Supporting information for

Onydecalins, Fungal Polyketides with Anti-*Histoplasma* and Anti-TRP Activity

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List of the supporting information.

Figure S1. ^{1}H NMR spectrum of compound **1** in DMSO-d_6.

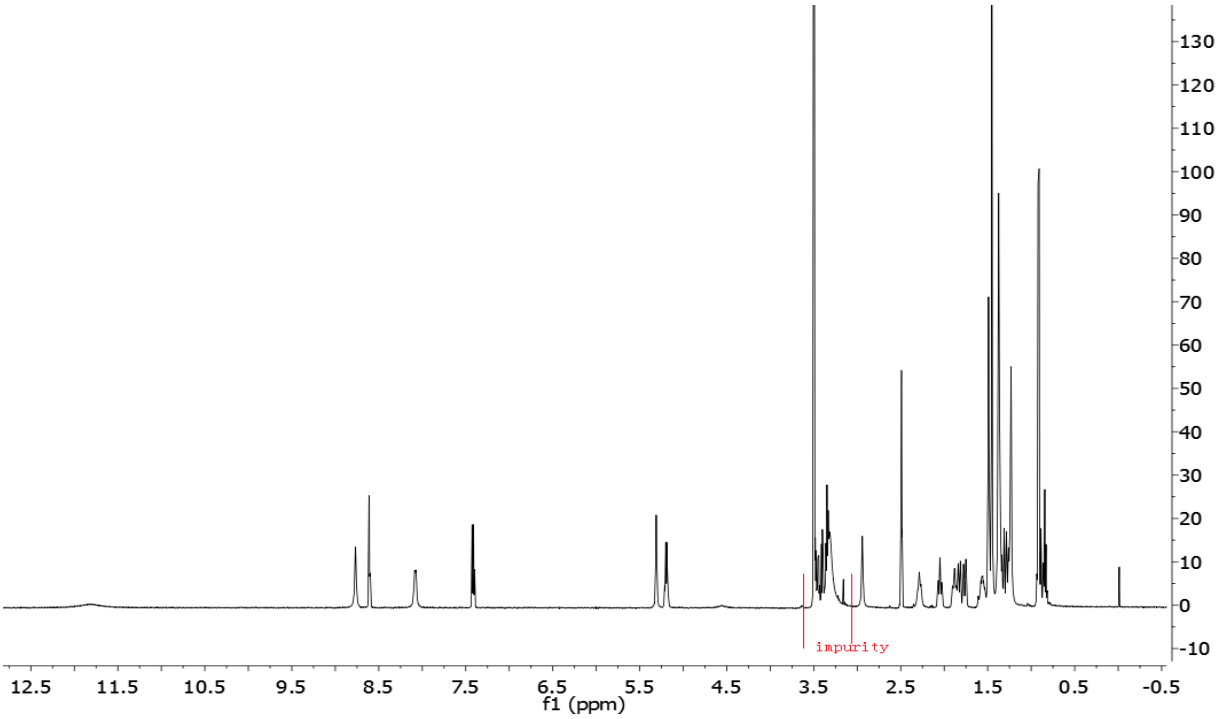


Figure S2. HSQC of compound **1** in DMSO-d_6.

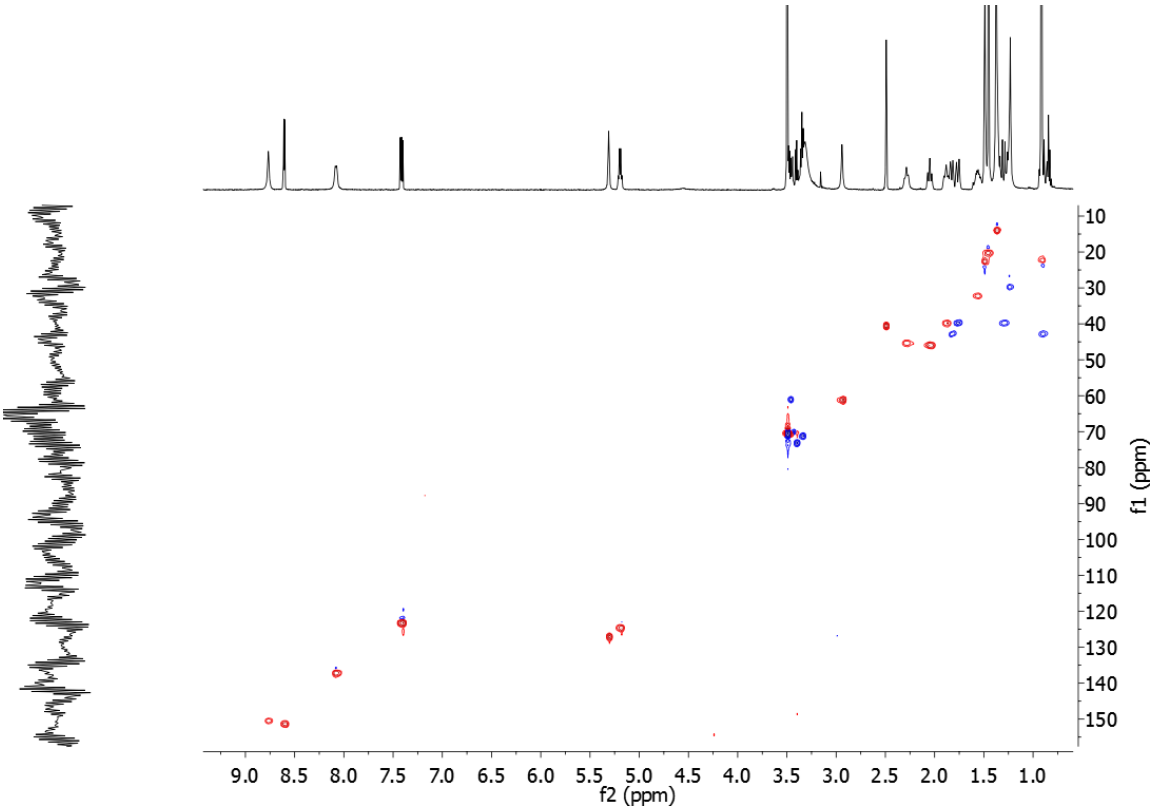


Figure S3. HMBC of compound **1** in DMSO-d_6.

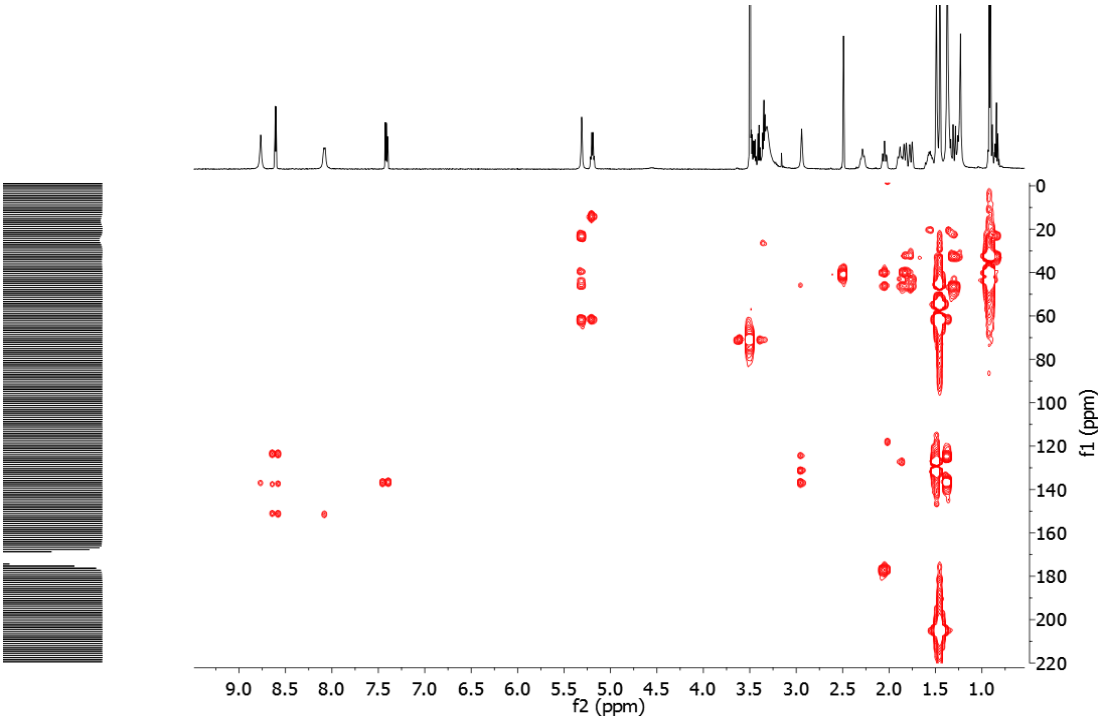


Figure S4. ^{1}H-^{1}H COSY of compound **1** in DMSO-d_6.

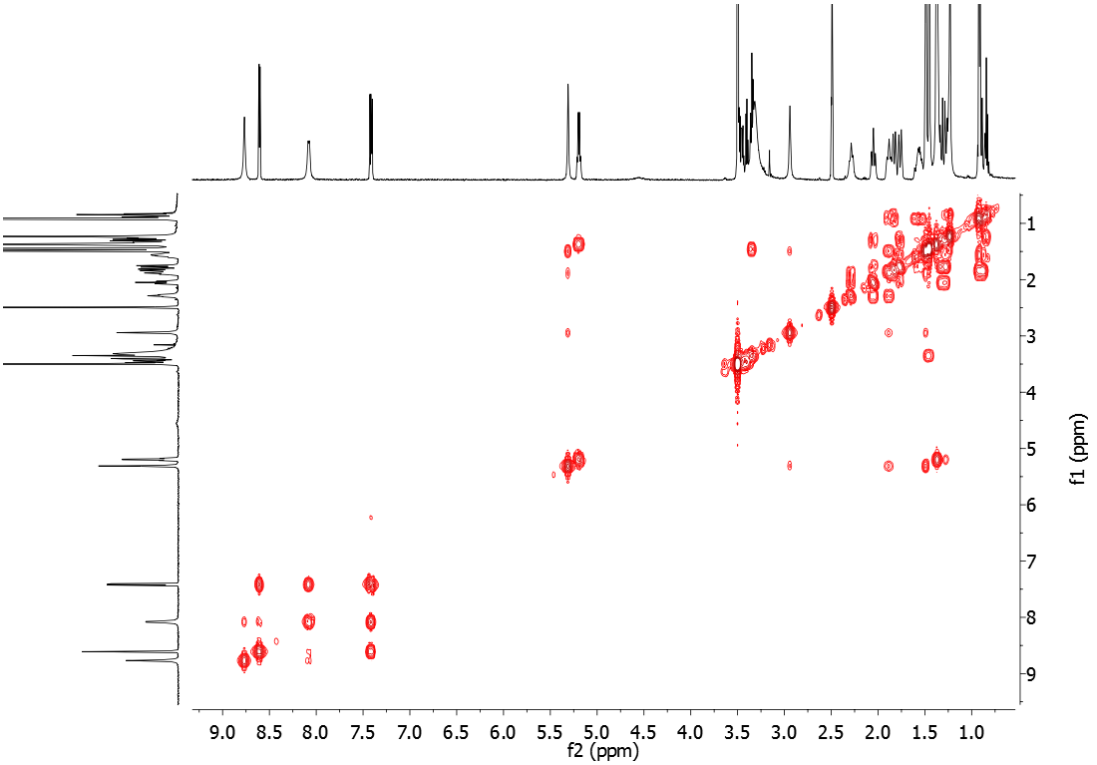


Figure S5. ROESY of compound **1** in DMSO-d_6.

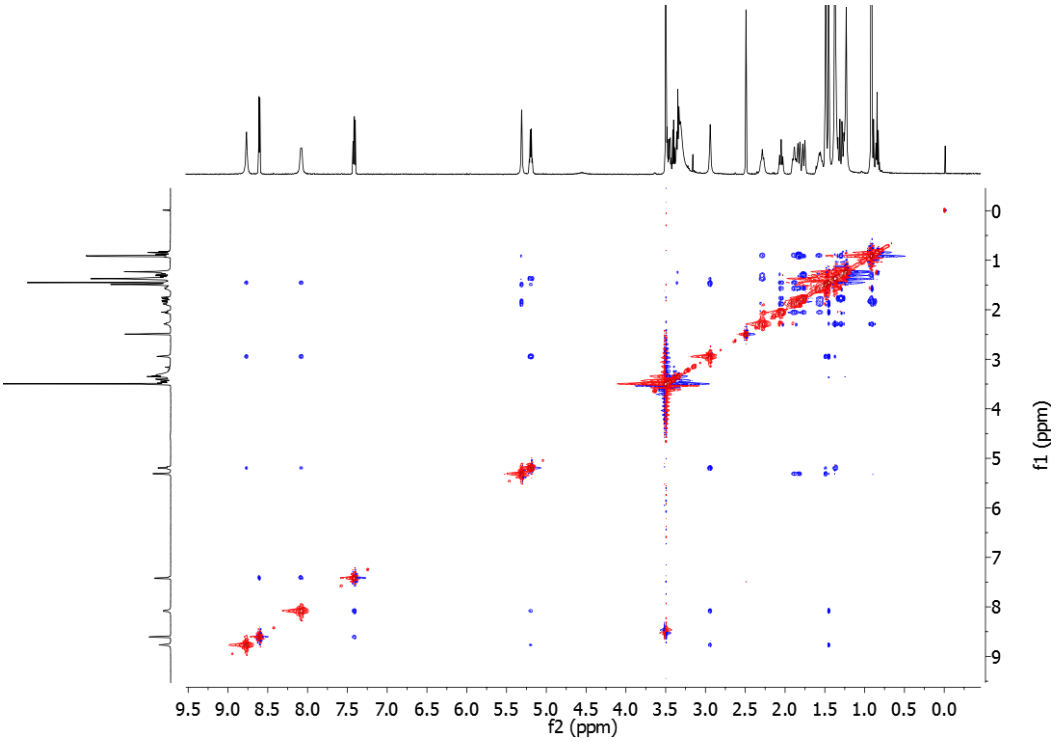


Figure S6. ^{1}H NMR of TFA salt of compound **1** in DMSO-d_6.

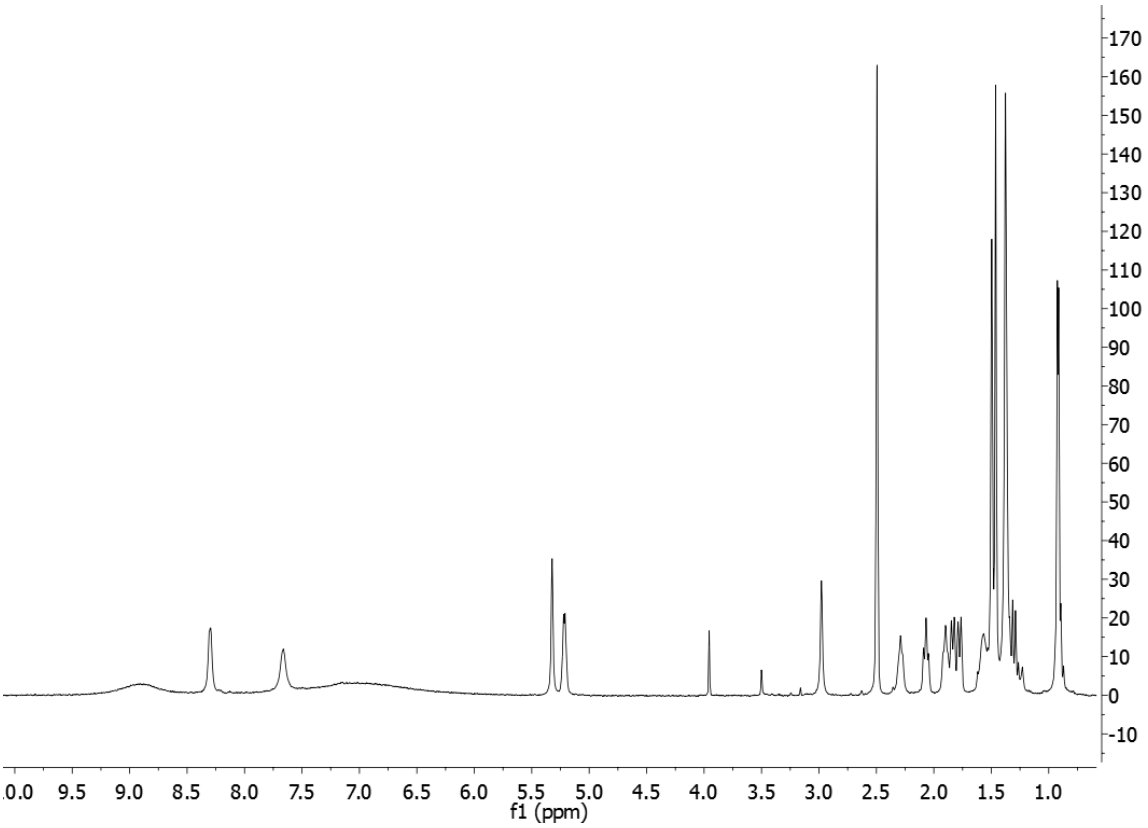


Figure S7. ^{13}C NMR of TFA salt of compound **1** in DMSO-d_6.

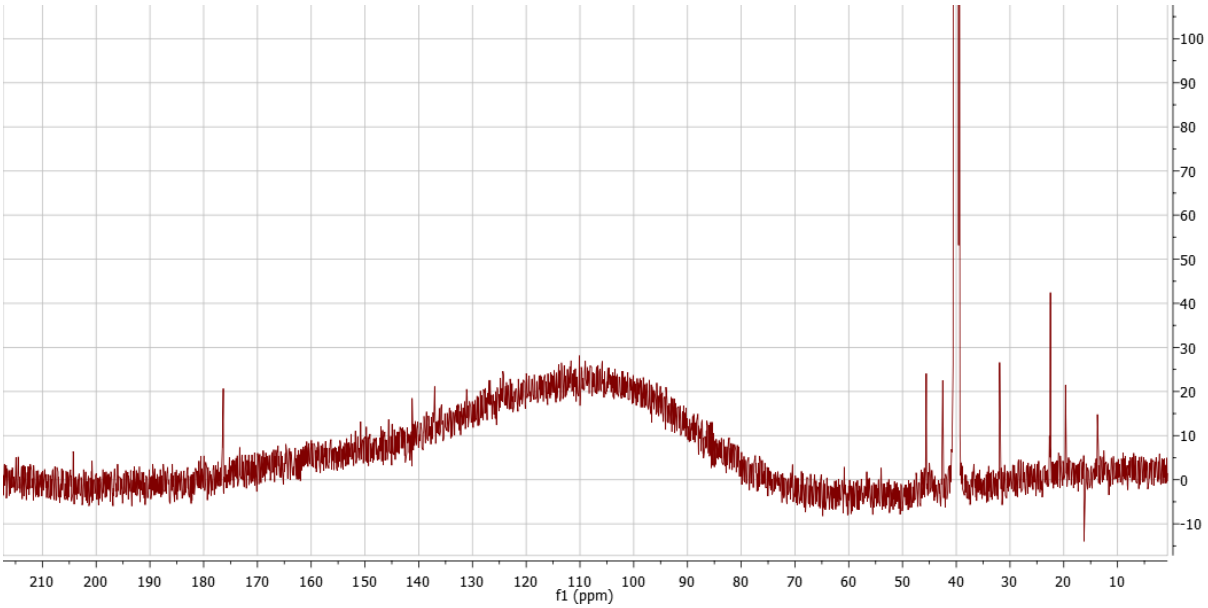


Figure S8. HSQC of TFA salt of compound **1** in DMSO-d_6.

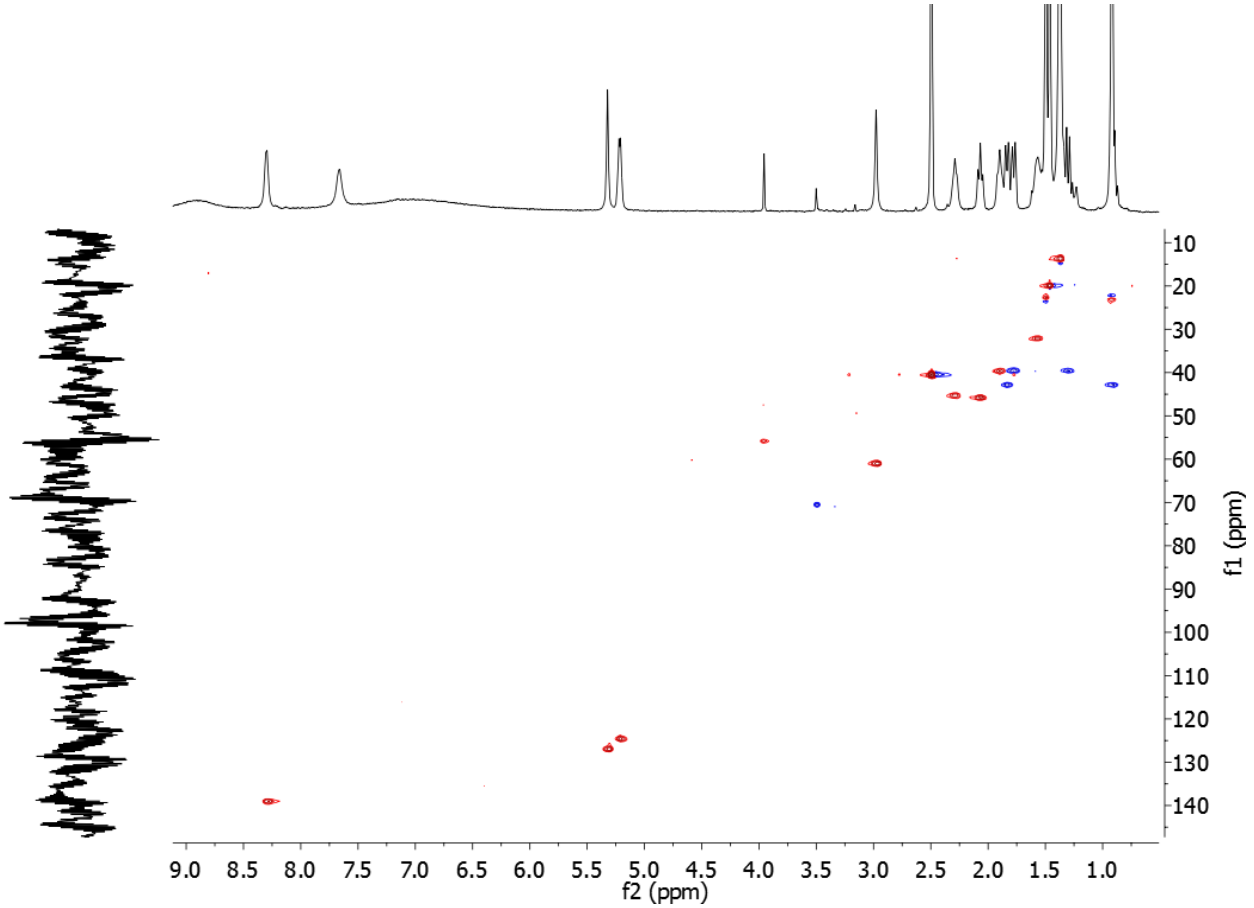


Figure S9. HMBC of TFA salt of compound **1** in DMSO-d_6.

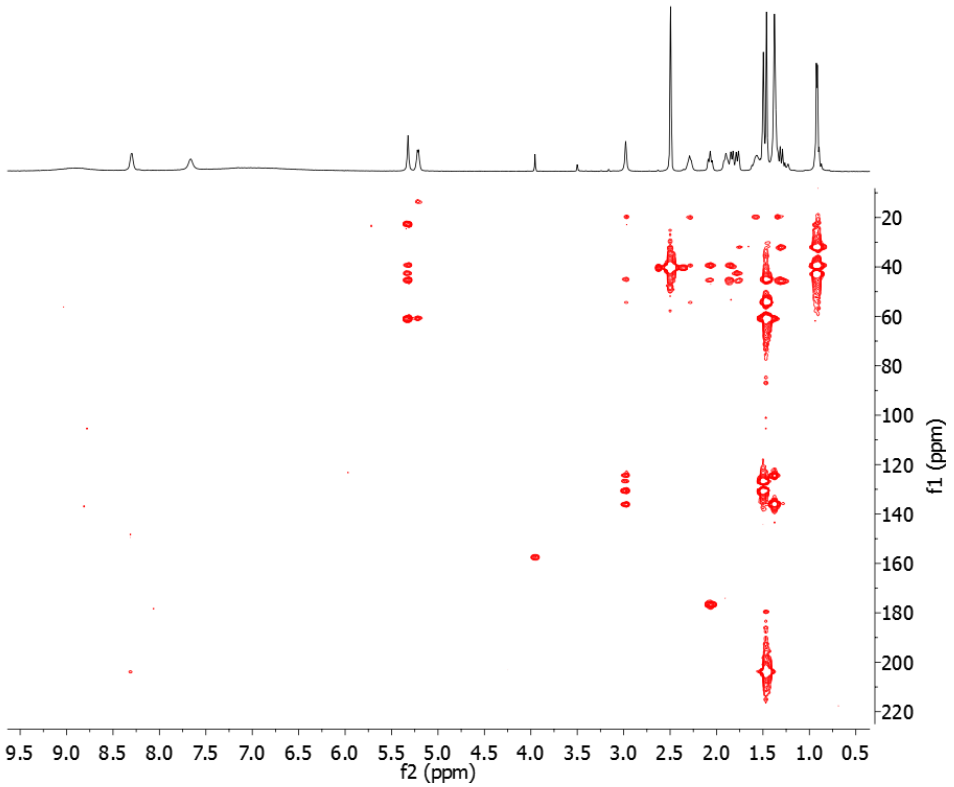


Figure S10. COSY of TFA salt of compound **1** in DMSO-d_6.

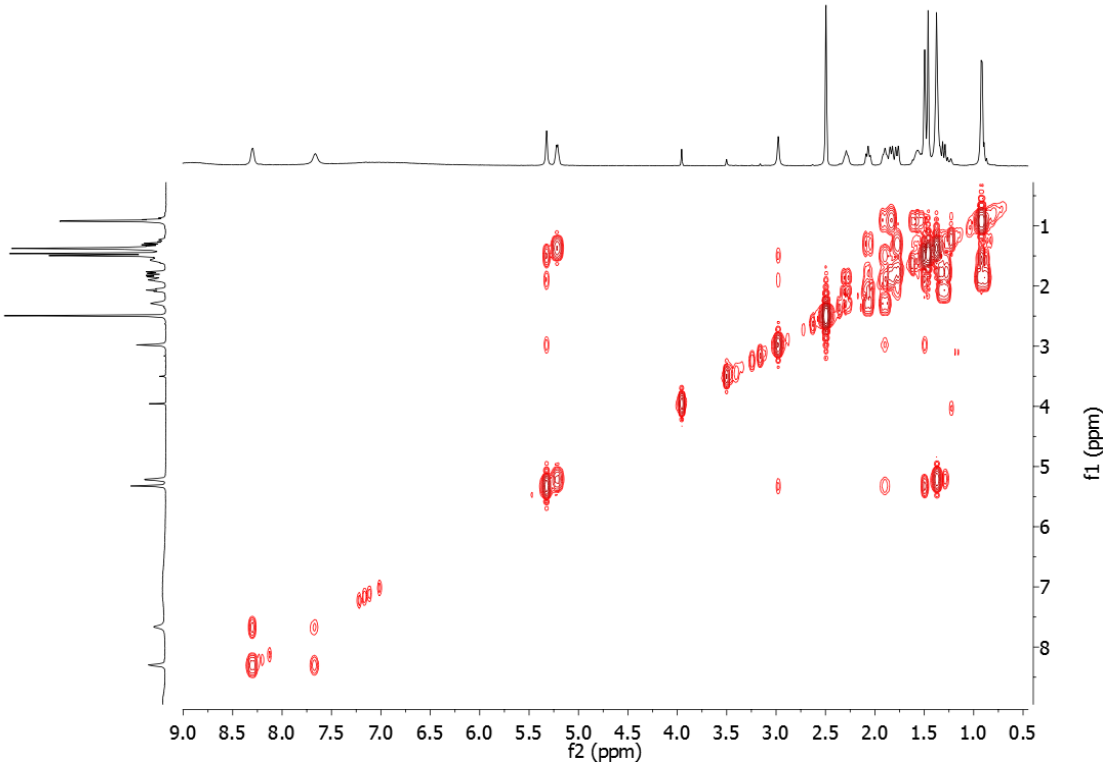


Figure S11. ^{1}H NMR of compound **2** in DMSO-d_6.

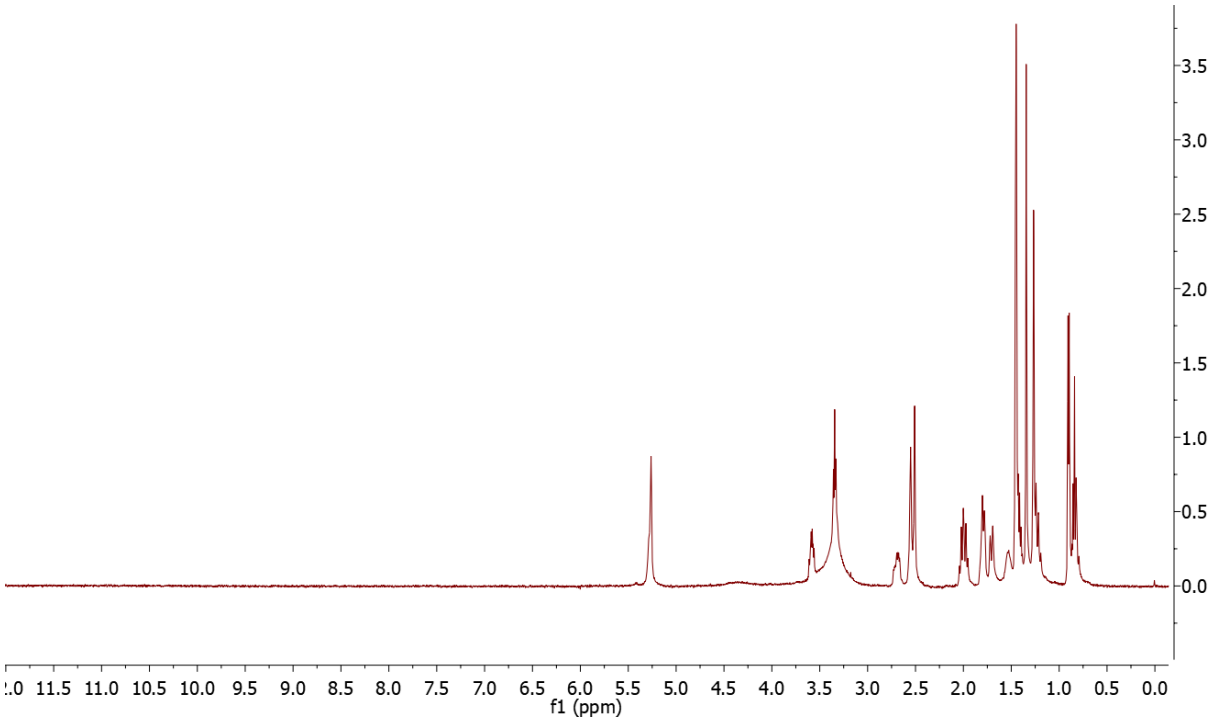


Figure S12. ^{13}C NMR of compound **2** in DMSO-d_6.

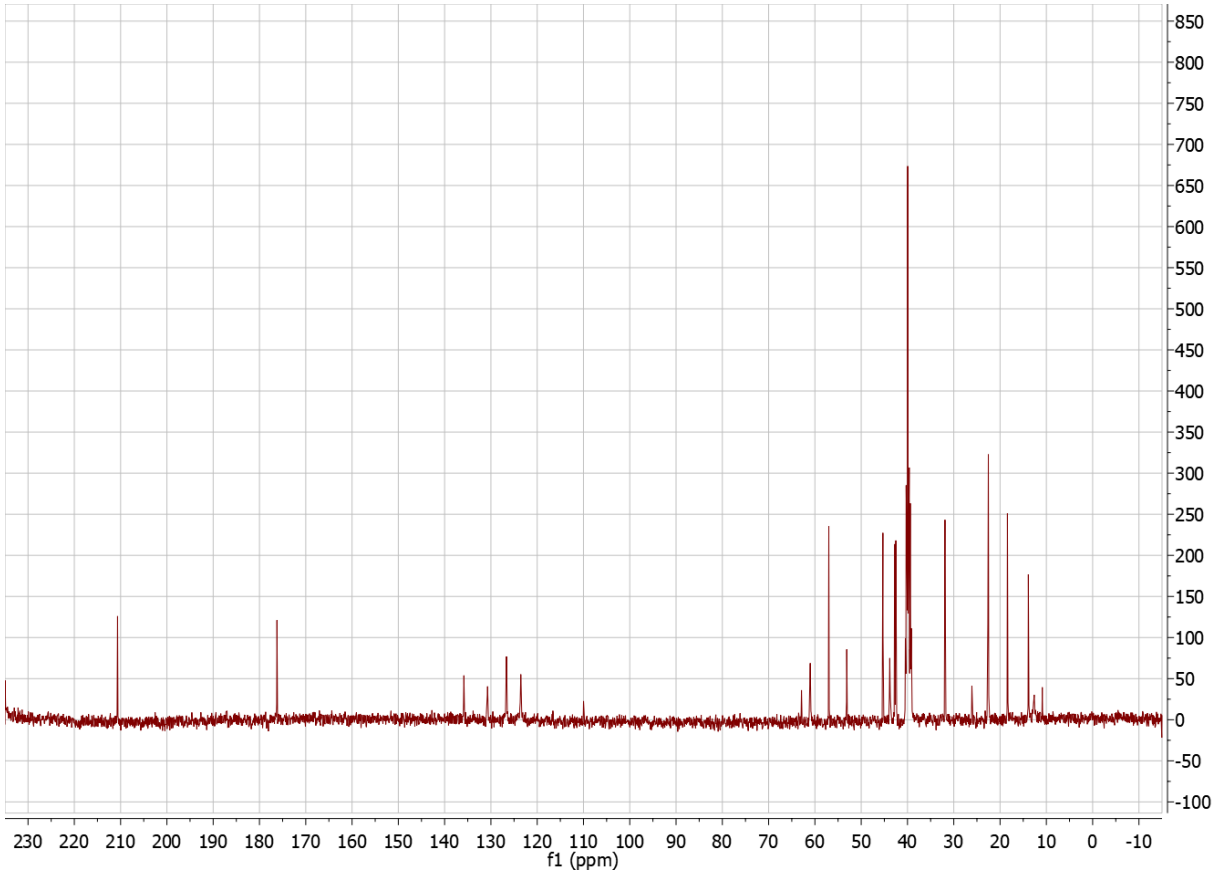


Figure S13. HSQC of compound **2** in DMSO-d_6.

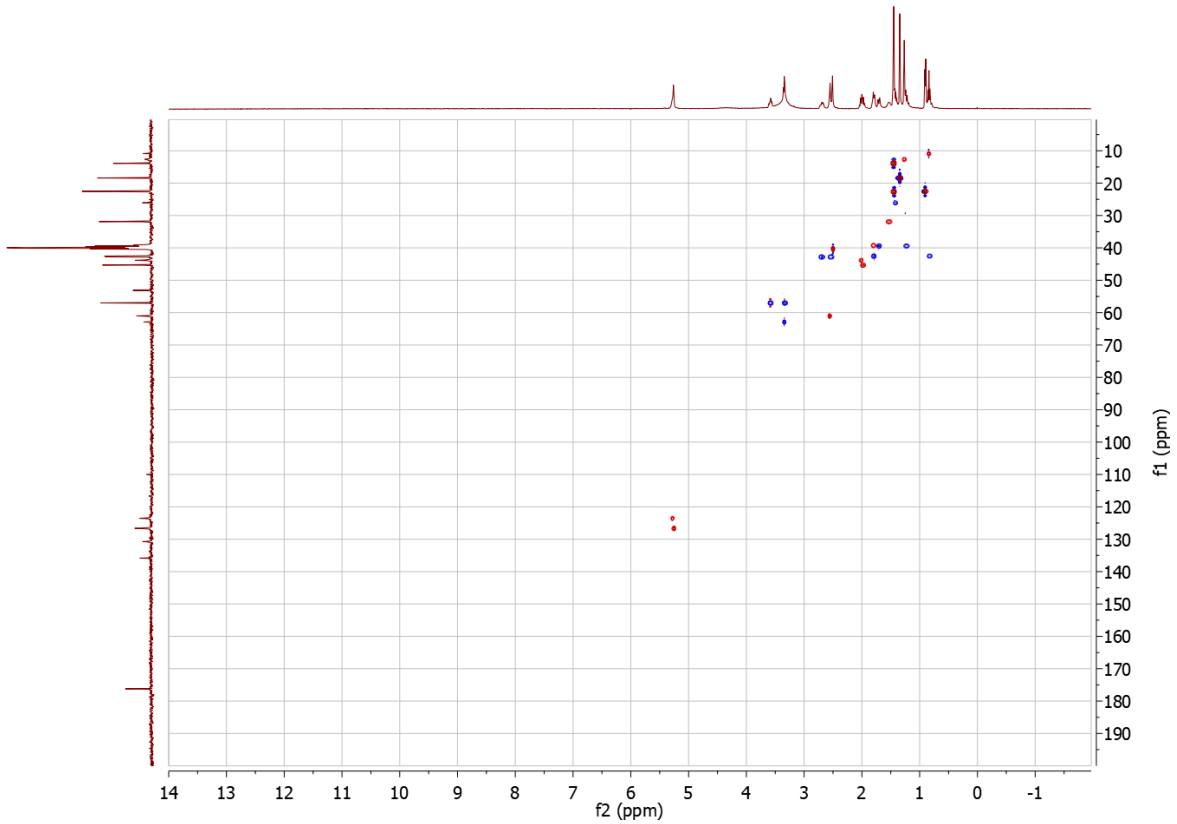


Figure S14. ^{1}H-^{1}H COSY of compound **2** in DMSO-d_6.

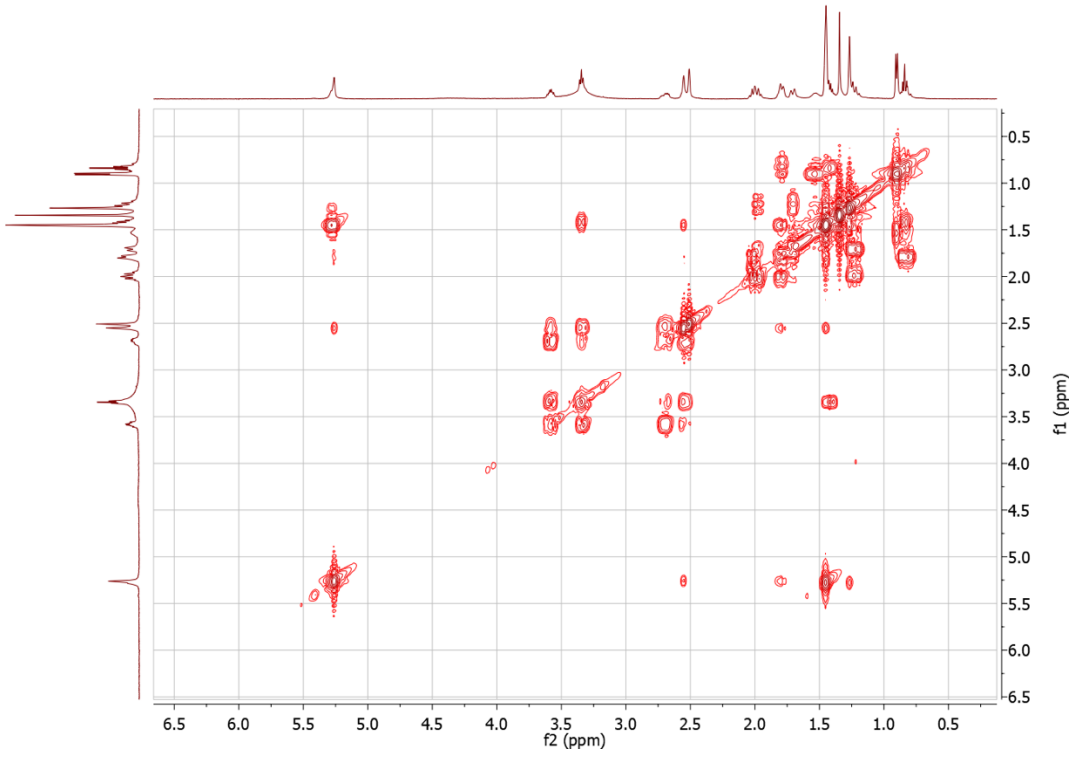


Figure S15. ROESY of compound **2** in DMSO-d_6.

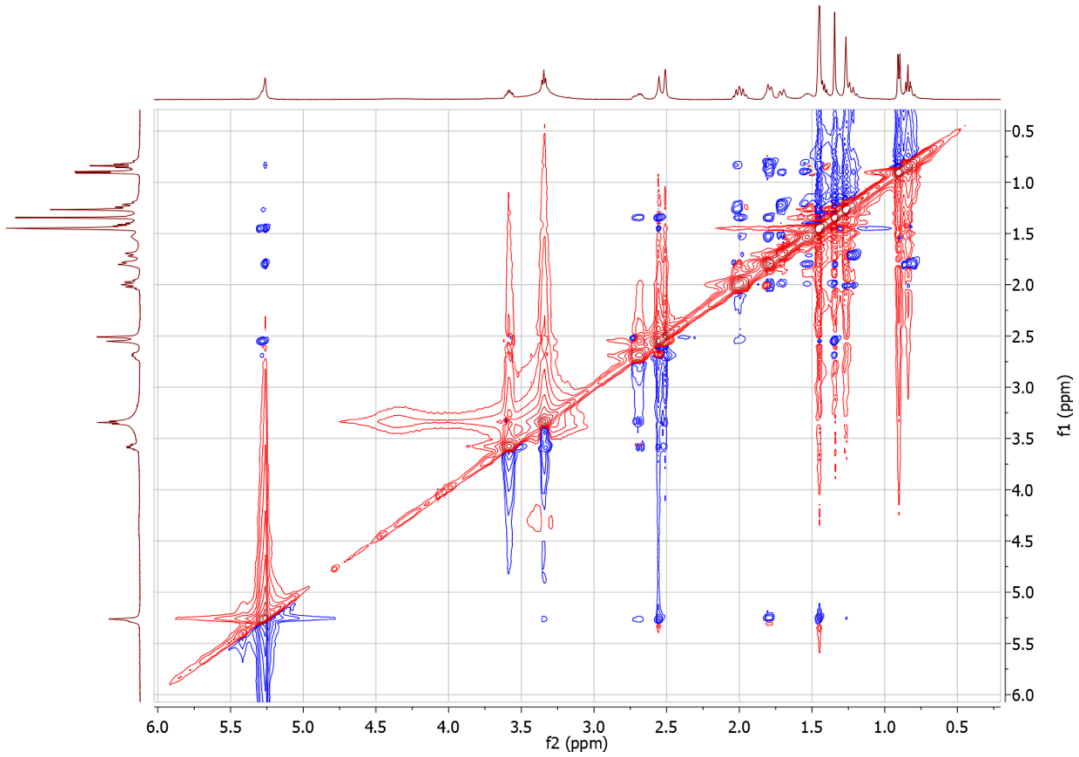


Figure S16. ^{1}H NMR of compound **3** in $CDCl_3$.

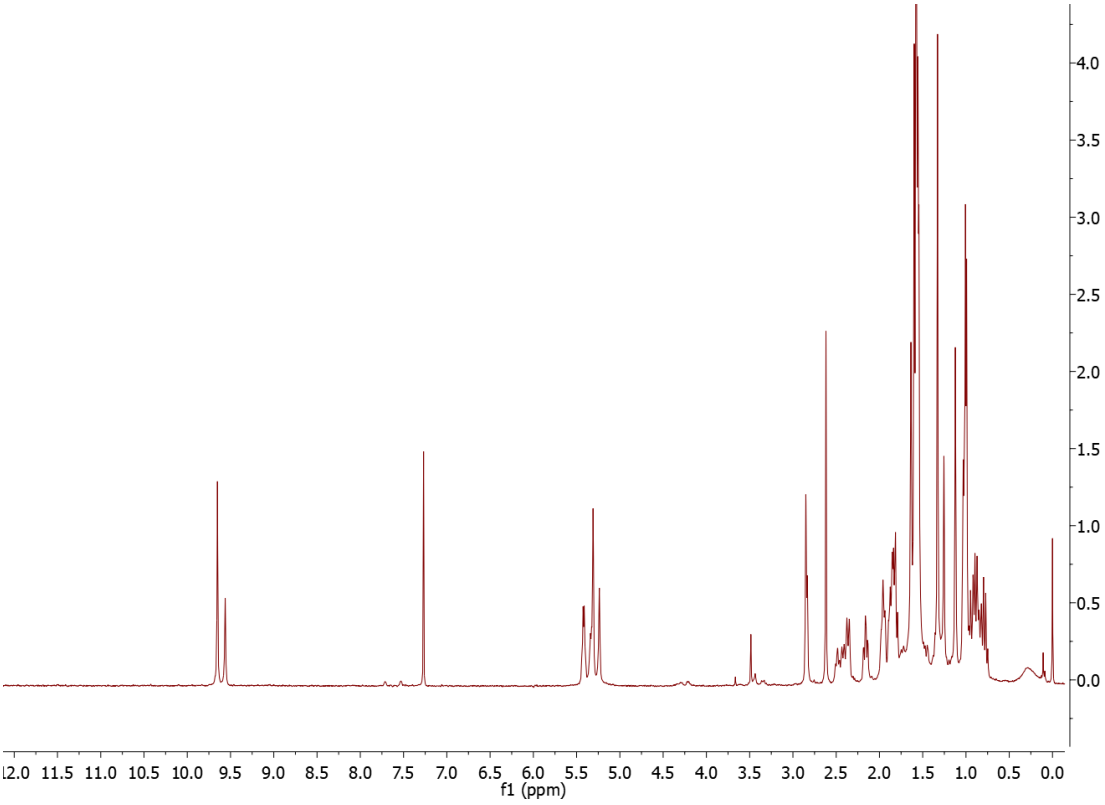


Figure S17. ^{13}C NMR of compound **3** in $CDCl_3$.

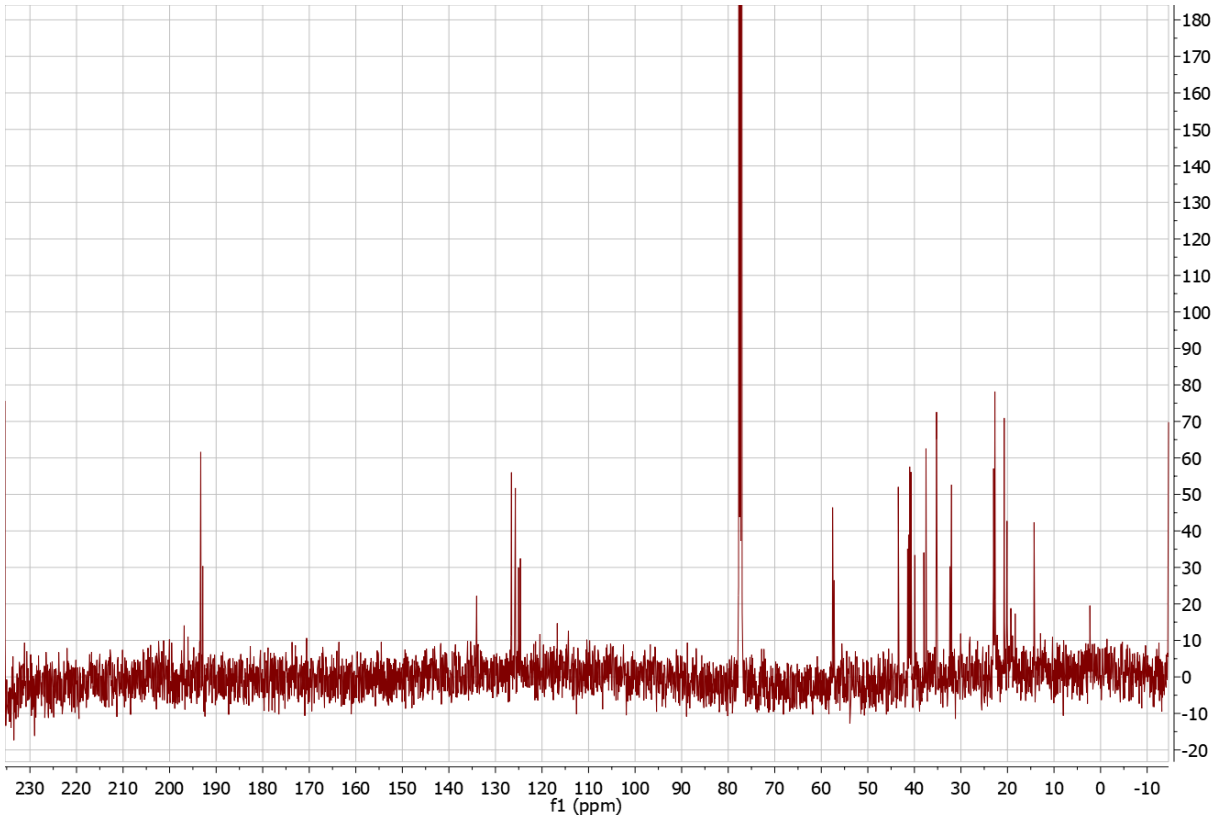


Figure S18. HSQC of compound **3** in $CDCl_3$.

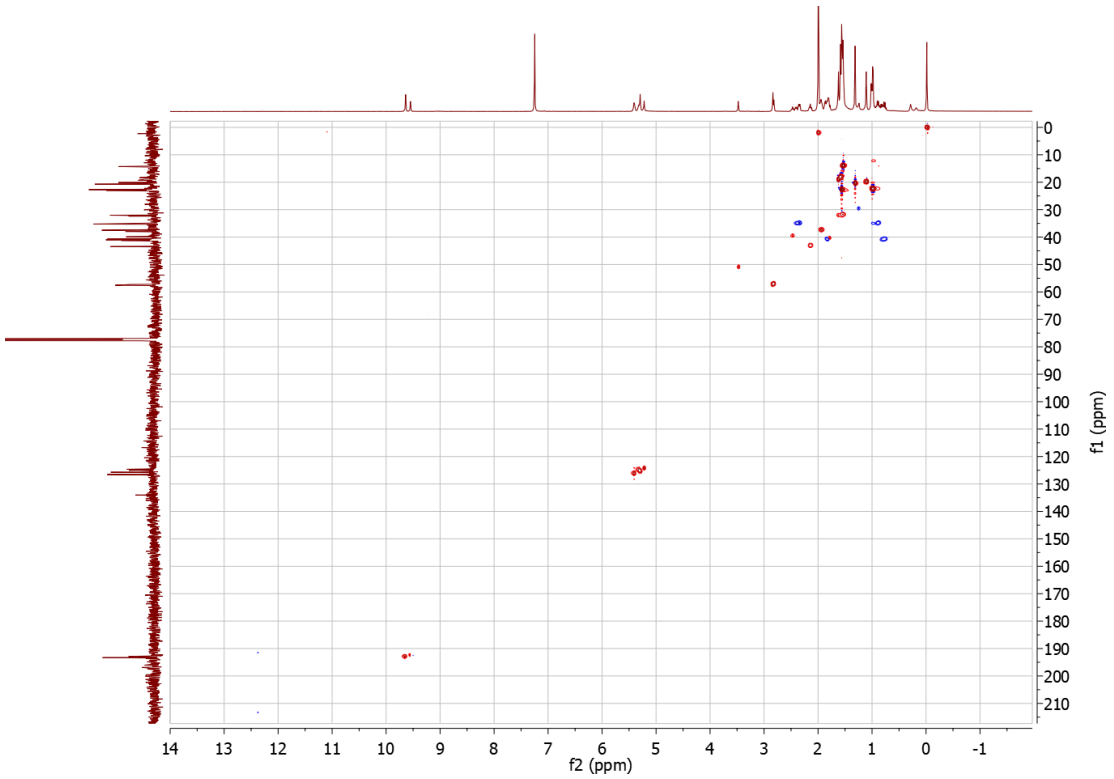


Figure S19. HMBC of compound **3** in $CDCl_3$.

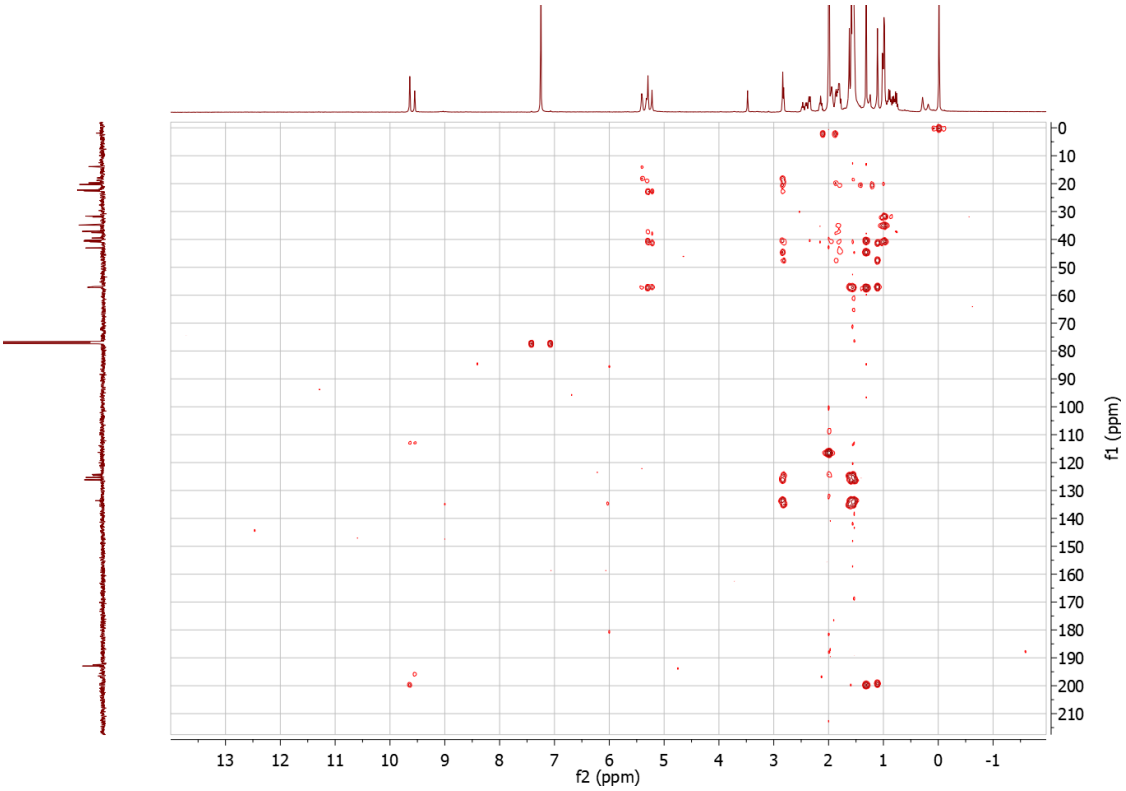


Figure S20. ^{1}H-^{1}H COSY of compound **3** in $CDCl_3$.

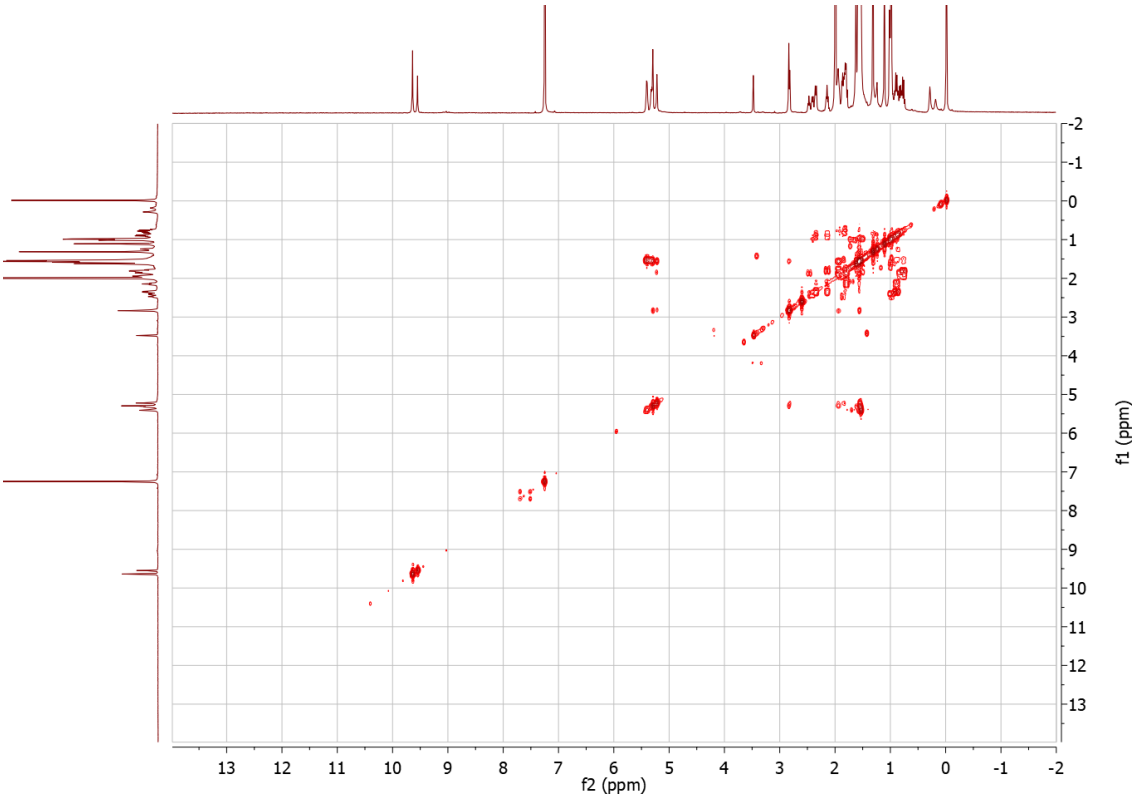


Figure S21. NOESY of compound **3** in $CDCl_3$.

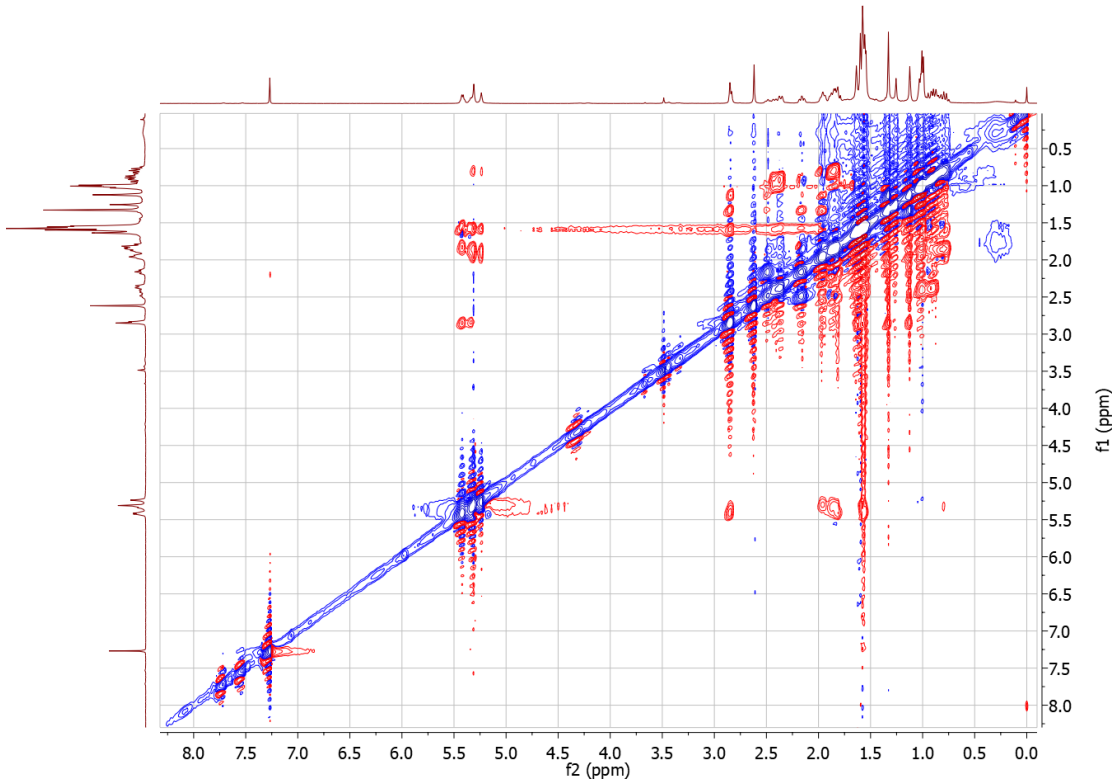


Figure S22. ^1H NMR of compound **4** in $CDCl_3$.

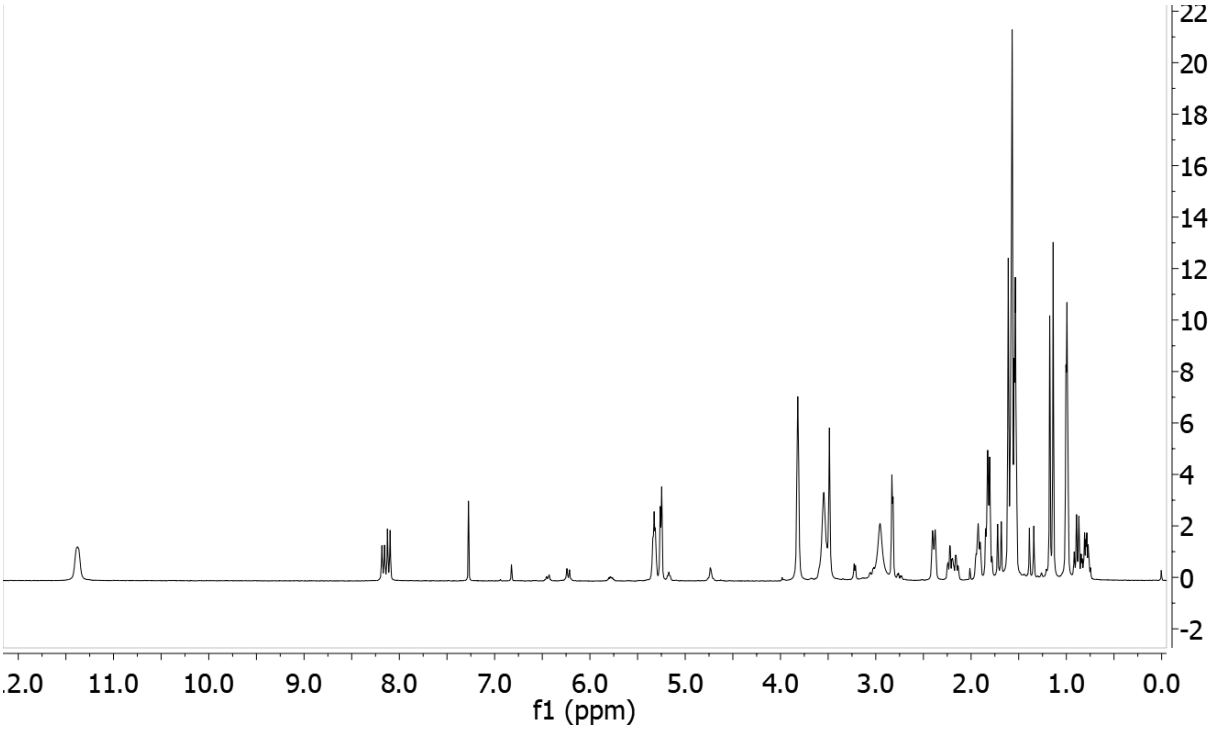


Figure S23. ^{13}C NMR of compound **4** in $CDCl_3$.

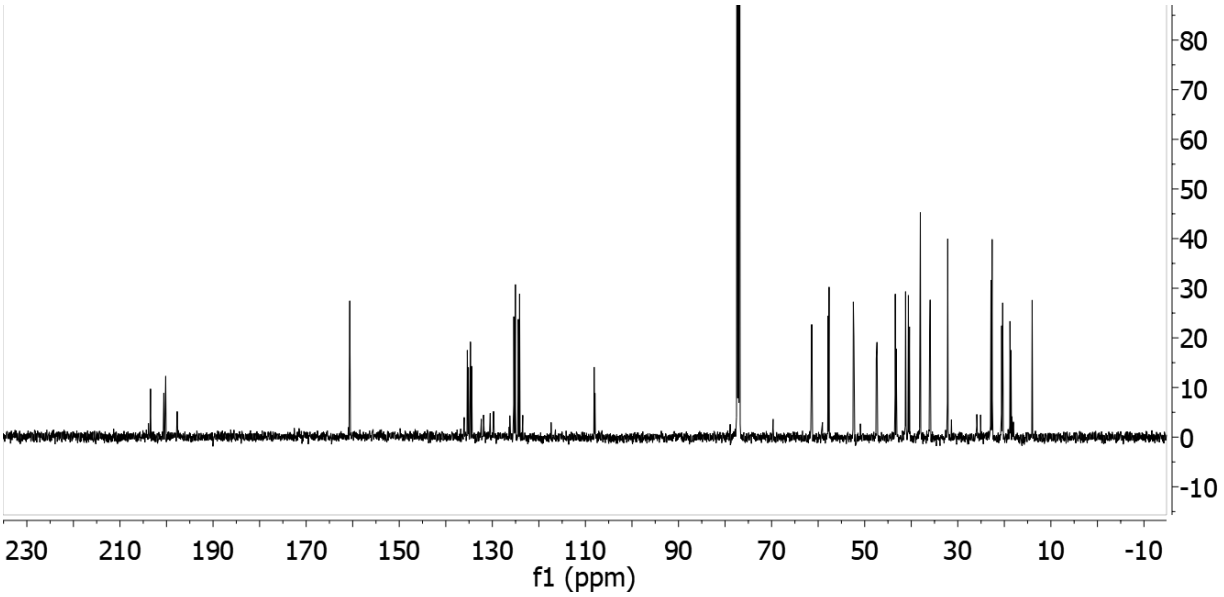


Figure S24. HSQC of compound **4** in $CDCl_3$.

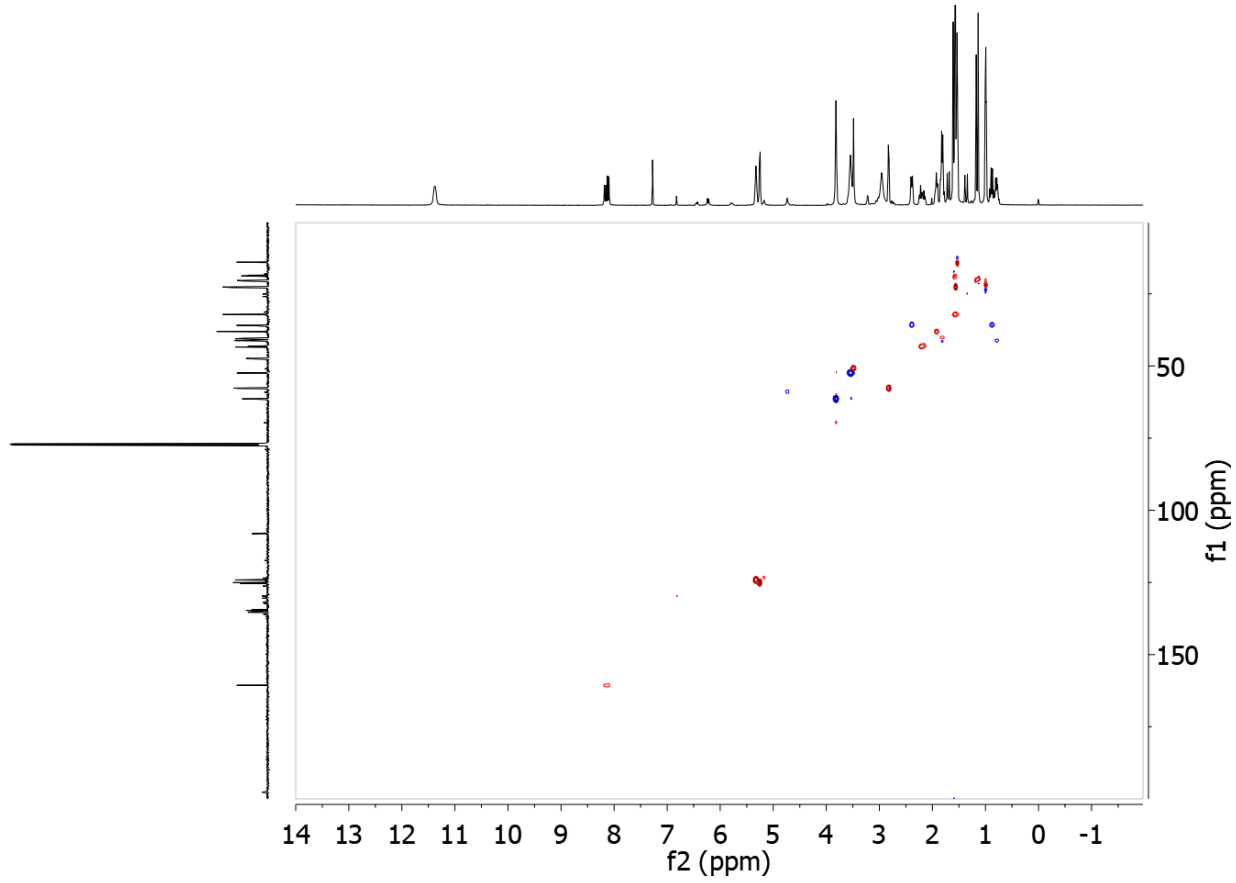


Figure S25. HMBC of compound **4** in $CDCl_3$.

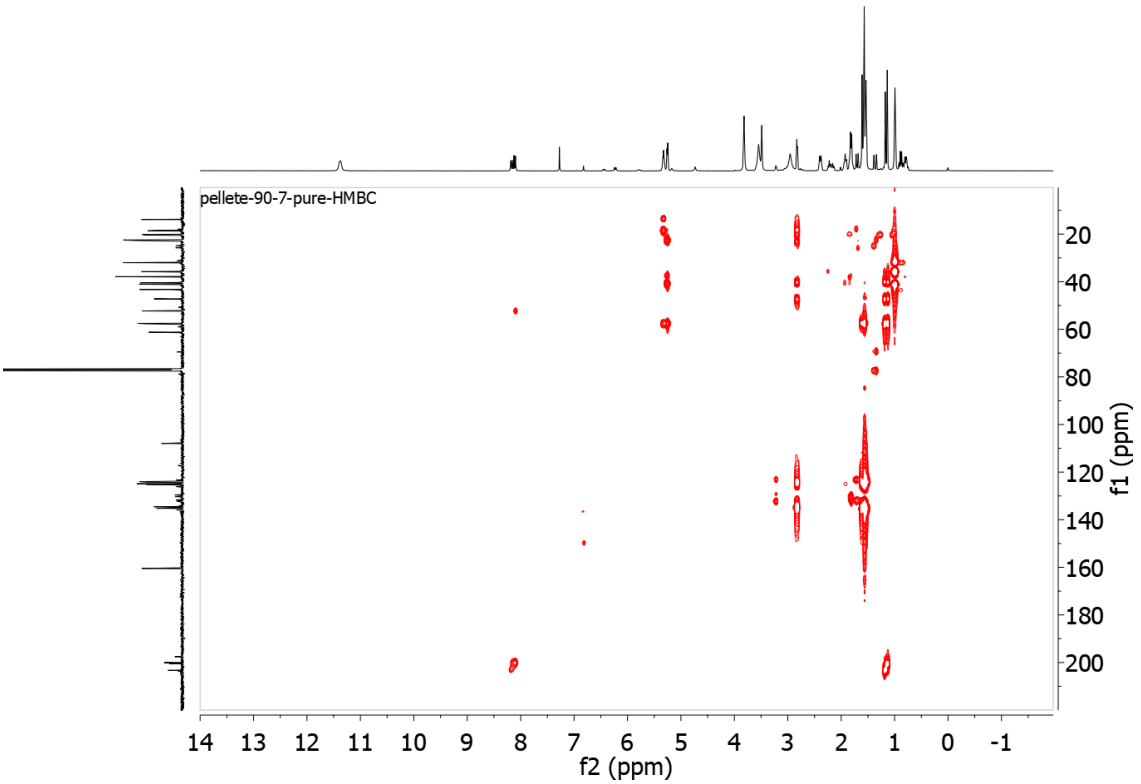


Figure S26. ^{1}H-^{1}H COSY of compound **4** in $CDCl_3$.

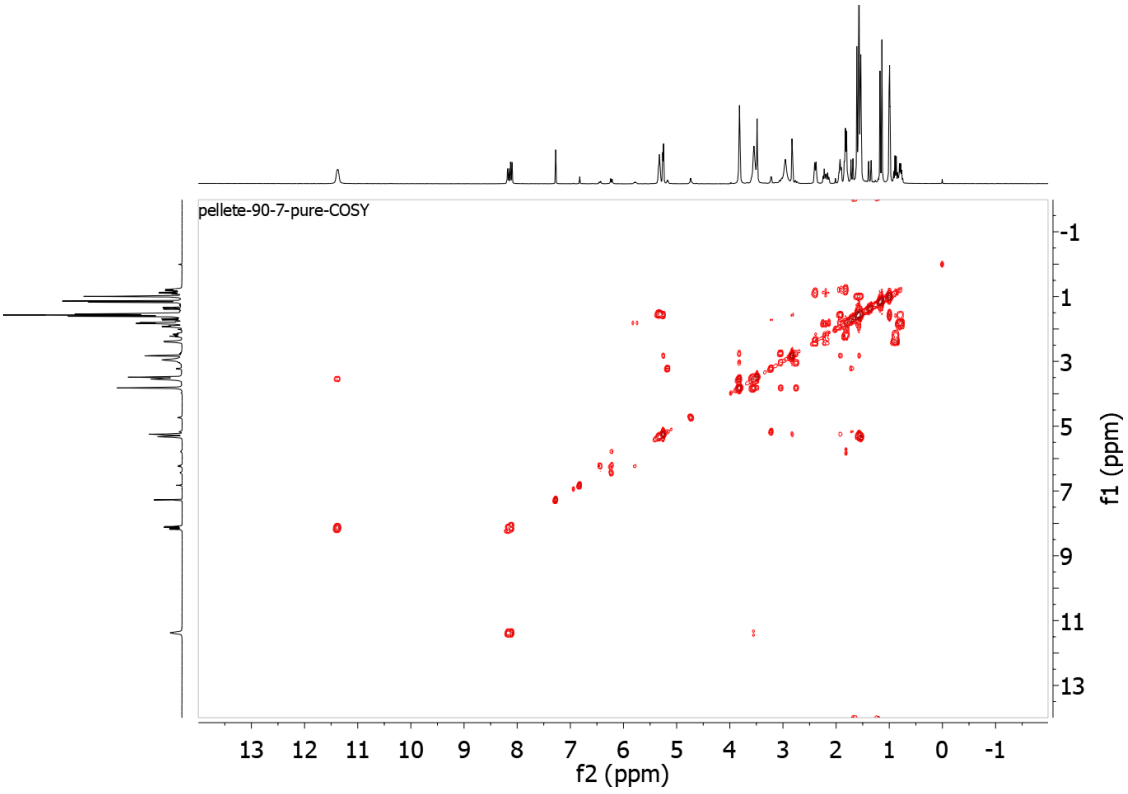


Figure S27. NOESY of compound **4** in $CDCl_3$.

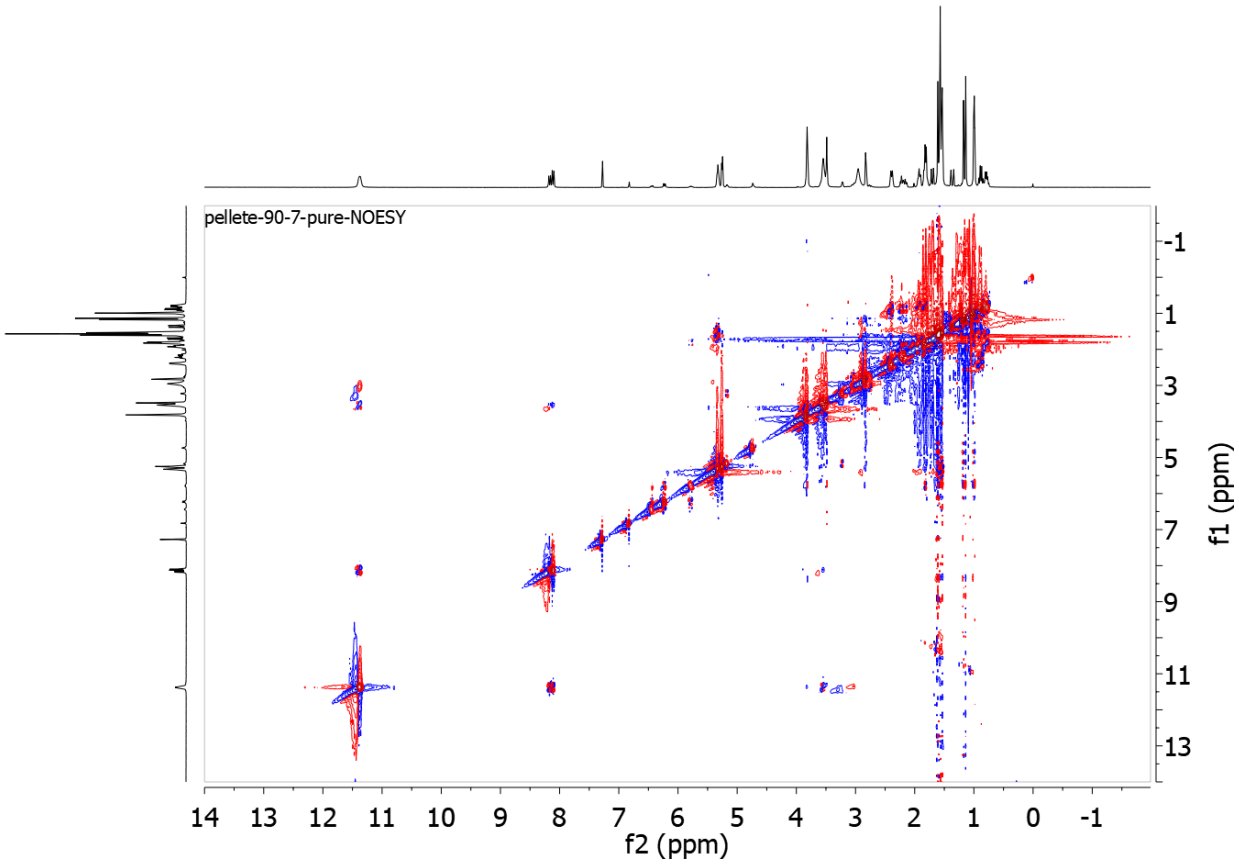


Figure S28. ADEQUATE spectrum of ^{13}C labeled compound **1**.

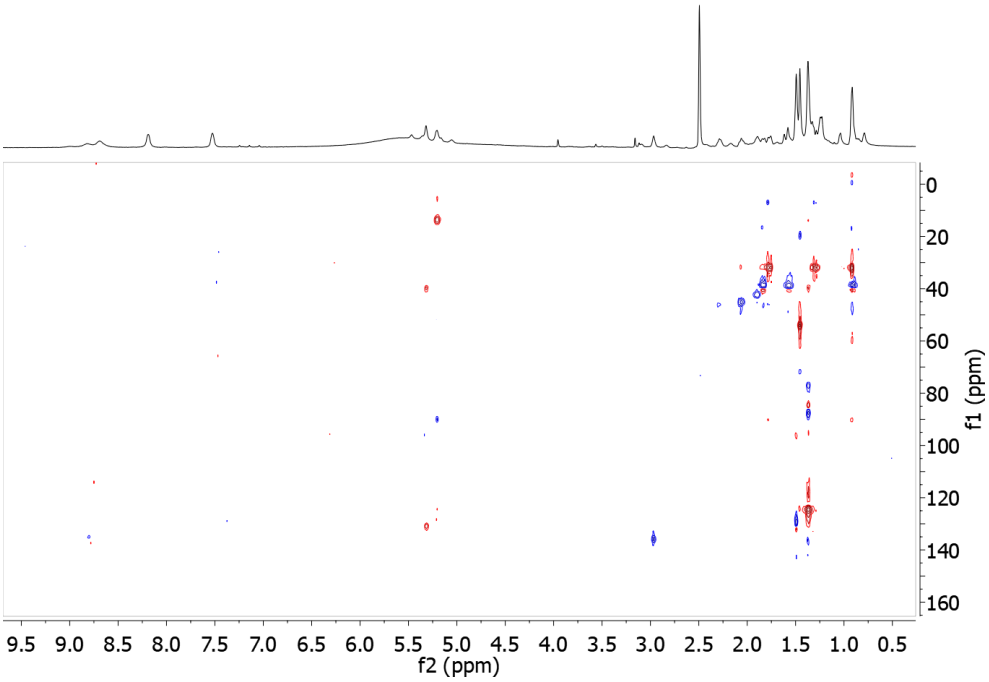


Figure S29. The ^{1}H NMR of ^{13}C labeled and natural compound **1**.

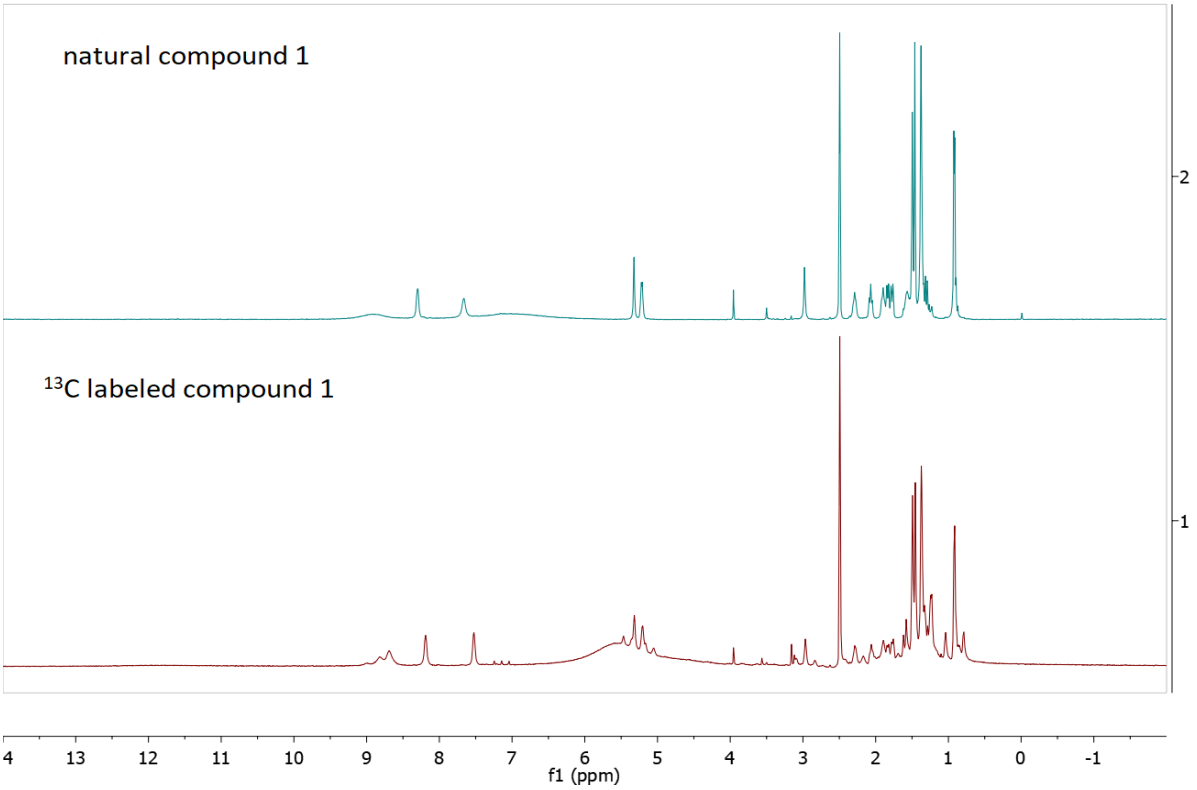


Figure S30. The ^{13}C NMR of ^{13}C labeled and natural compound **1**.

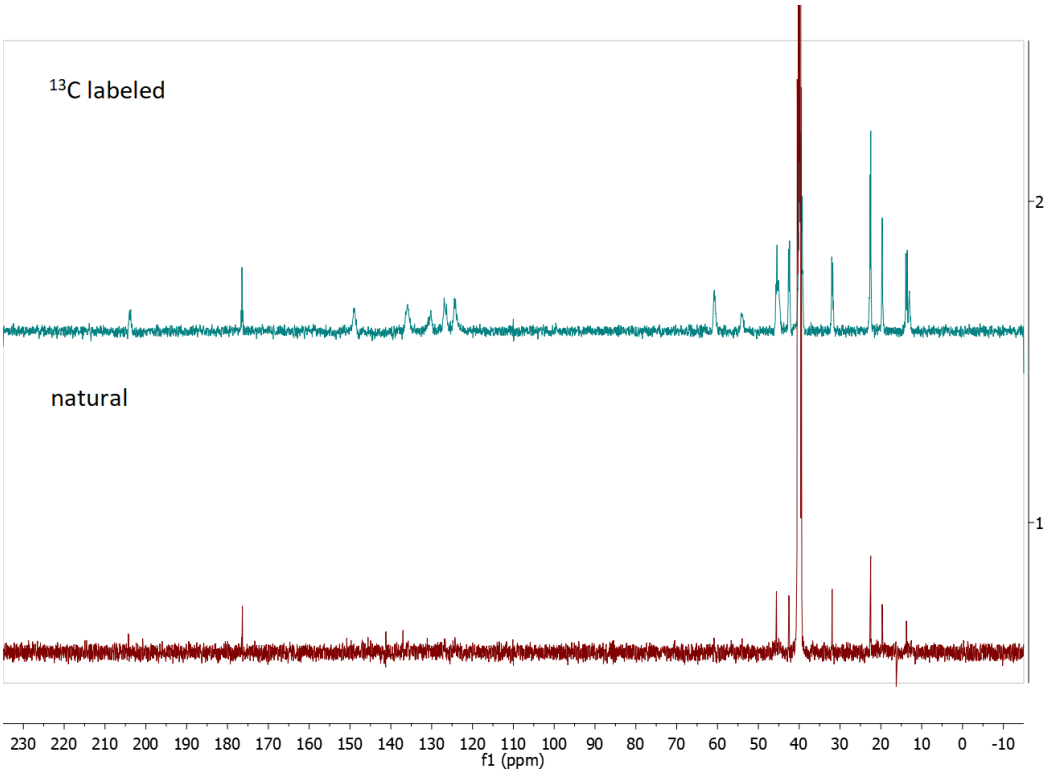


Figure S31. CD spectrum of compound **1**

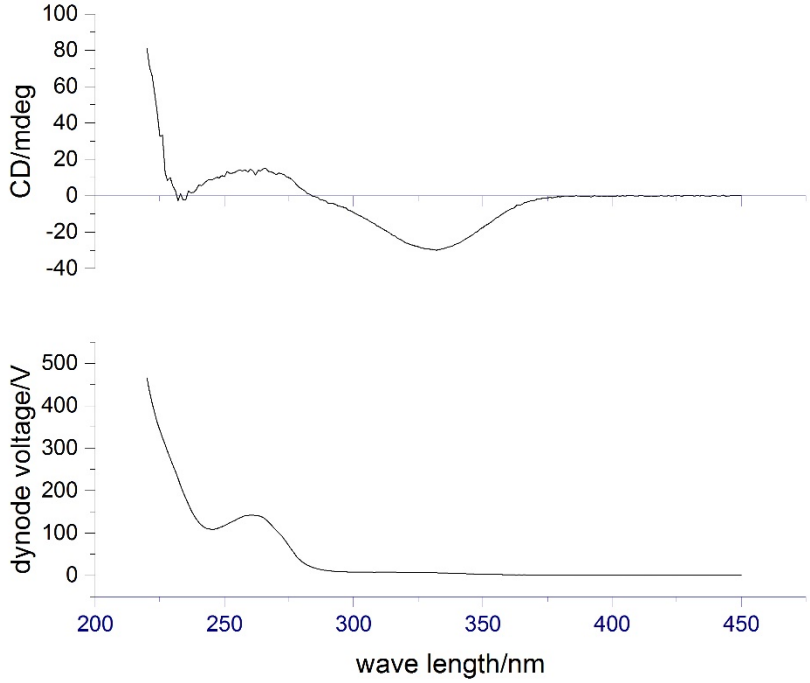


Figure S32. CD spectrum of compound **2**

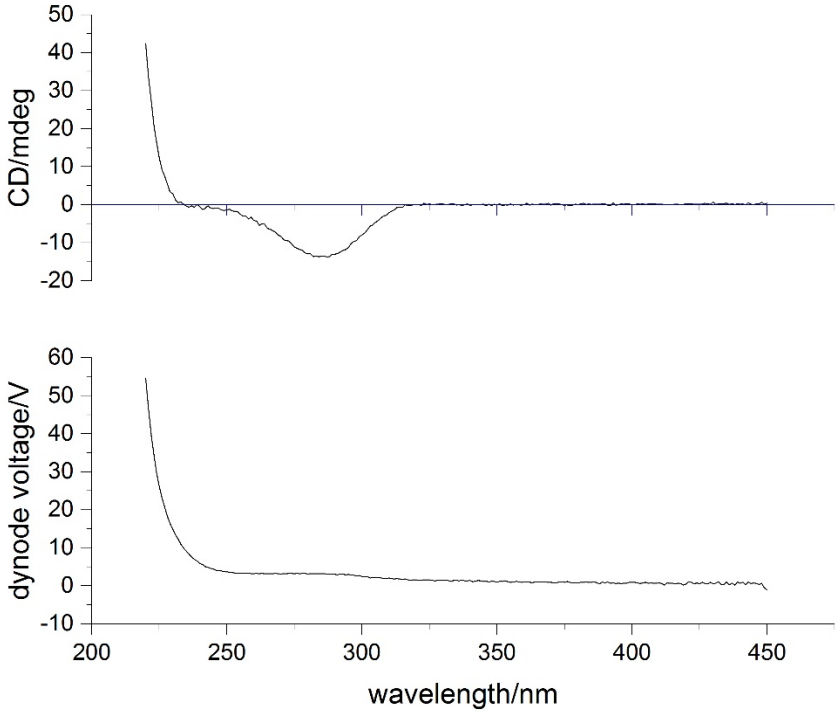


Figure S33. CD spectrum of compound **3**

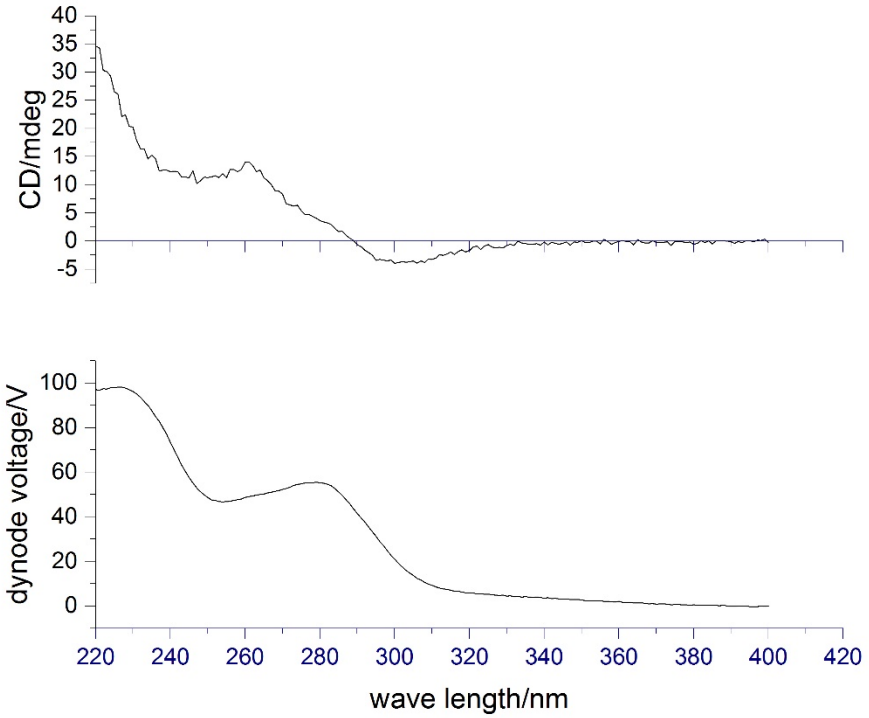


Figure S34. CD spectrum of compound **4**

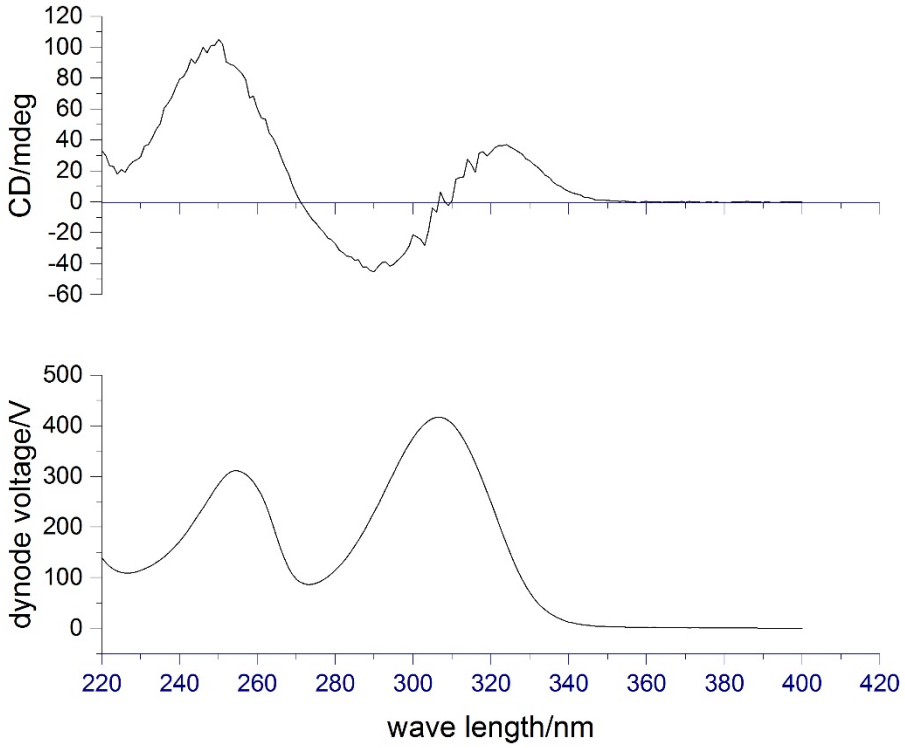


Figure S35. Dose response of TRPV channel inhibition.

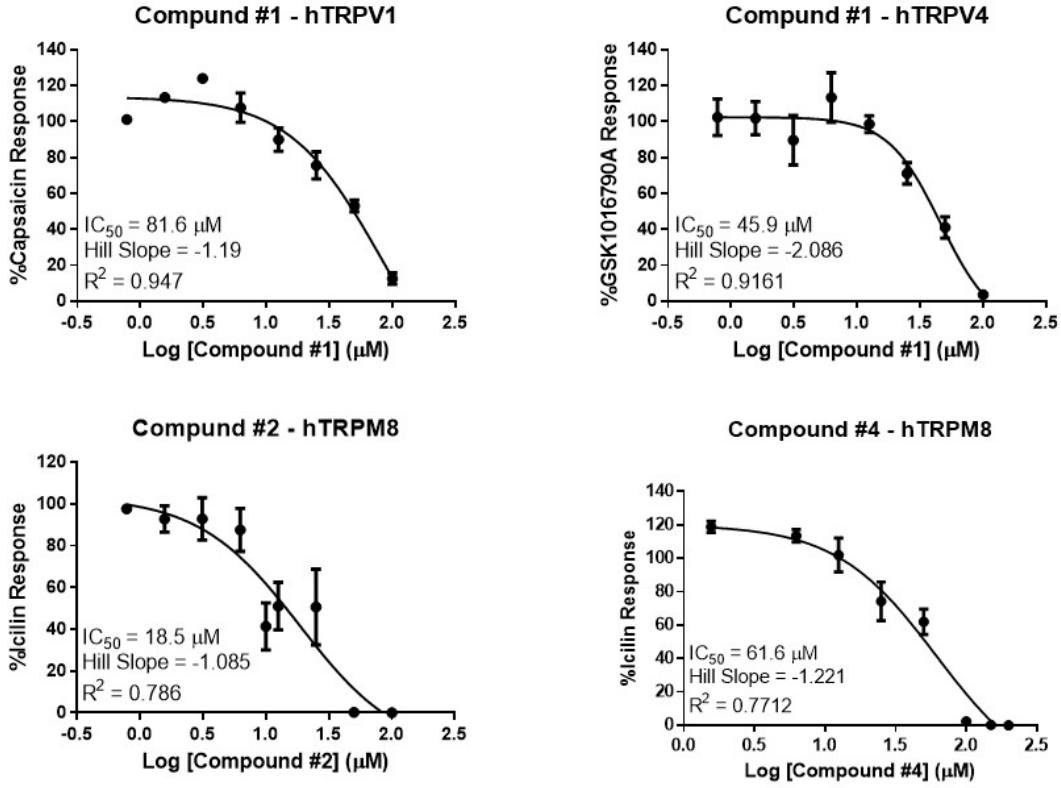


Figure S36. Effects of onydecalins on *H. capsulatum* growth. Itraconazole, amphotericin B, and compounds **3** and **4** were tested for their antifungal properties against *H. capsulatum* at a series of concentrations. Plates were incubated at 37 ºC with 5% CO_2 for 10-14 days. The images shown were from the wells containing each compound at the indicated concentration (μg/ml). These experiments were repeated at least three independent times and representative images are shown.

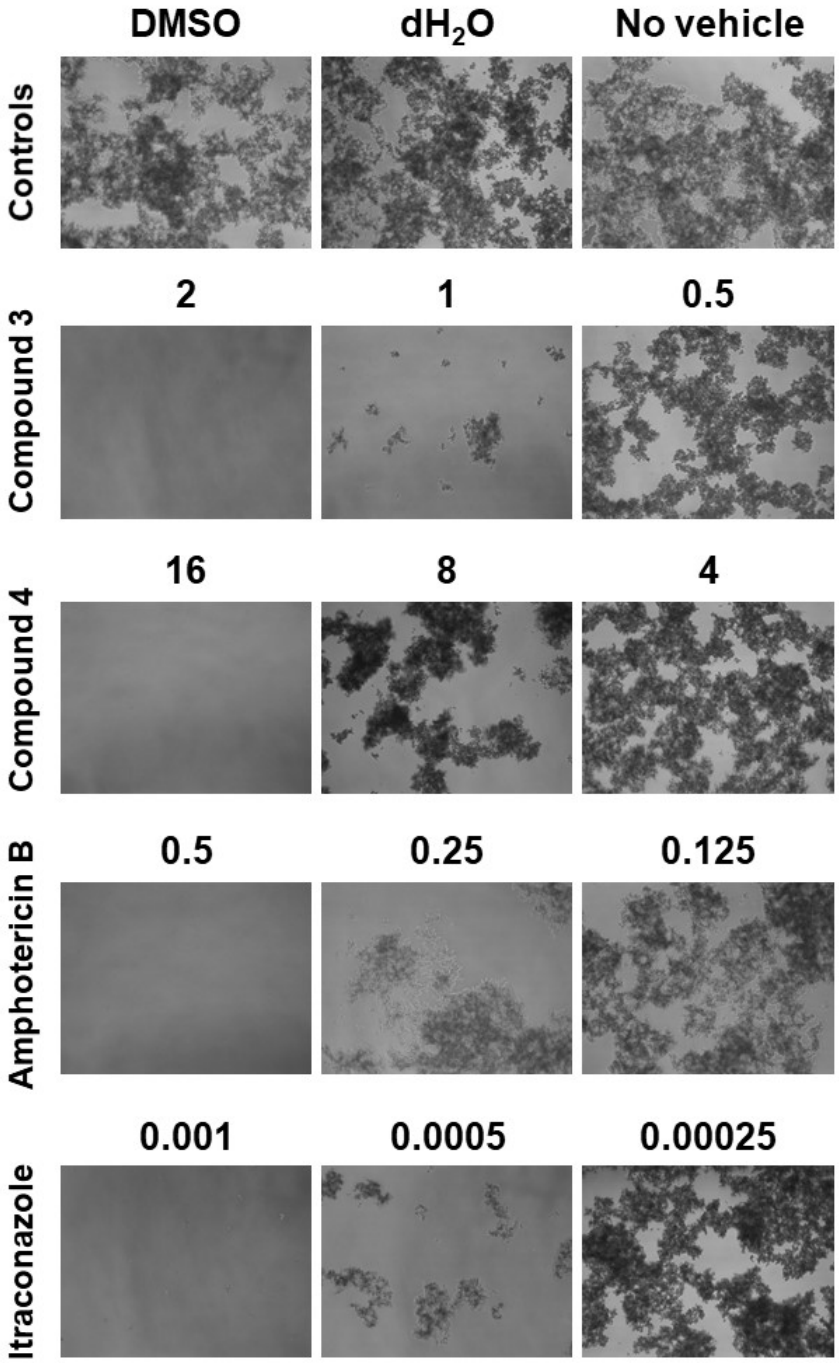


Figure S37. Effects of onydecalins on fungal growth**.** Four compounds were tested for their anti-fungal properties at a series of concentrations (0.25 to 64 μg/ml) against *A. fumigatus* and *C. albicans*. The plates containing *C. albicans* and *A. fumigatus* were incubated for 48 hours at 30 ºC and 37 ºC, respectively. None of the compounds inhibited the growth of *A. fumigatus* and *C. albicans* at any of the ten concentrations tested. The images shown were from the wells containing the highest (64 μg/ml) concentration of the respective compound. These experiments were repeated at least three independent times.

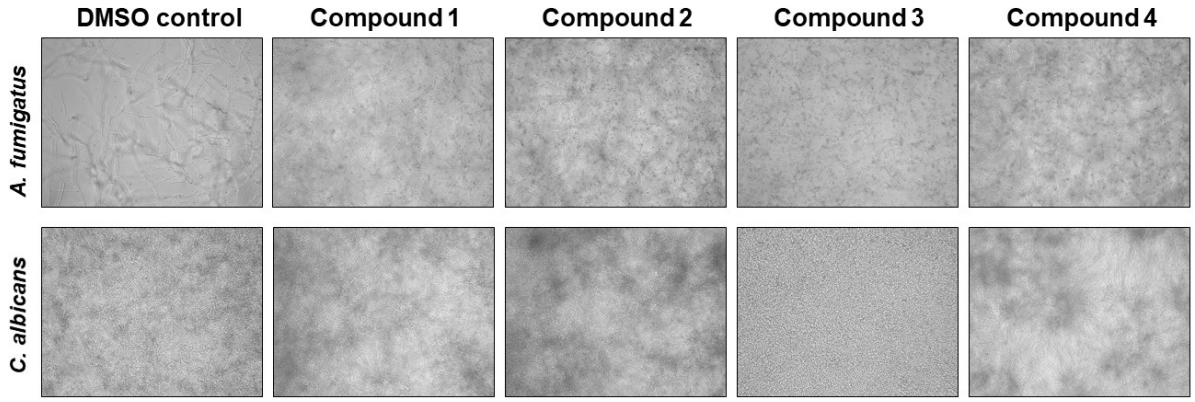
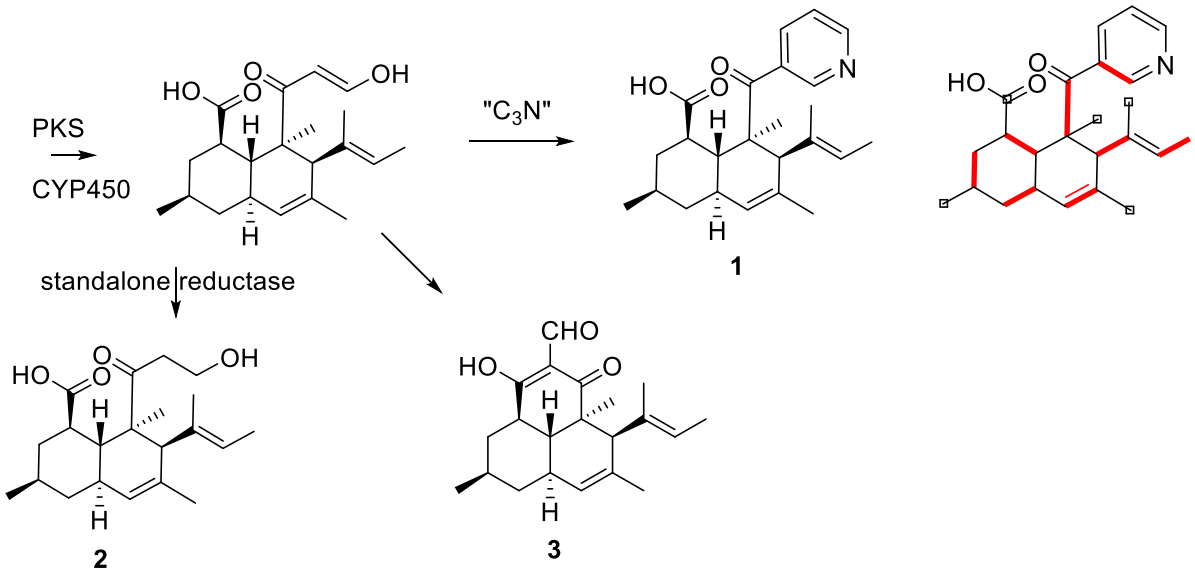


Table S1. Antagonist activity of compounds **1**-**4** against a panel of TRP channel subtypes (IC_{50} values in μM*).

compound	TRPA1	TRPM8	TRPV1	TRPV3	TRPV4
1	> 100	> 100	81.6	> 100	45.9
2	> 100	18.5	> 100	> 100	> 100
3	NT	> 100	NT	> 100	> 100
4	NT	61.6	NT	NT	> 100
capsazepine			0.5		
HC-067047					0.024
AMTB		5			

NT=not tested



Scheme S1. Proposed biogenesis of compound 1-4. Red: ^{13}C-^{13}C coupled carbons resulting from feeding with U-^{13}C-glucose. Squares: ^{13}C-enriched carbons resulting from feeding with U-^{13}C-glucose.