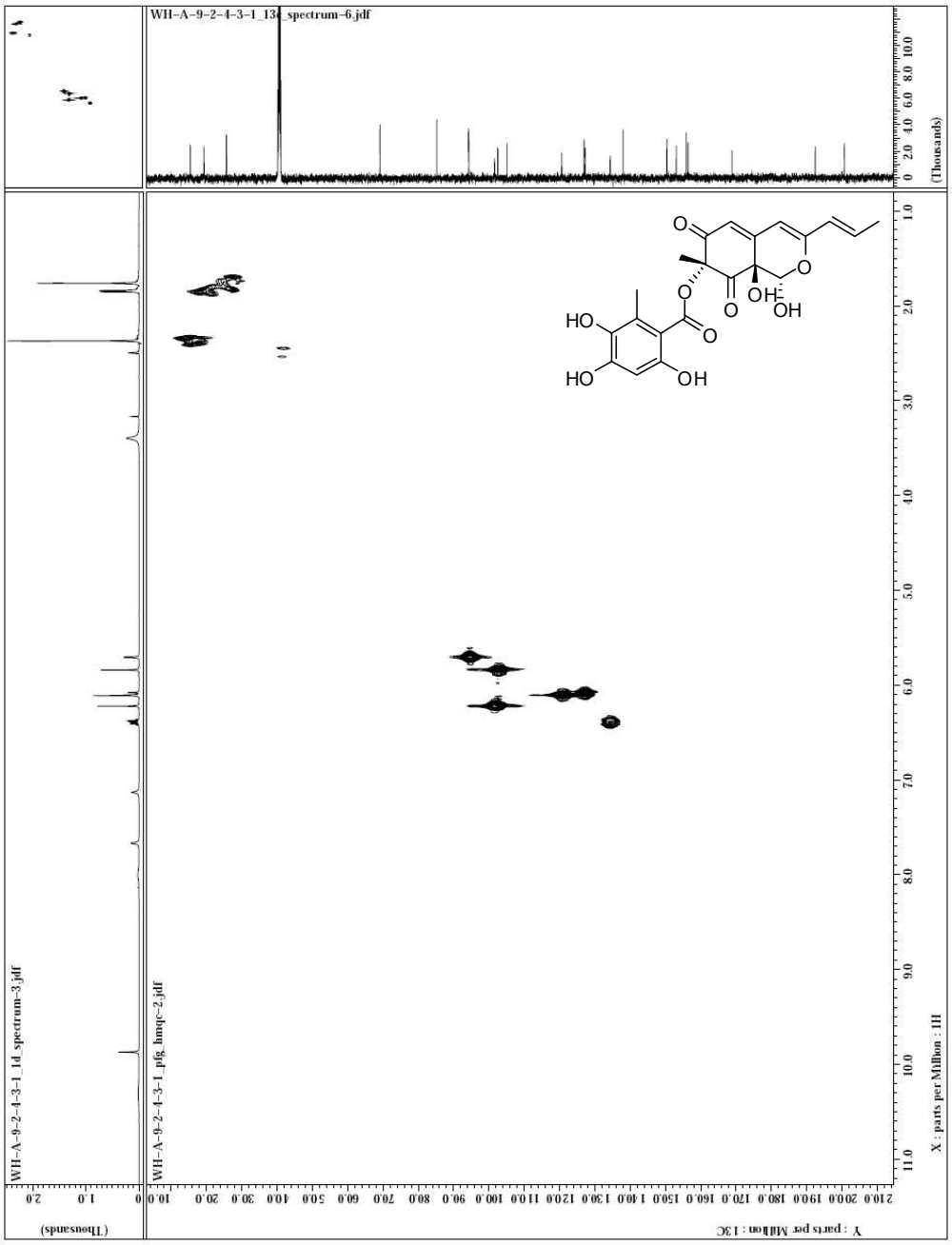


Figure S14. The HMBC spectrum of purpurquinone B (**2**) in DMSO

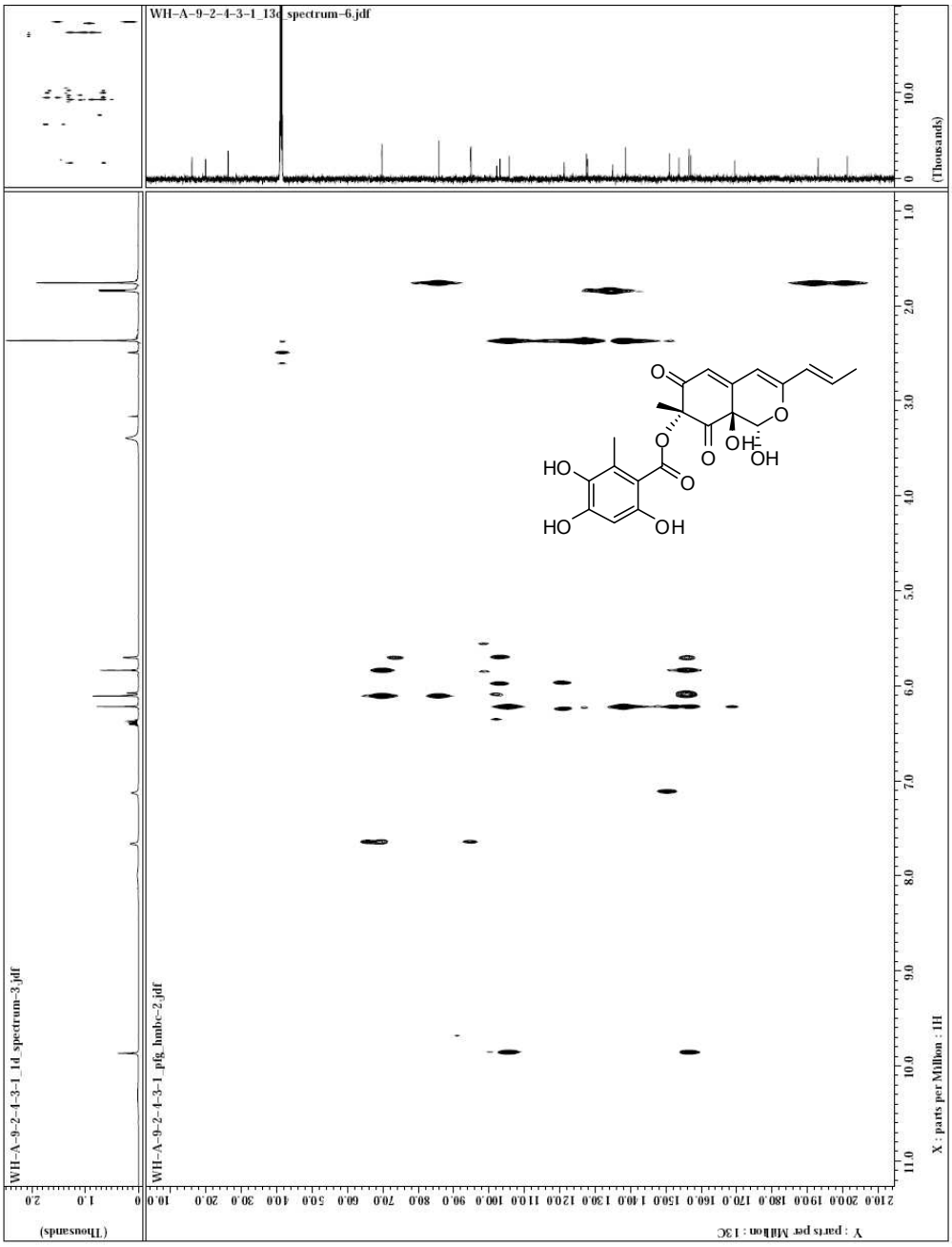
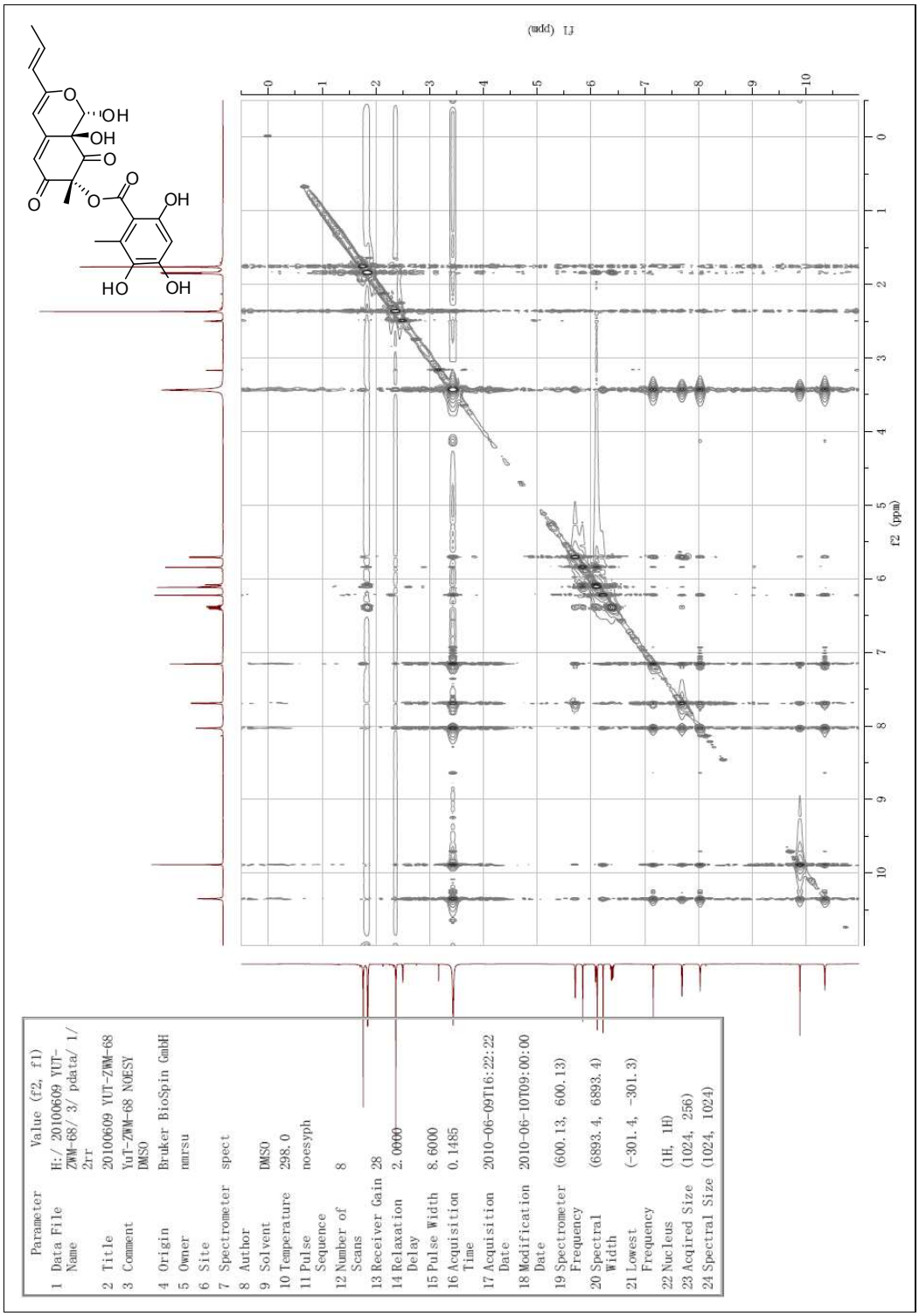


Figure S15. The NOESY spectrum of purpurquinone B (**2**) in DMSO



Parameter	Value (f2, f1)
1 Data File Name	H:/ 20100609 YUT-ZWM-68/ 3/ pdata/ 1/ 2rr
2 Title	20100609 YUT-ZWM-68
3 Comment	YuT-ZWM-68 NOESY DMSO
4 Origin	Bruker BioSpin GmbH
5 Owner	nmrsu
6 Site	
7 Spectrometer	spect
8 Author	
9 Solvent	DMSO
10 Temperature	298.0
11 Pulse Sequence	noesyph
12 Number of Scans	8
13 Receiver Gain	28
14 Relaxation Delay	2.0000
15 Pulse Width	8.6000
16 Acquisition Time	0.1485
17 Acquisition Date	2010-06-09T16:22:22
18 Modification Date	2010-06-10T09:00:00
19 Spectrometer Frequency	(600.13, 600.13)
20 Spectral Width	(6893.4, 6893.4)
21 Lowest Frequency	(-301.4, -301.3)
22 Nucleus	(1H, 1H)
23 Acqired Size	(1024, 256)
24 Spectral Size	(1024, 1024)

Figure S16. The ^{1}H NMR spectrum of purpurquinone C (**3**) in DMSO

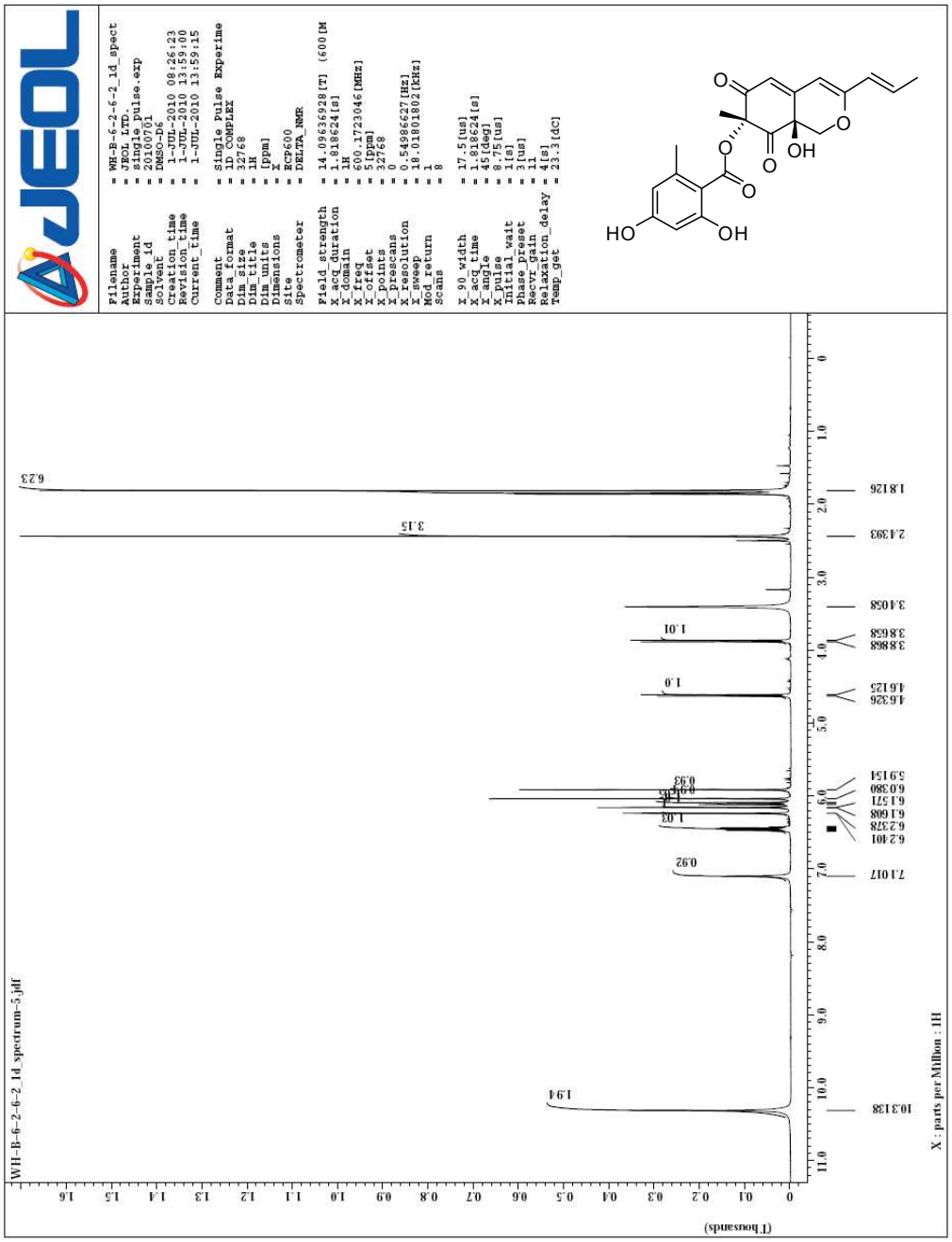


Figure S17. The ^{13}C NMR spectrum of purpurquinone C (**3**) in DMSO

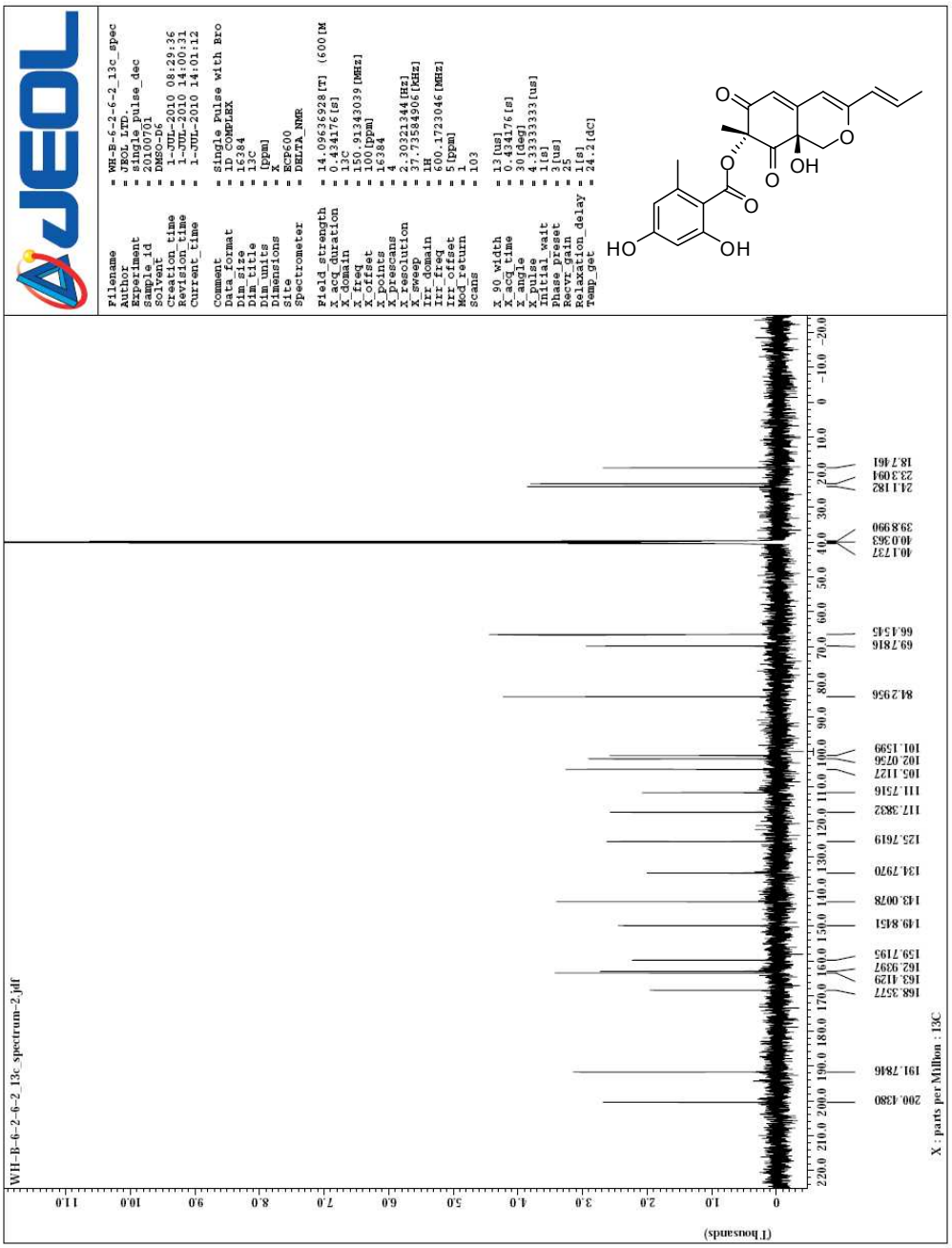


Figure S18. The DEPT spectrum of purpurquinone C (**3**) in DMSO

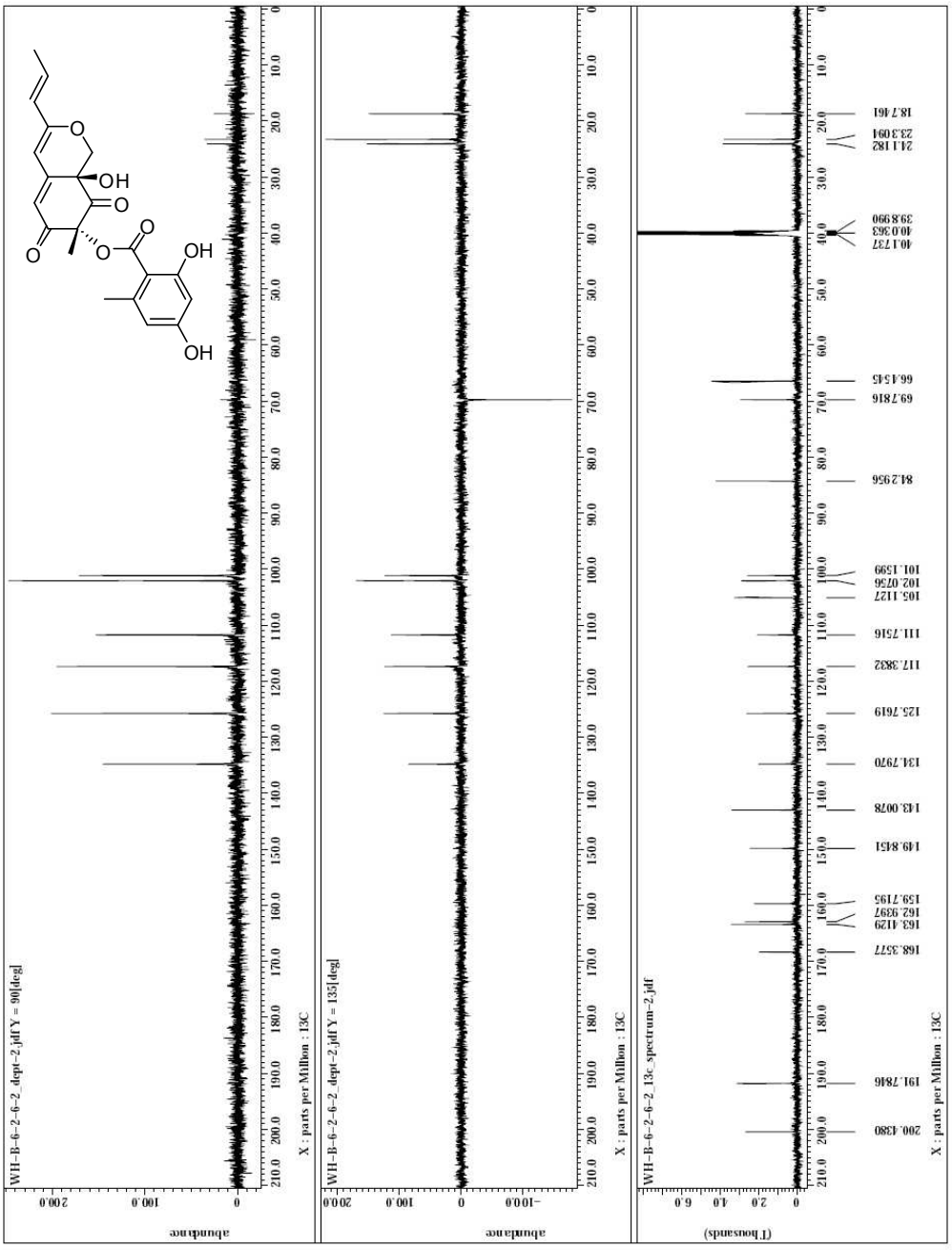


Figure S19. The NOESY spectrum of purpurquinone C (**3**) in DMSO

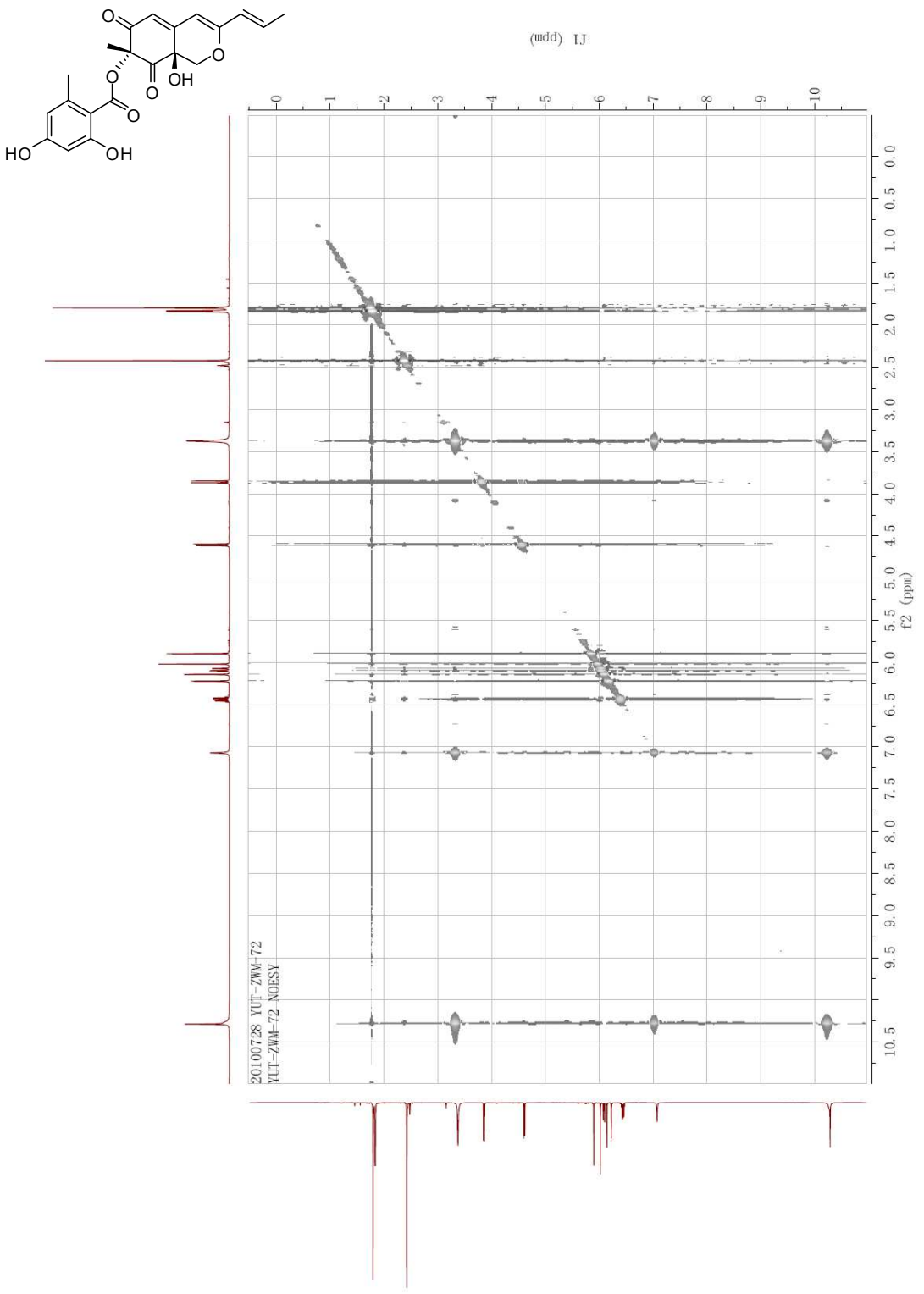


Figure S20. The ^{1}H NMR spectrum of purpurester A (**4**) in DMSO

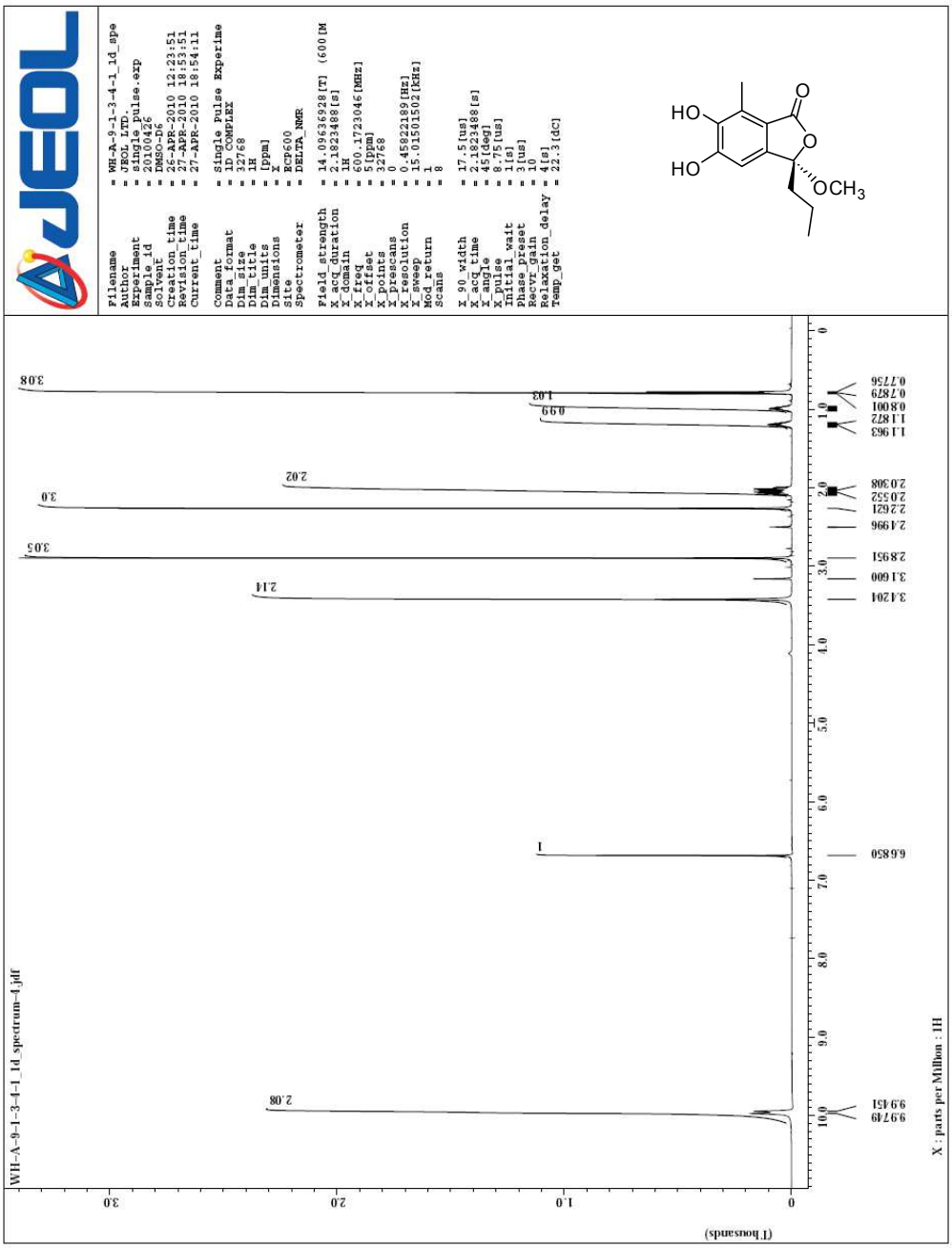


Figure S21. The ^{13}C NMR spectrum of purpurester A (**4**) in DMSO

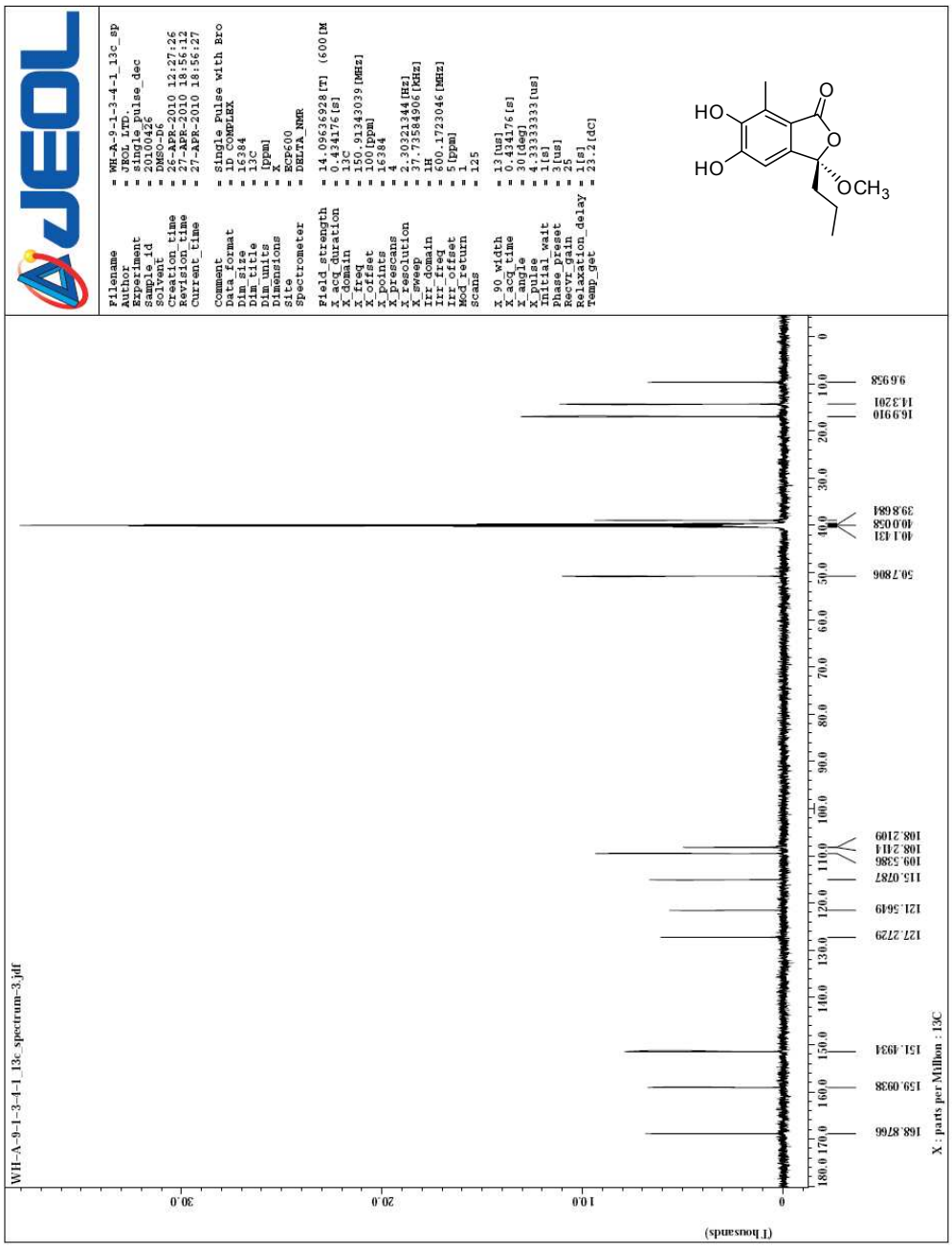


Figure S22. The DEPT spectrum of purpurester A (**4**) in DMSO

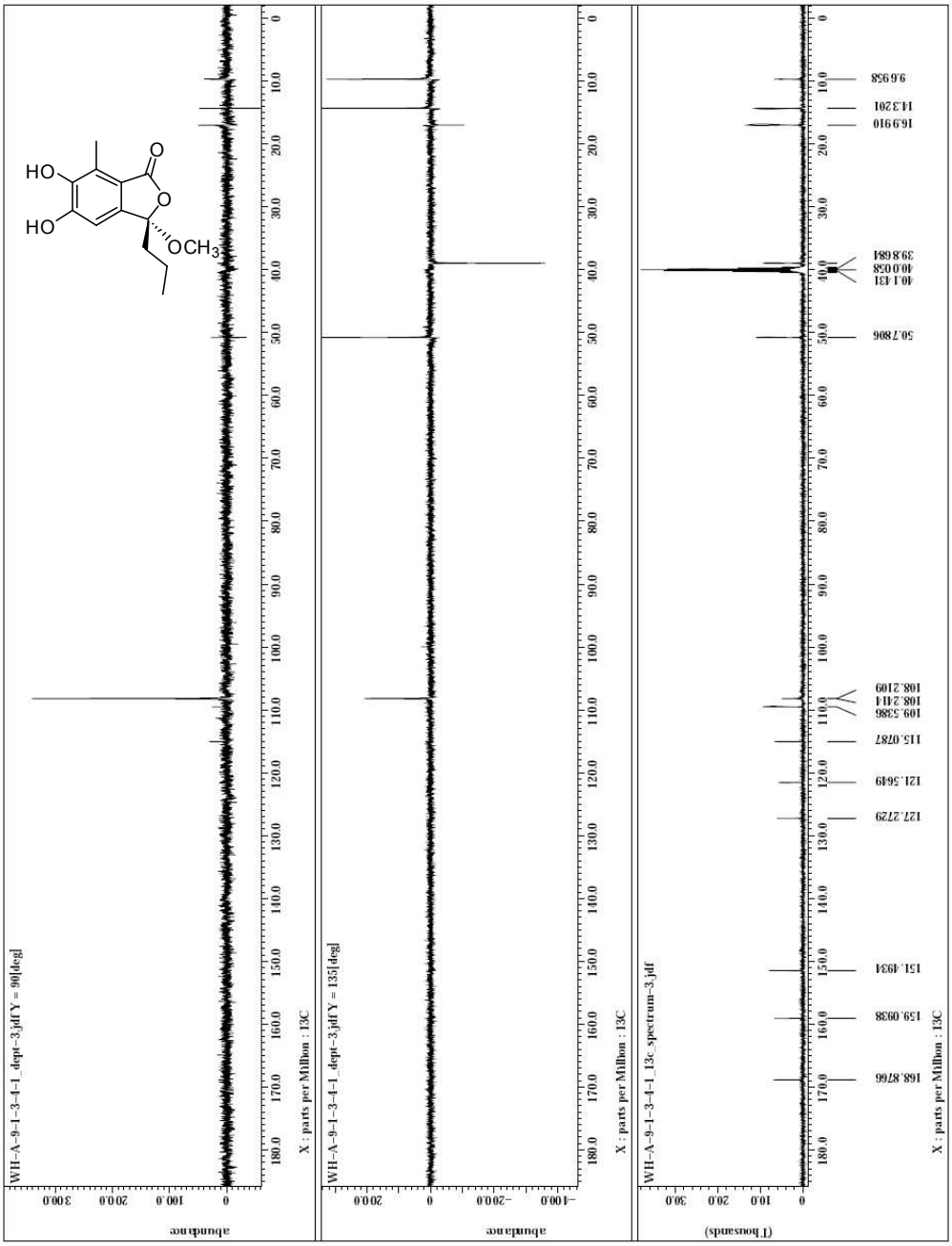


Figure S23. The HMQC spectrum of purpurester A (**4**) in DMSO

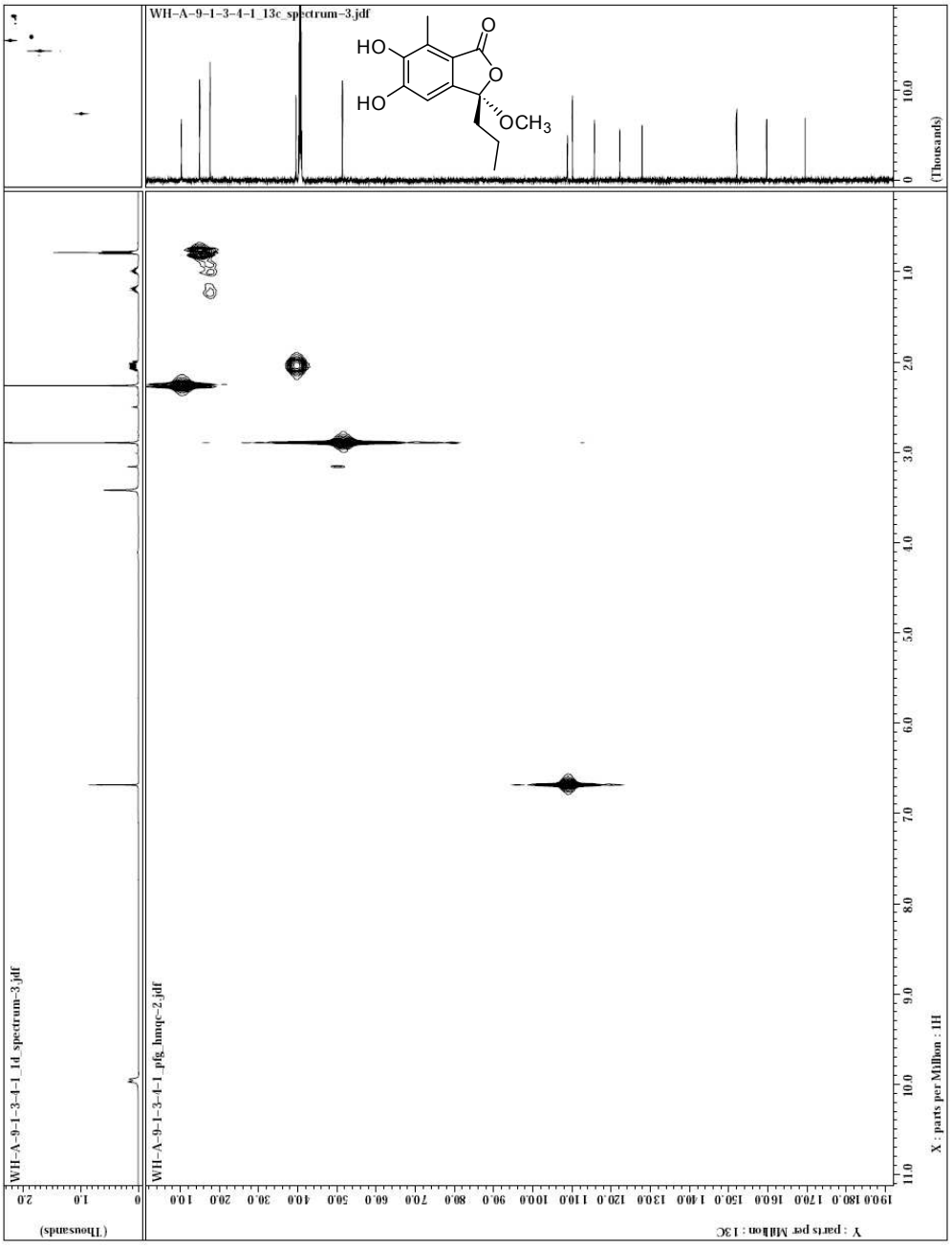


Figure S24. The ^{1}H-^{1}H COSY spectrum of purpurester A (**4**) in DMSO

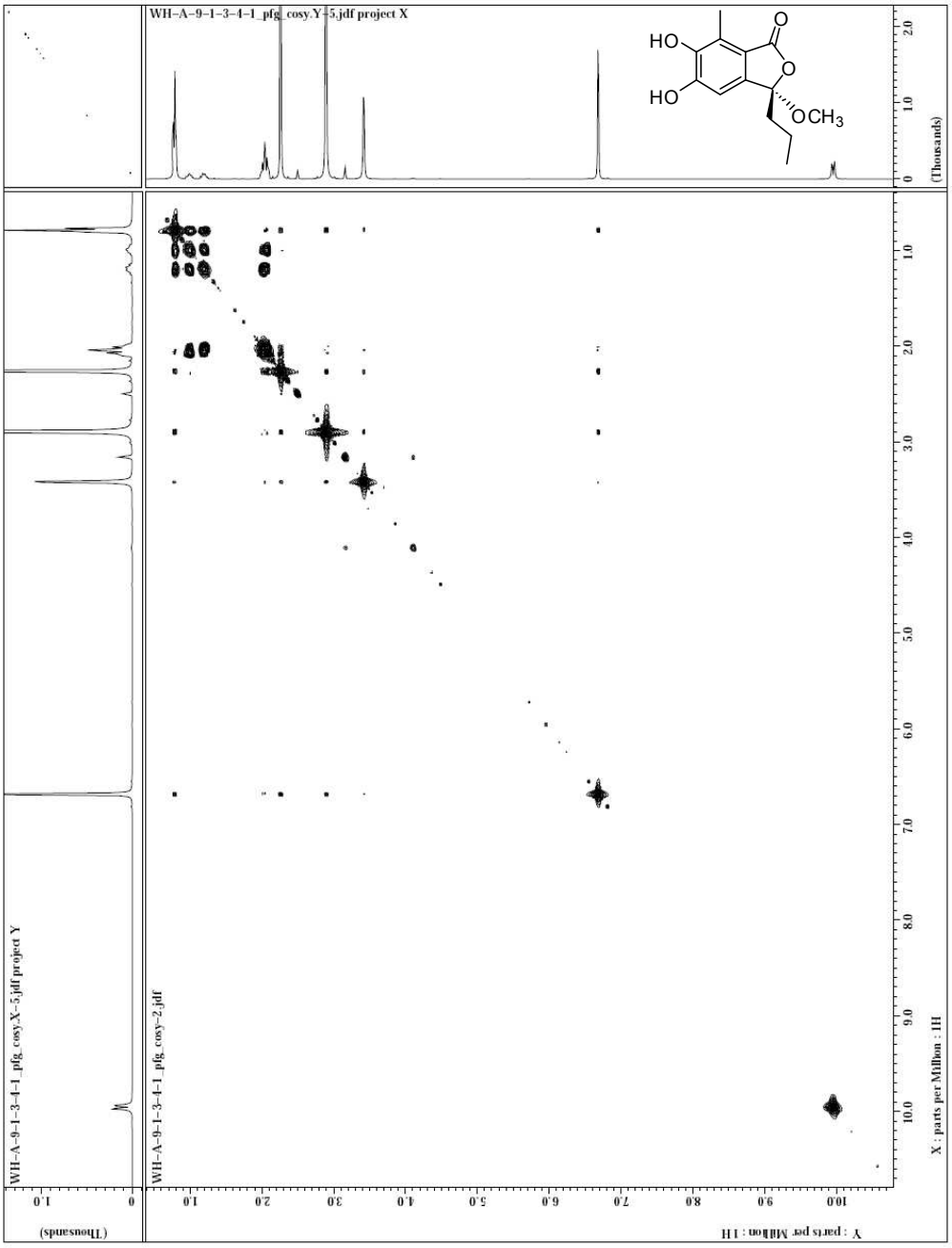


Figure S25. The HMBC spectrum of purpurester A (**4**) in DMSO

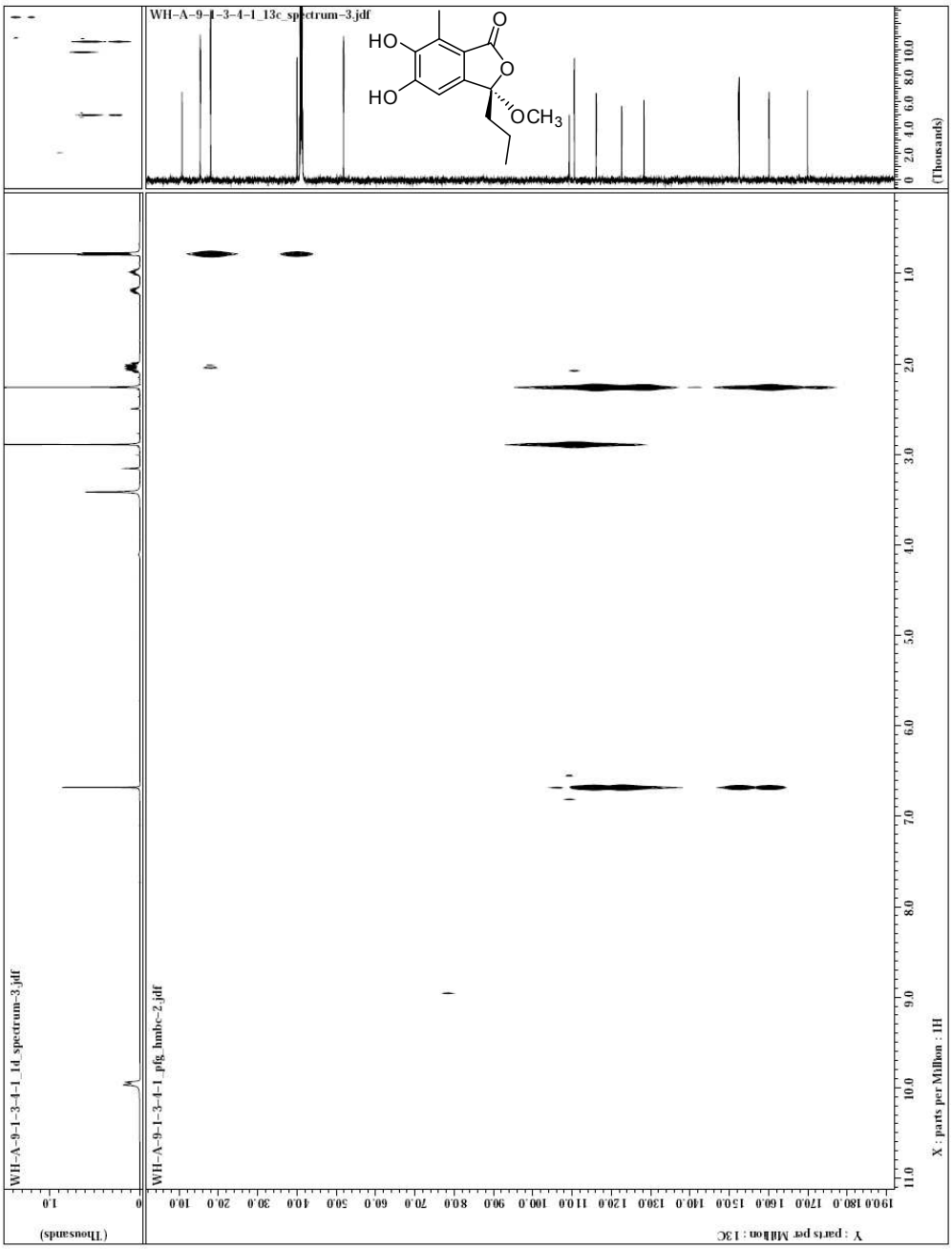


Figure S26. The ^{1}H NMR spectrum of purpurester B (**5**) in DMSO

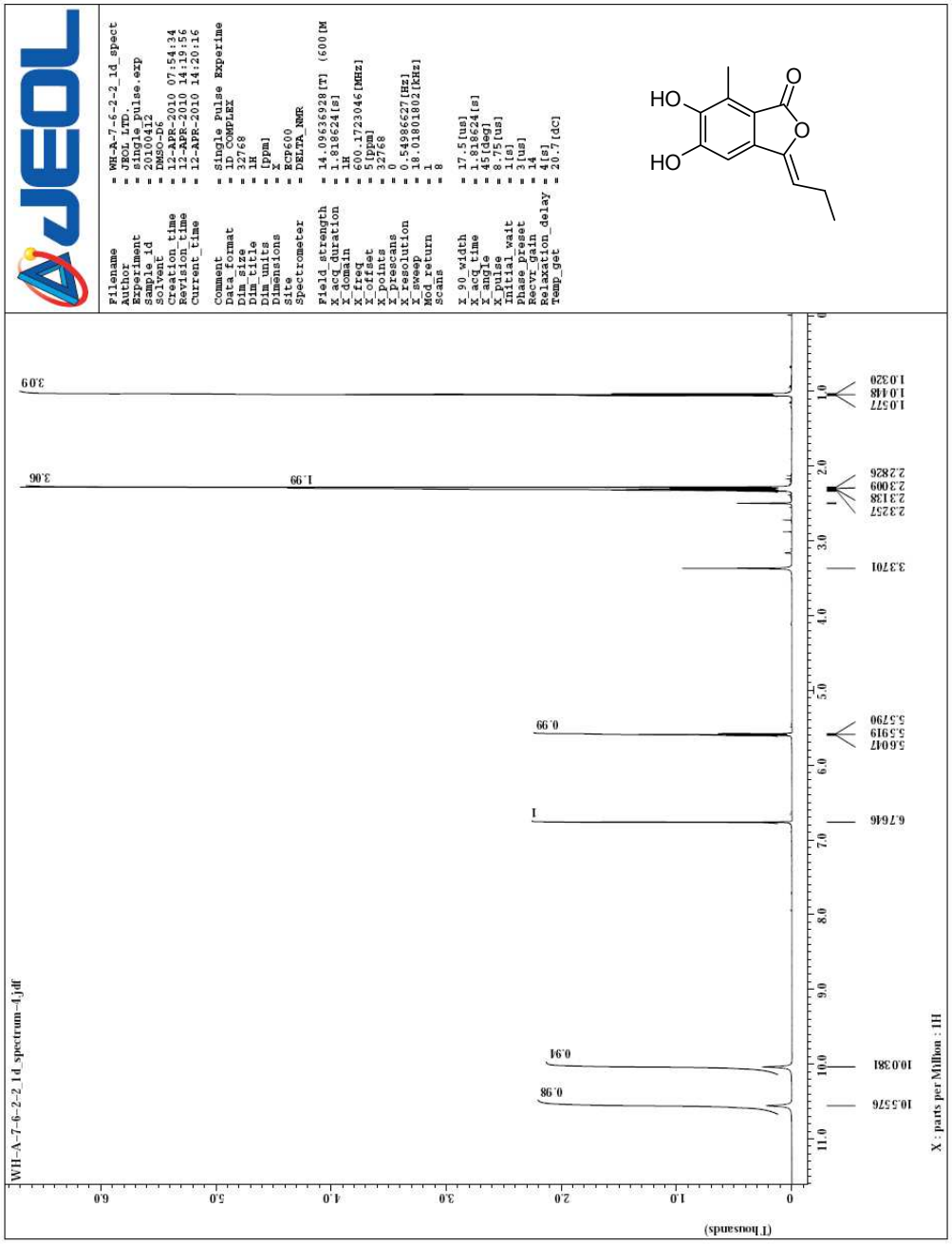


Figure S27. The ^{13}C NMR spectrum of purpurester B (**5**) in DMSO

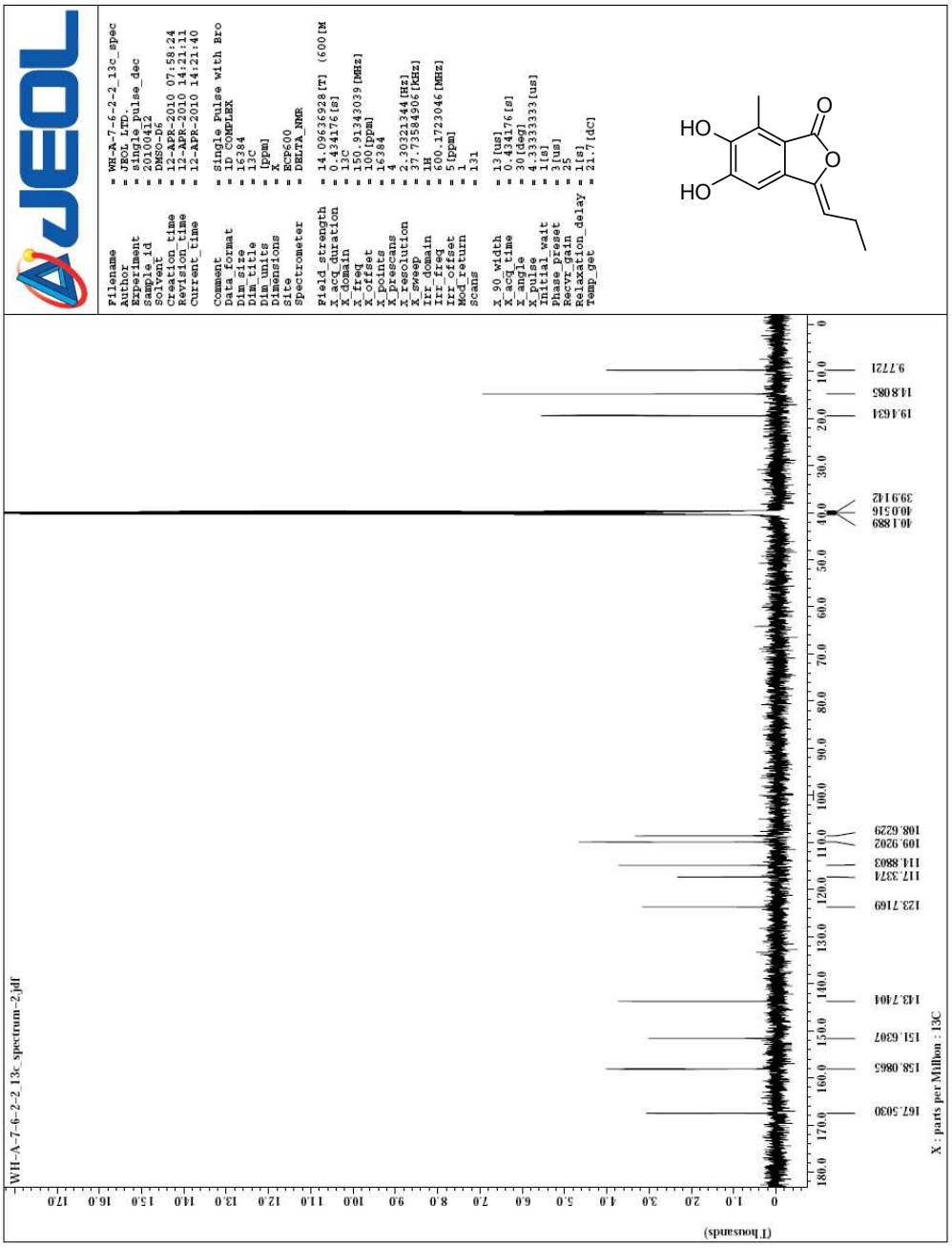


Figure S28. The DEPT spectrum of purpurester B (**5**) in DMSO

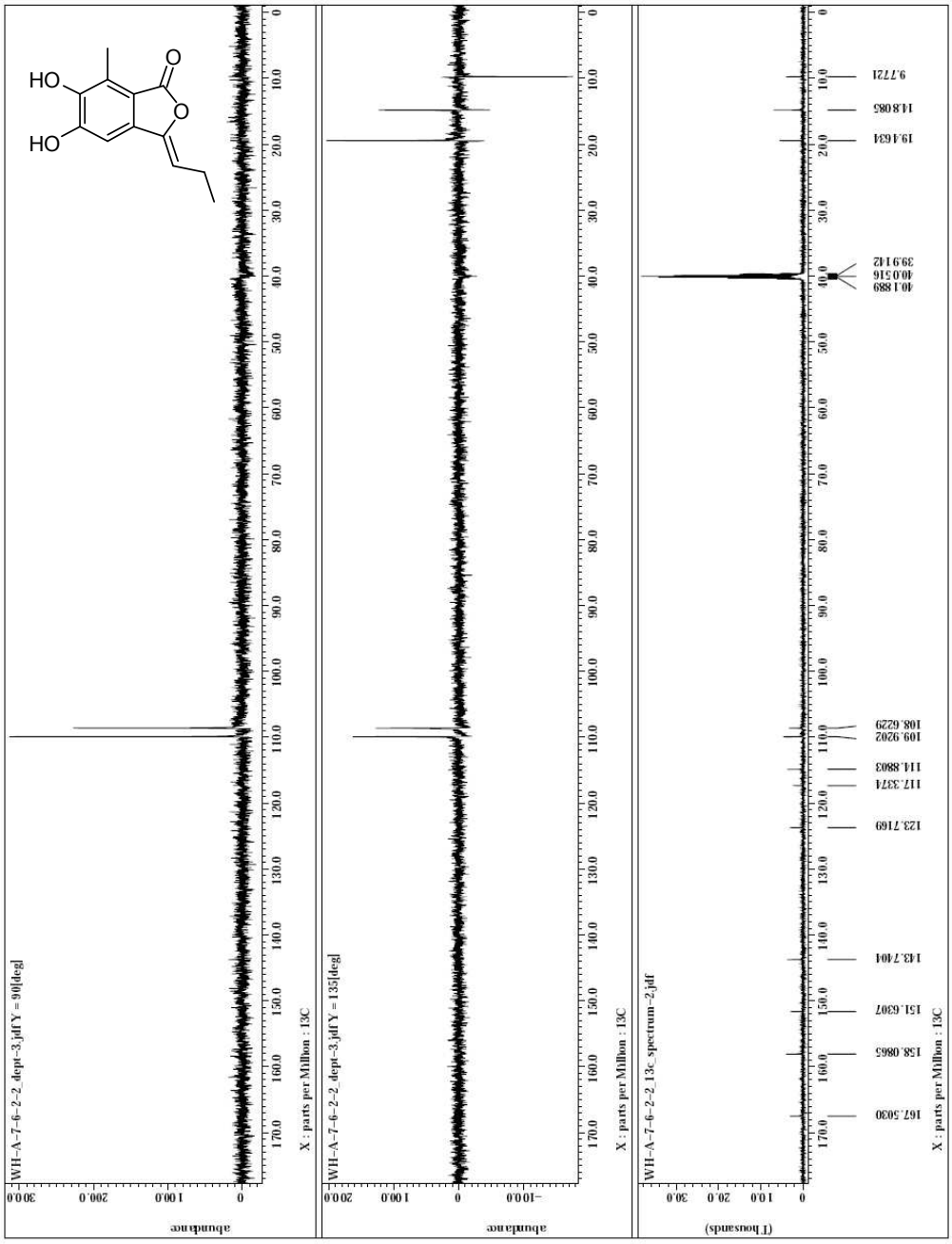


Figure S29. The ^{1}H NMR spectrum of compound **6** in DMSO

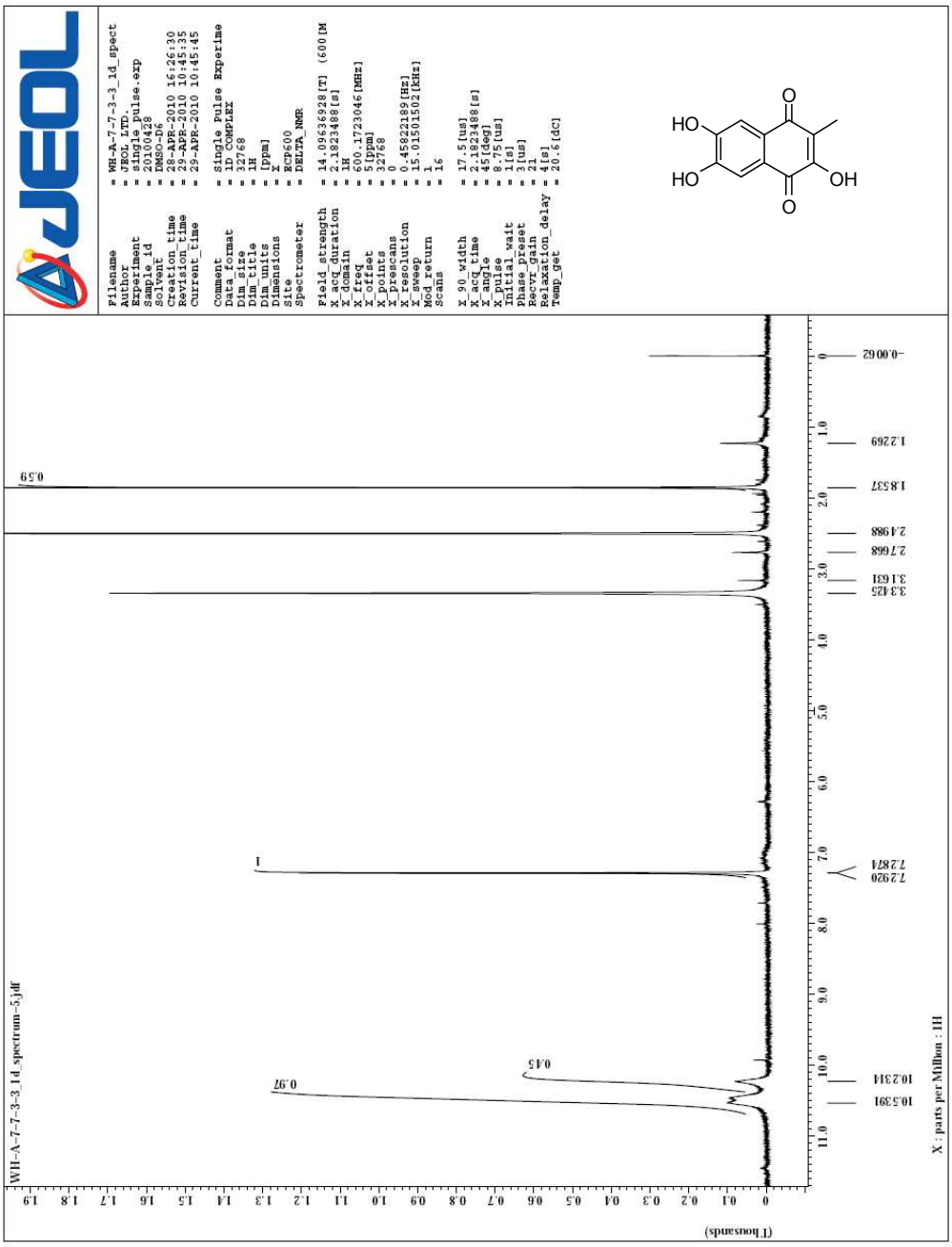


Figure S30. The ^{13}C NMR spectrum of compound **6** in DMSO

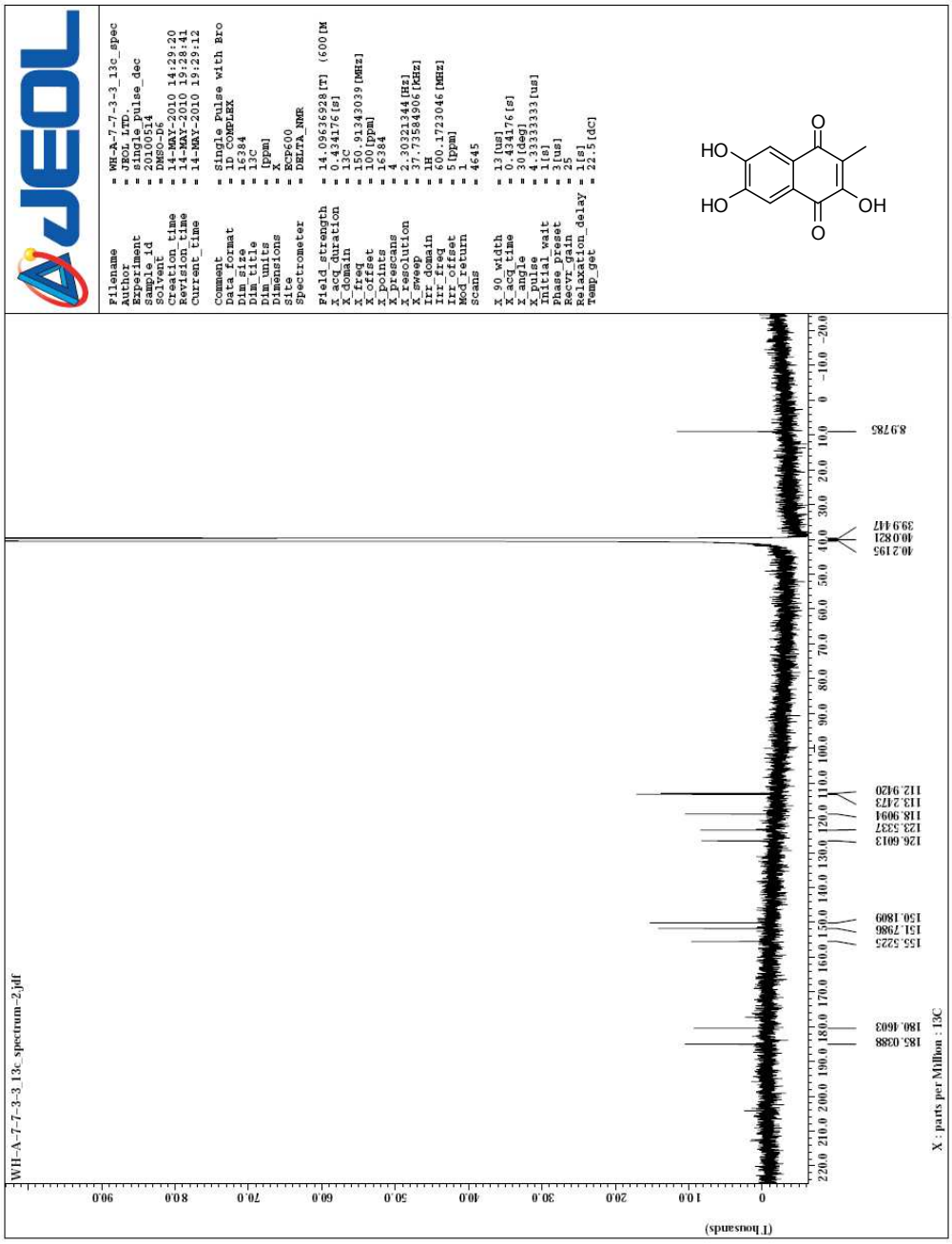


Figure S31. The DEPT spectrum of compound **6** in DMSO

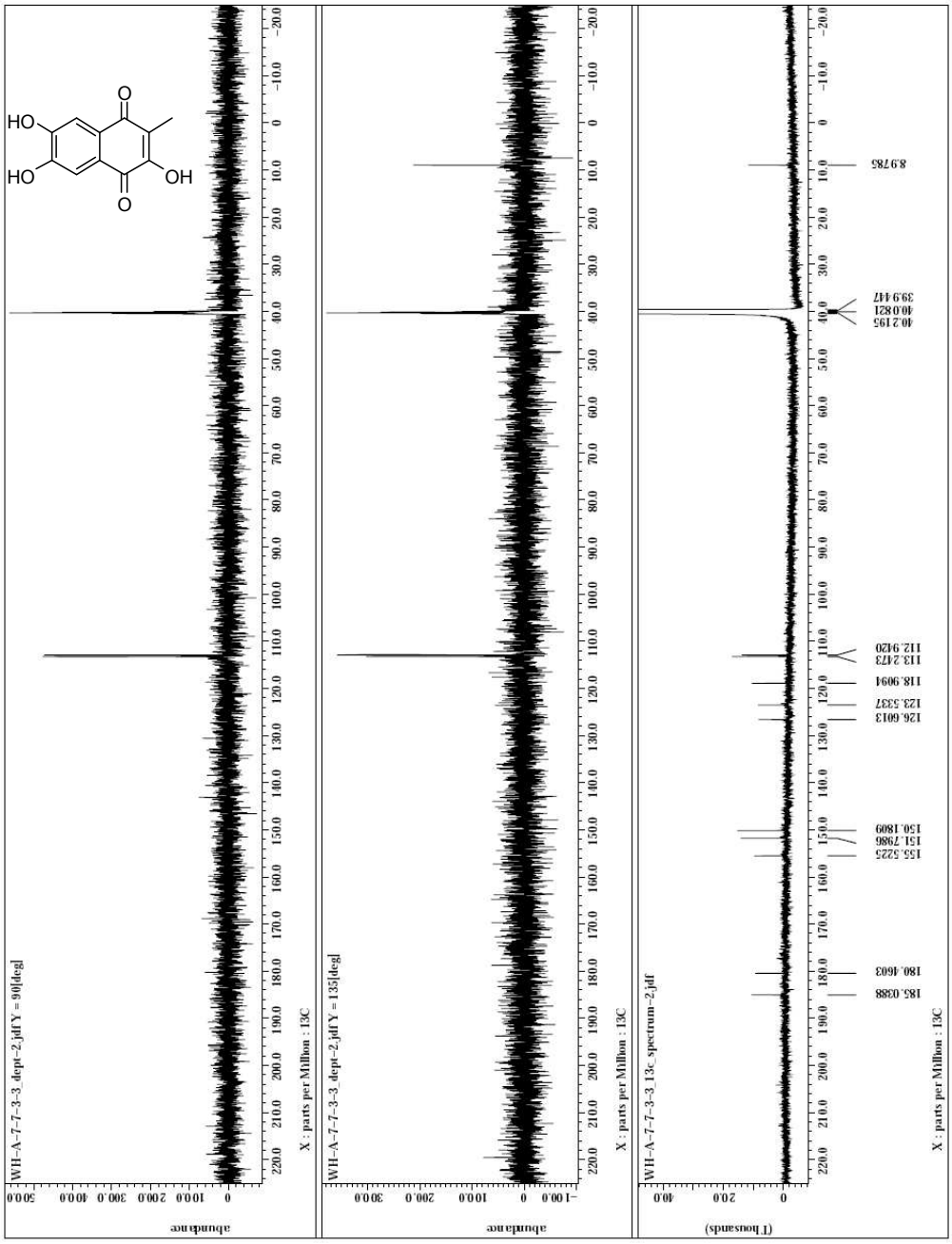


Figure S32. HPLC profiles (360 nm) of secondary metabolites from *P. purpurogenum* JS03-21 cultivated at pH 2 and pH 7.

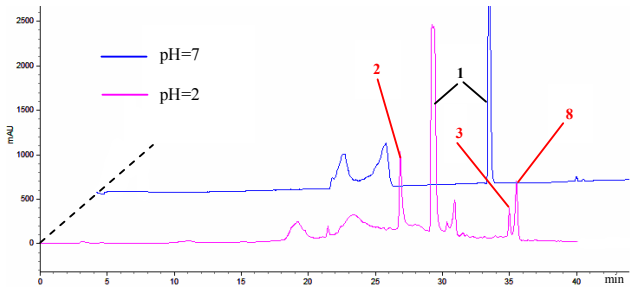


Figure S33. Key NOESY correlations of compounds **1**−**3**.