One-pot synthesis of tetrahydropyrimidinecarboxamides enabling In Vitro anticancer activities: A combinative study with clinically relevant brain-penetrant drugs

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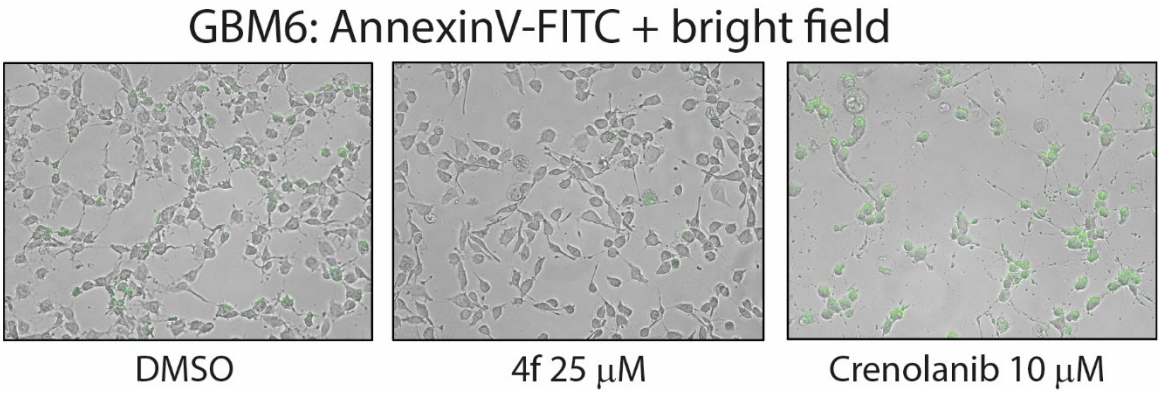


Figure S1:4f at 25 μM does not induce apoptosis in GBM6 after 16 hr treatment. Images are superimposed bright field with FITC fluorescent channels. Crenolanib treatment is used as control for apoptosis induction.

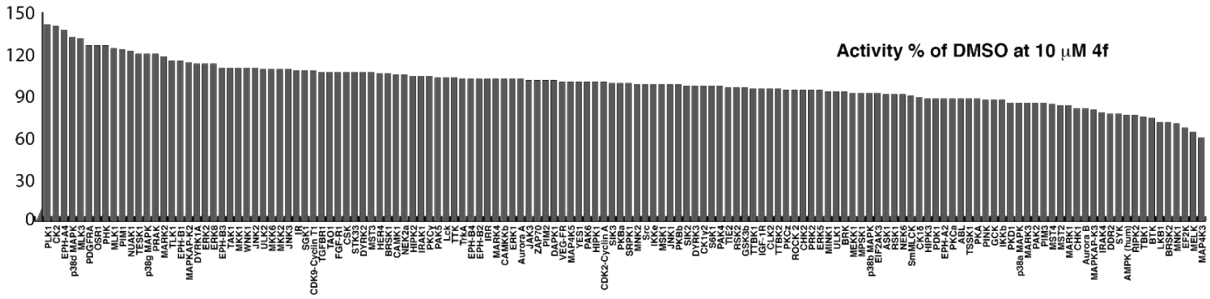


Figure S2: Kinase profiling of **4f** at 10 μM was carried out against the panel of 139 kinases at the International Centre for Protein Kinase Profiling (http://www.kinase-screen.mrc.ac.uk/).

Copies of ^{1}**H NMR** and ^{13}**C{**^{1}**H}- NMR** spectra for compound **4**a-**4**ab

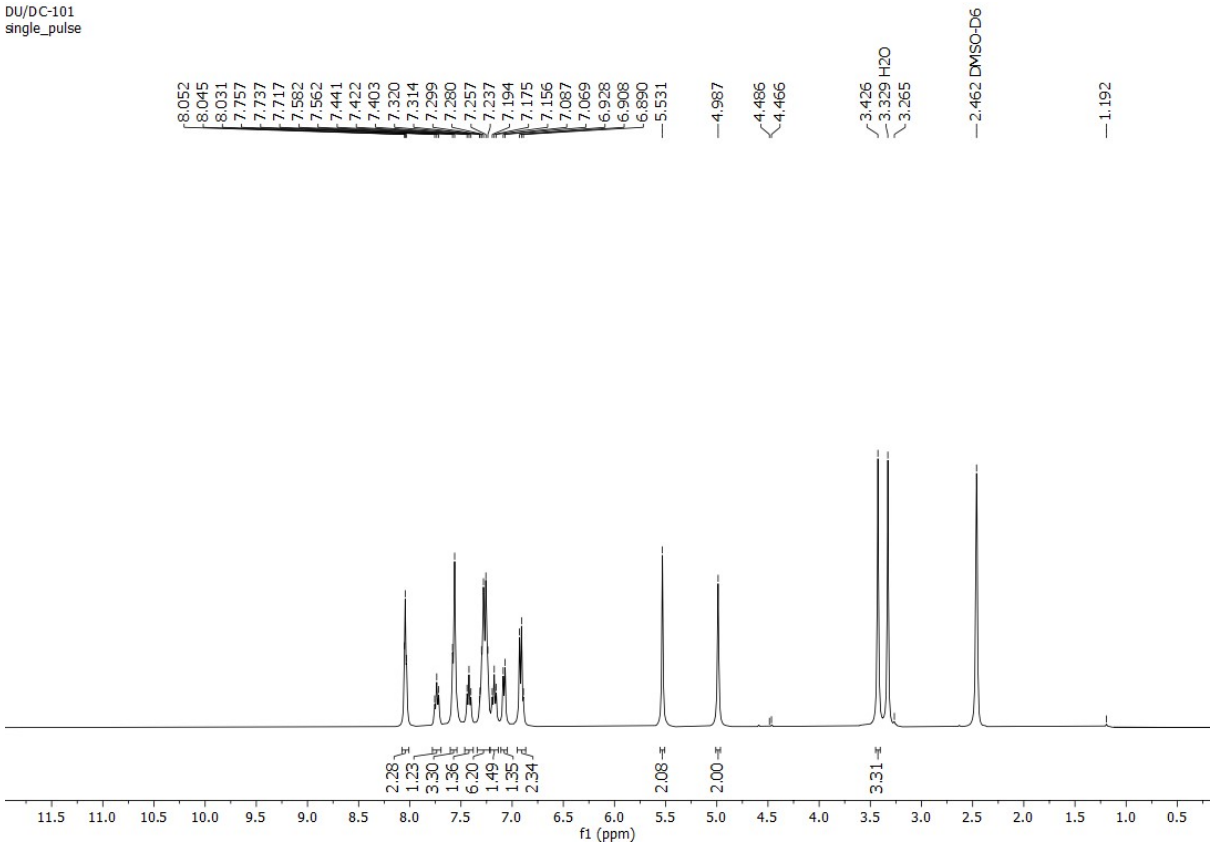


Figure S3. ^{1}H NMR spectrum of compound **4a** at 400 MHz in DMSO-d6

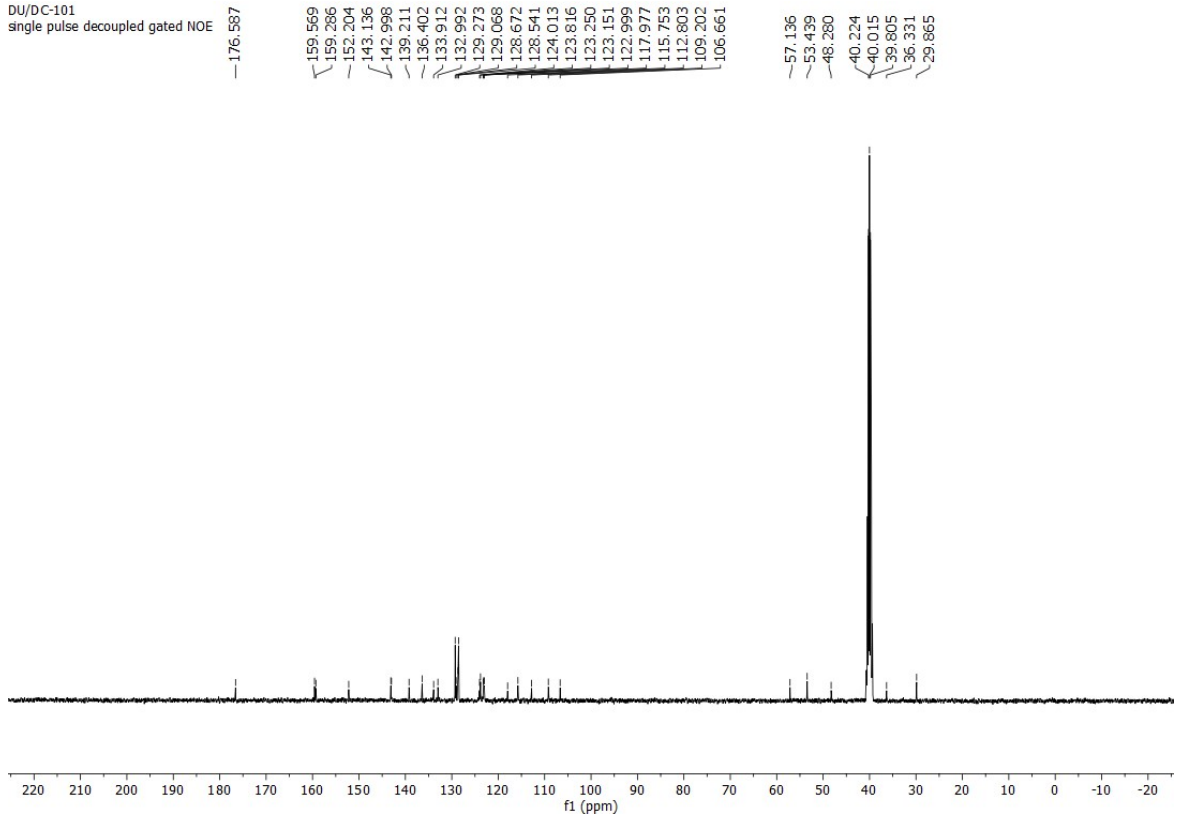


Figure S4. ^{13}C NMR spectrum of compound **4a** at 150 MHz in DMSO-d6

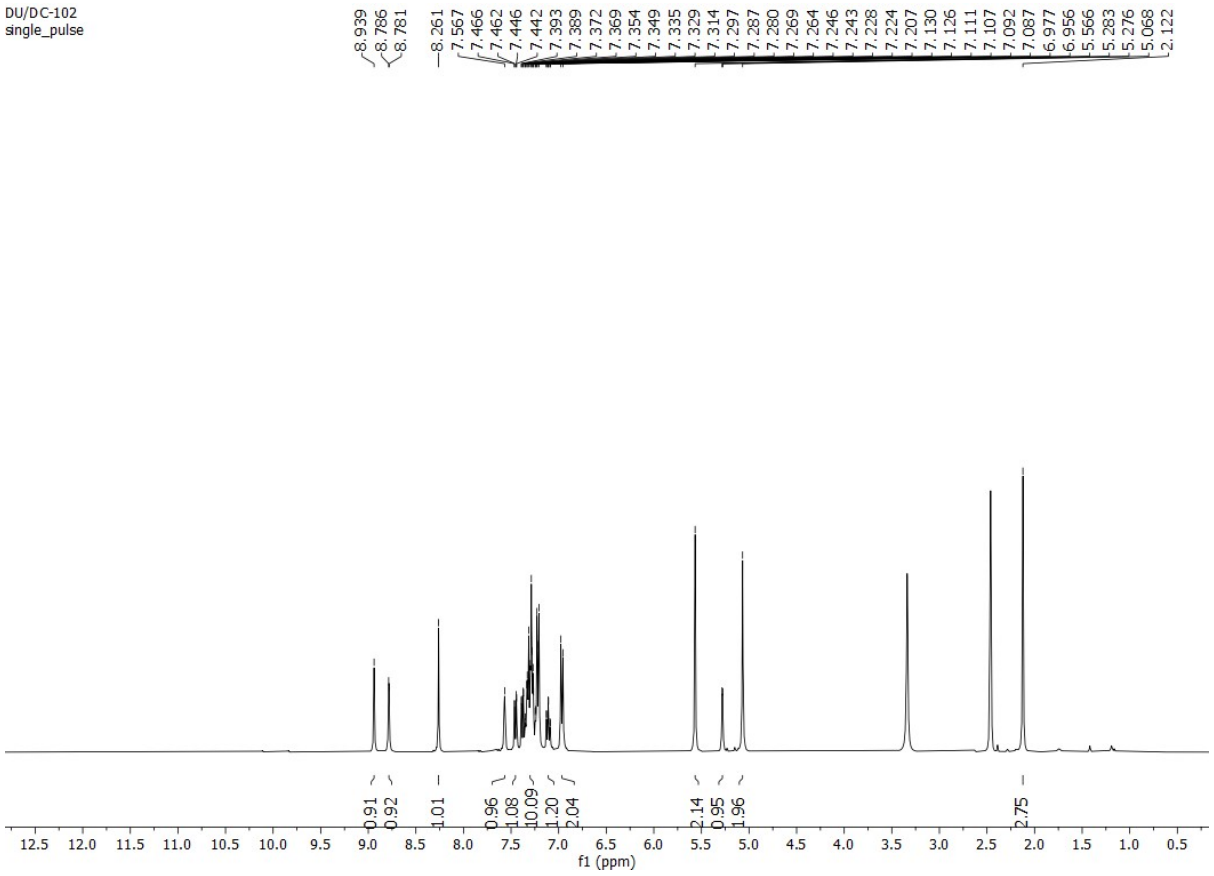


Figure S5. ^{1}H NMR spectrum of compound **4b** at 400 MHz in DMSO-d6

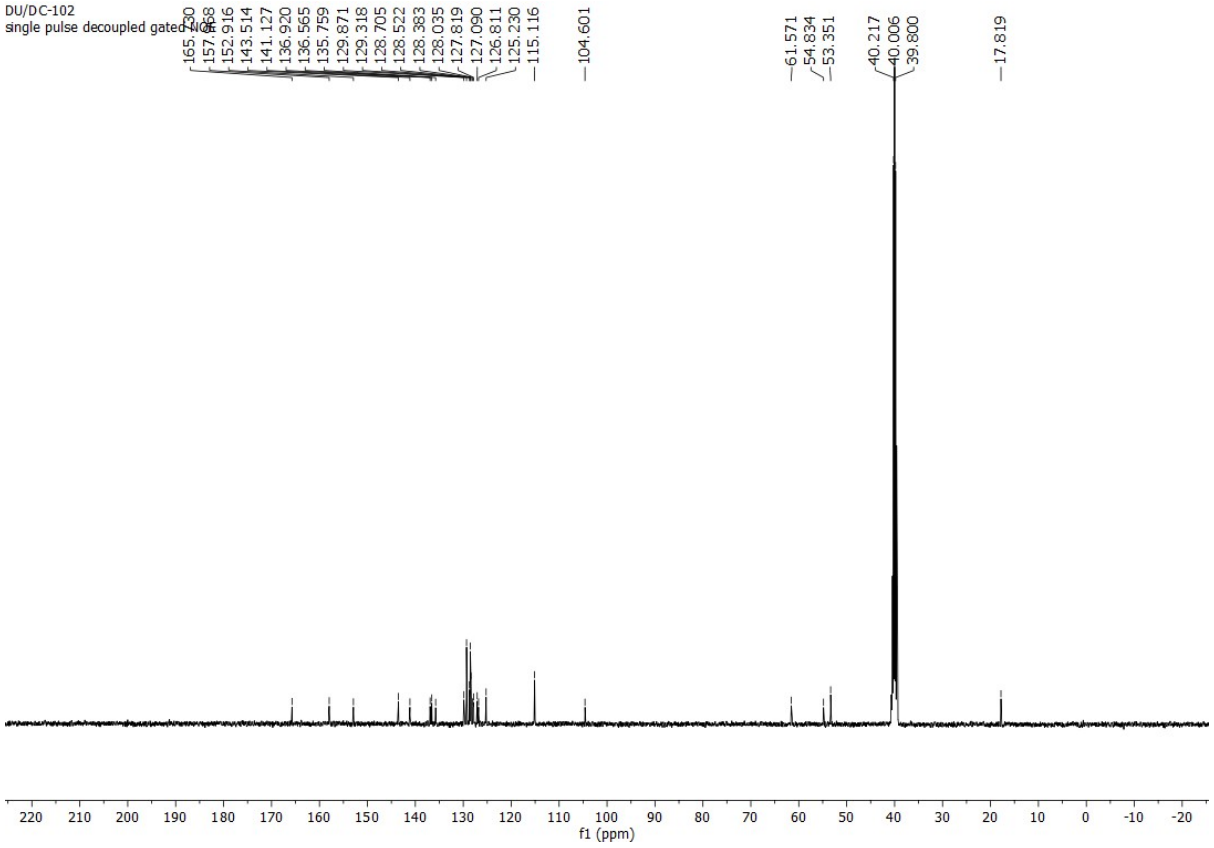


Figure S6. ^{13}C NMR spectrum of compound **4b** at 150 MHz in DMSO-d6

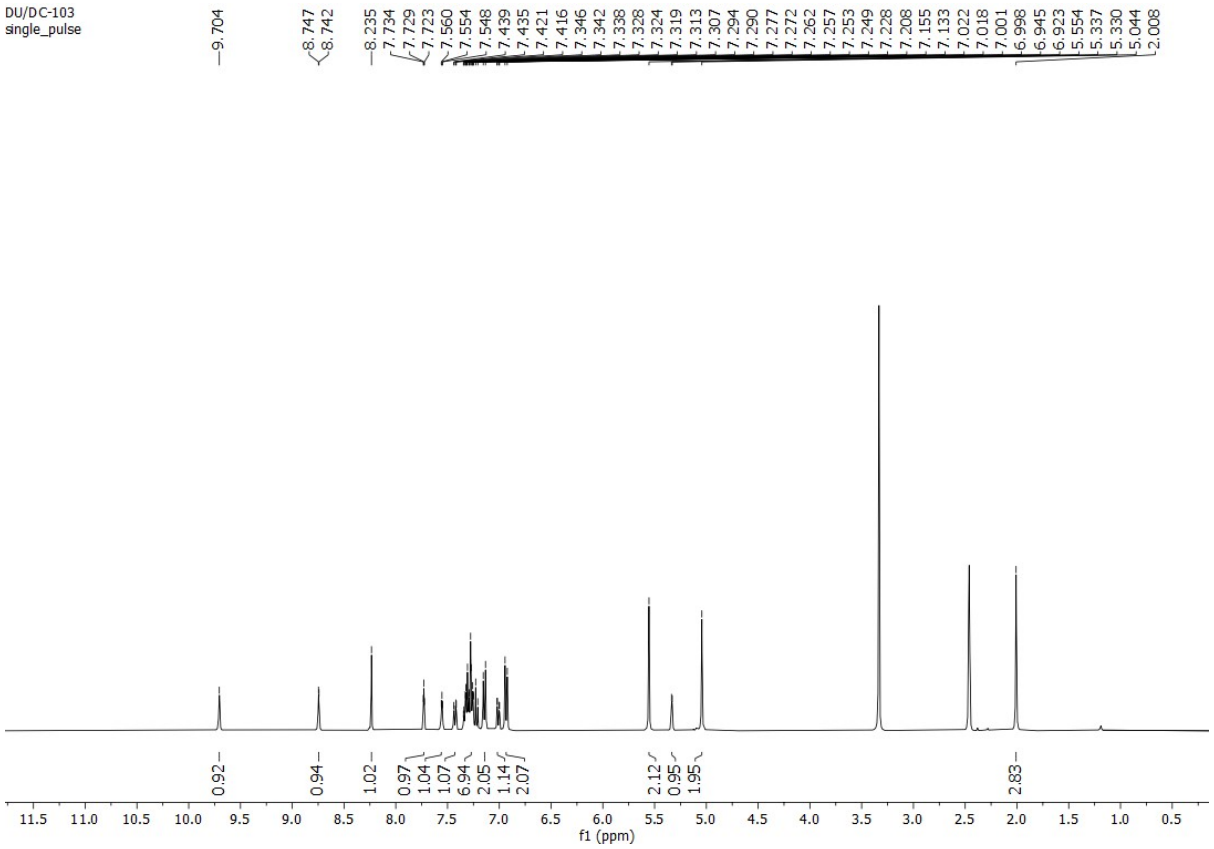


Figure S7. ^{1}H NMR spectrum of compound **4c** at 400 MHz in DMSO-d6

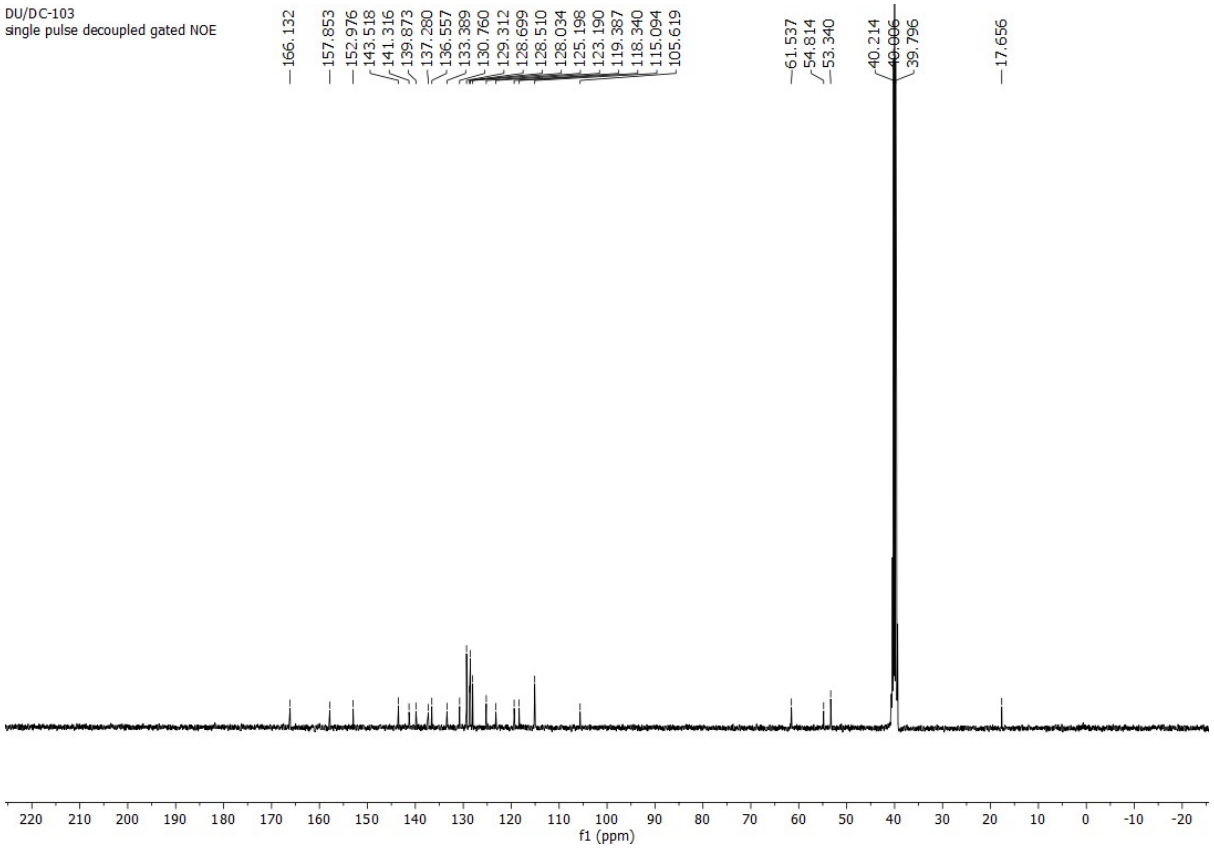


Figure S8. ^{13}C NMR spectrum of compound **4c** at 150 MHz in DMSO-d6

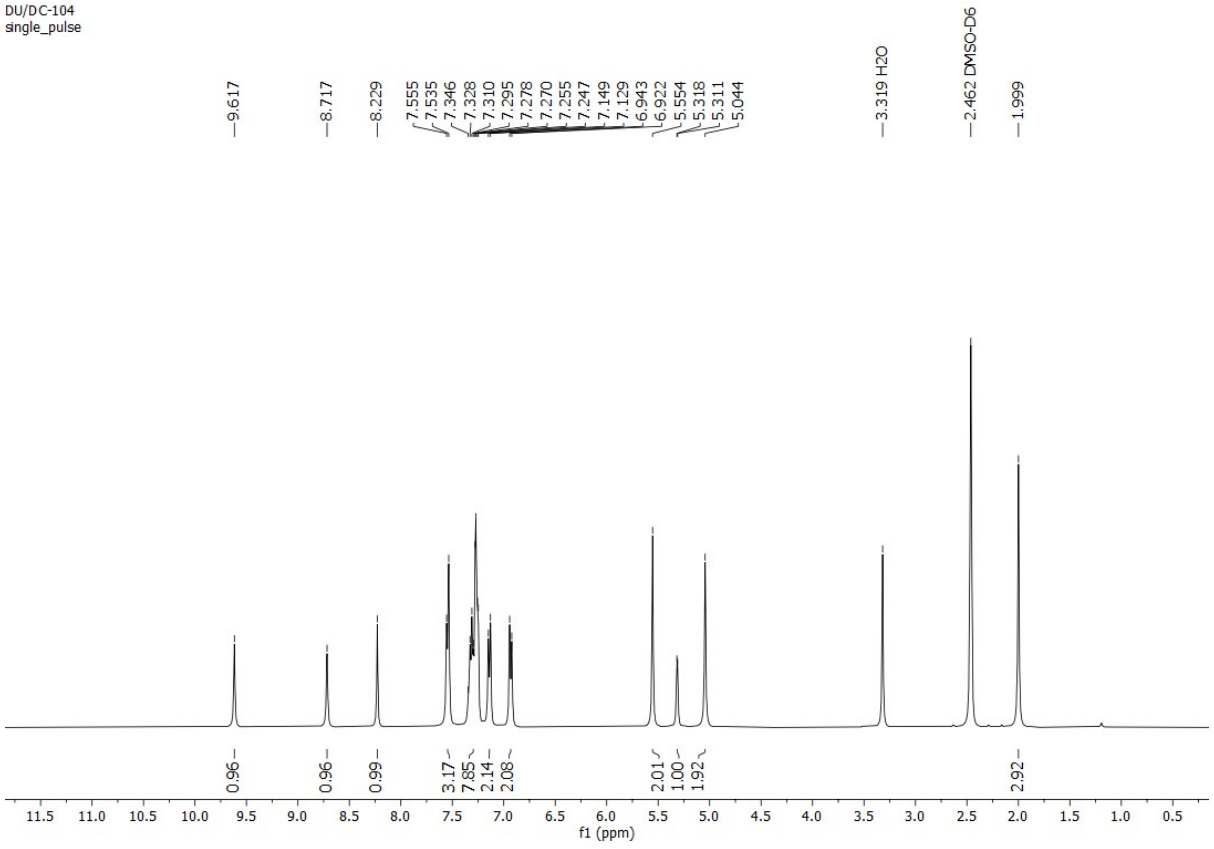


Figure S9. [1]H NMR spectrum of compound **4d** at 400 MHz in DMSO-d6

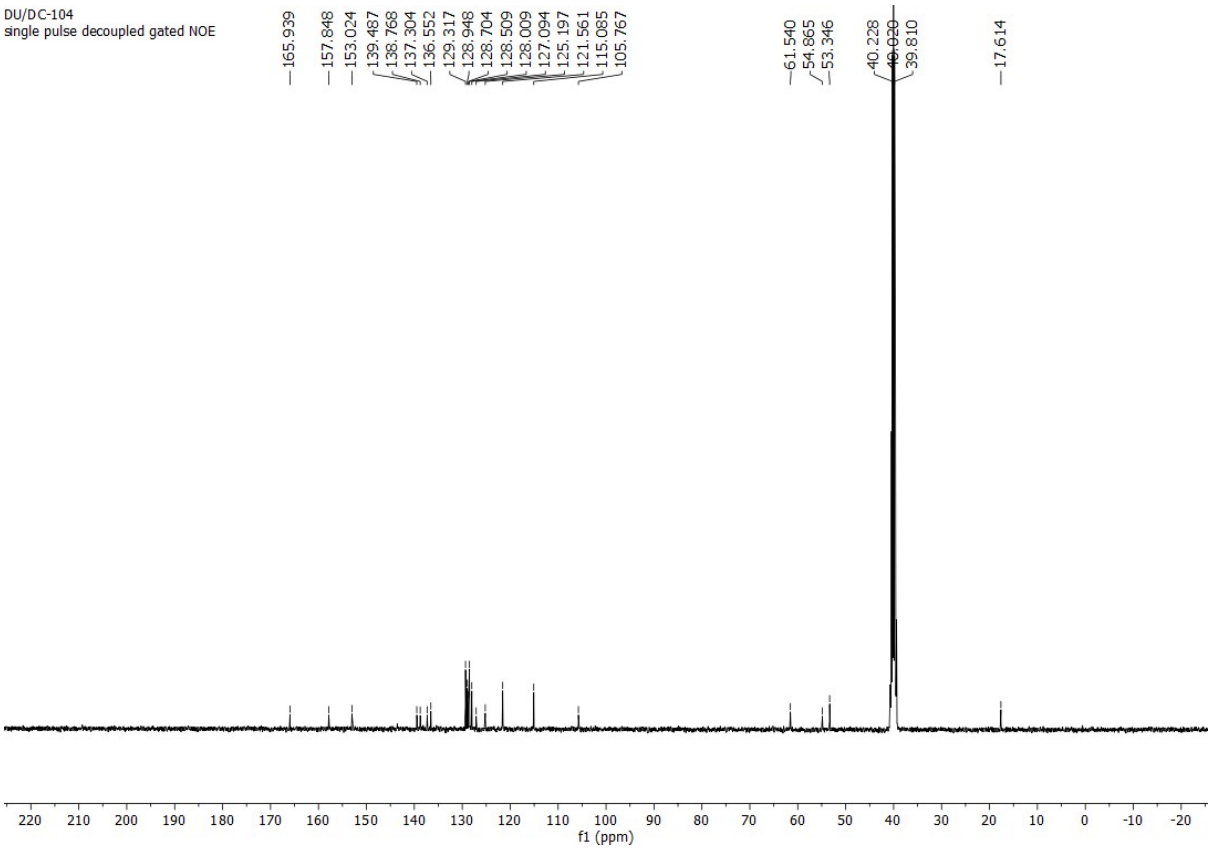


Figure S10. [13]C NMR spectrum of compound **4d** at 150 MHz in DMSO-d6

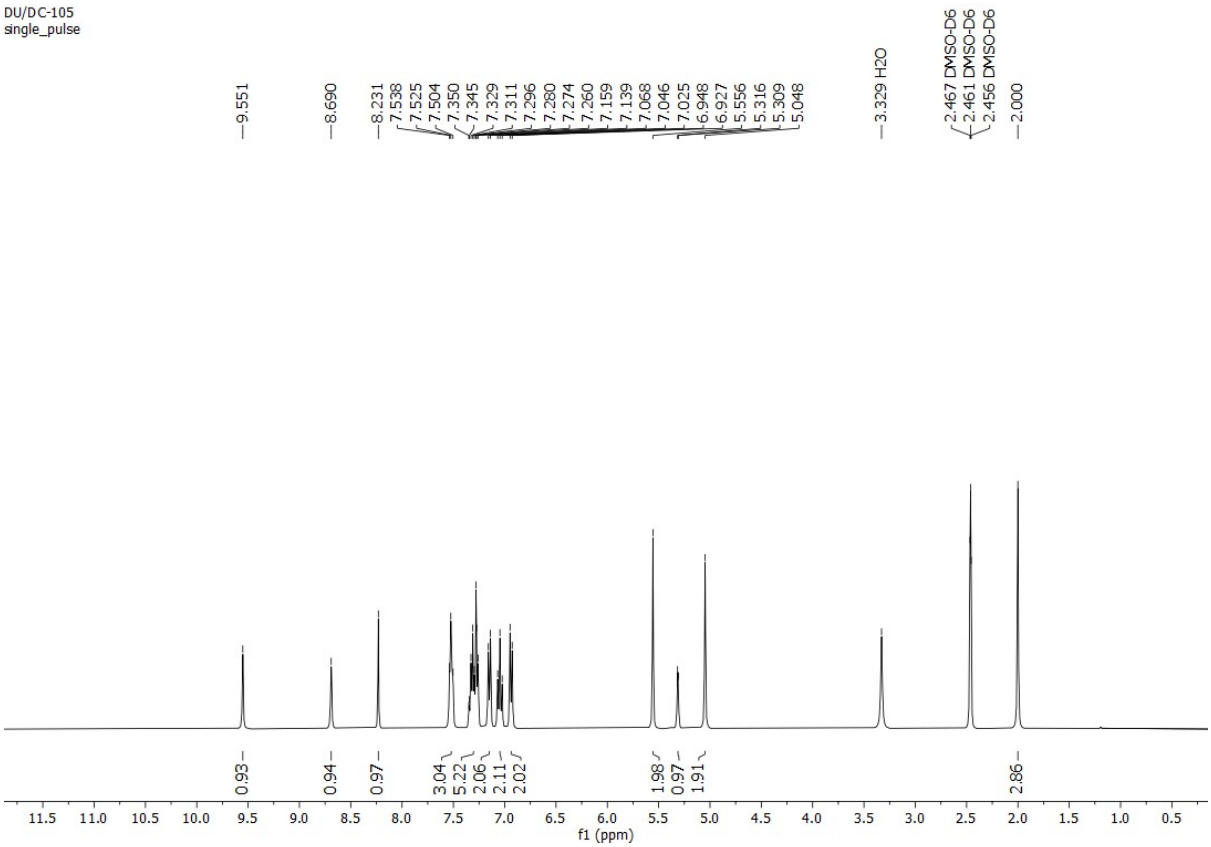


Figure S11. [1]H NMR spectrum of compound **4e** at 400 MHz in DMSO-d6

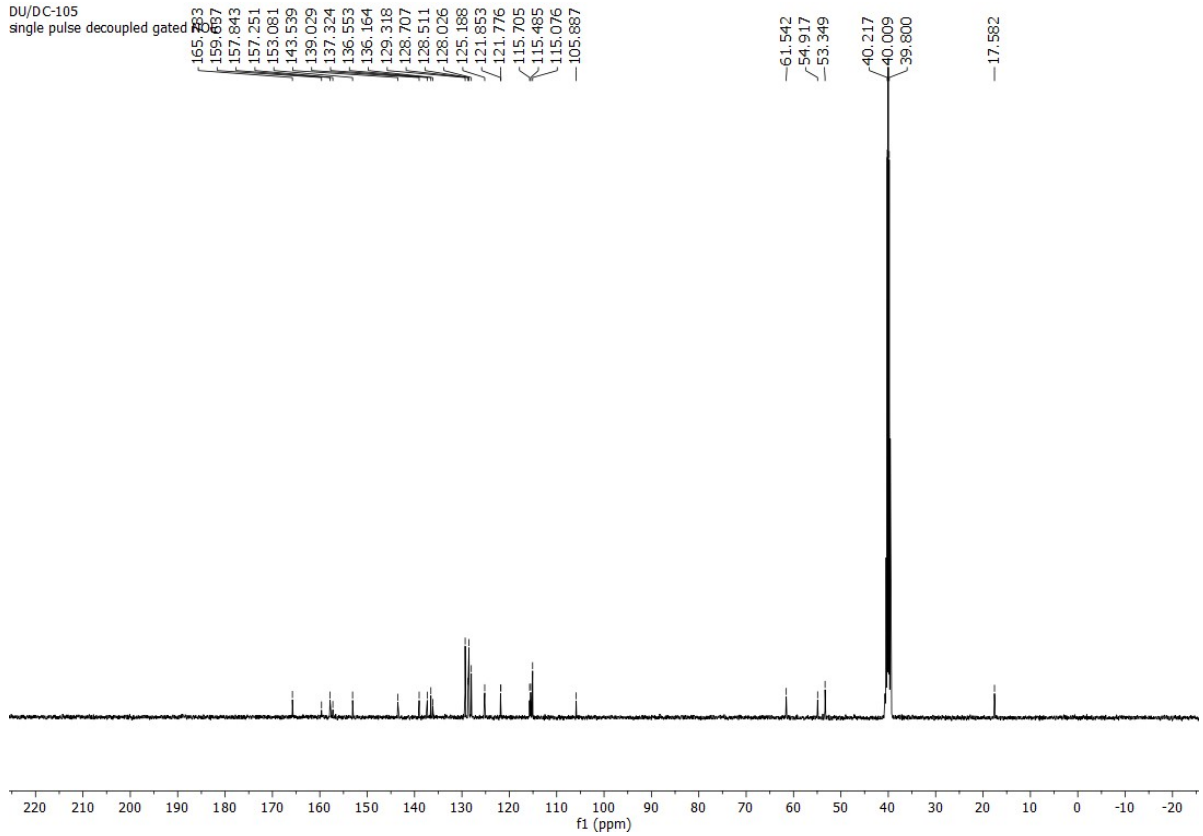


Figure S12. ^{13}C NMR spectrum of compound **4e** at 150 MHz in DMSO-d6

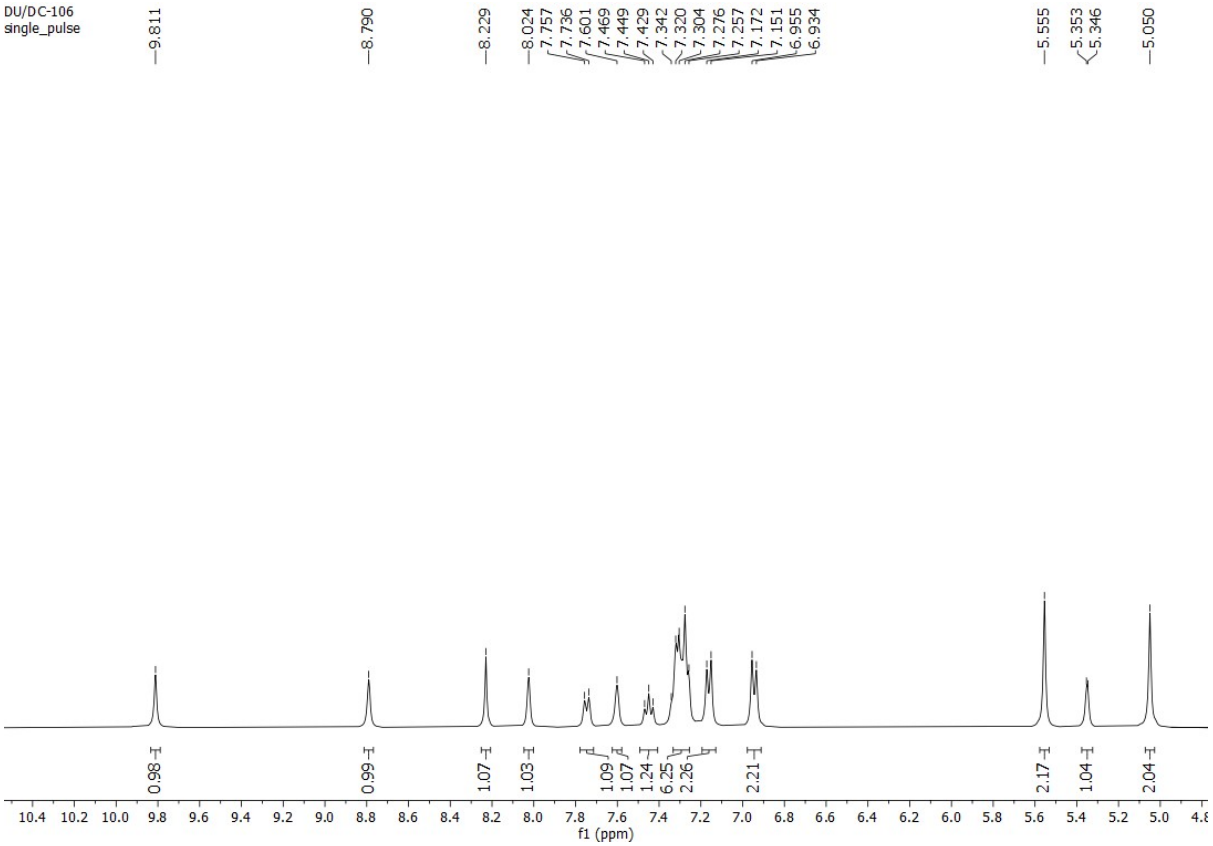


Figure S13. ^{1}H NMR spectrum of compound **4f** at 400 MHz in DMSO-d6

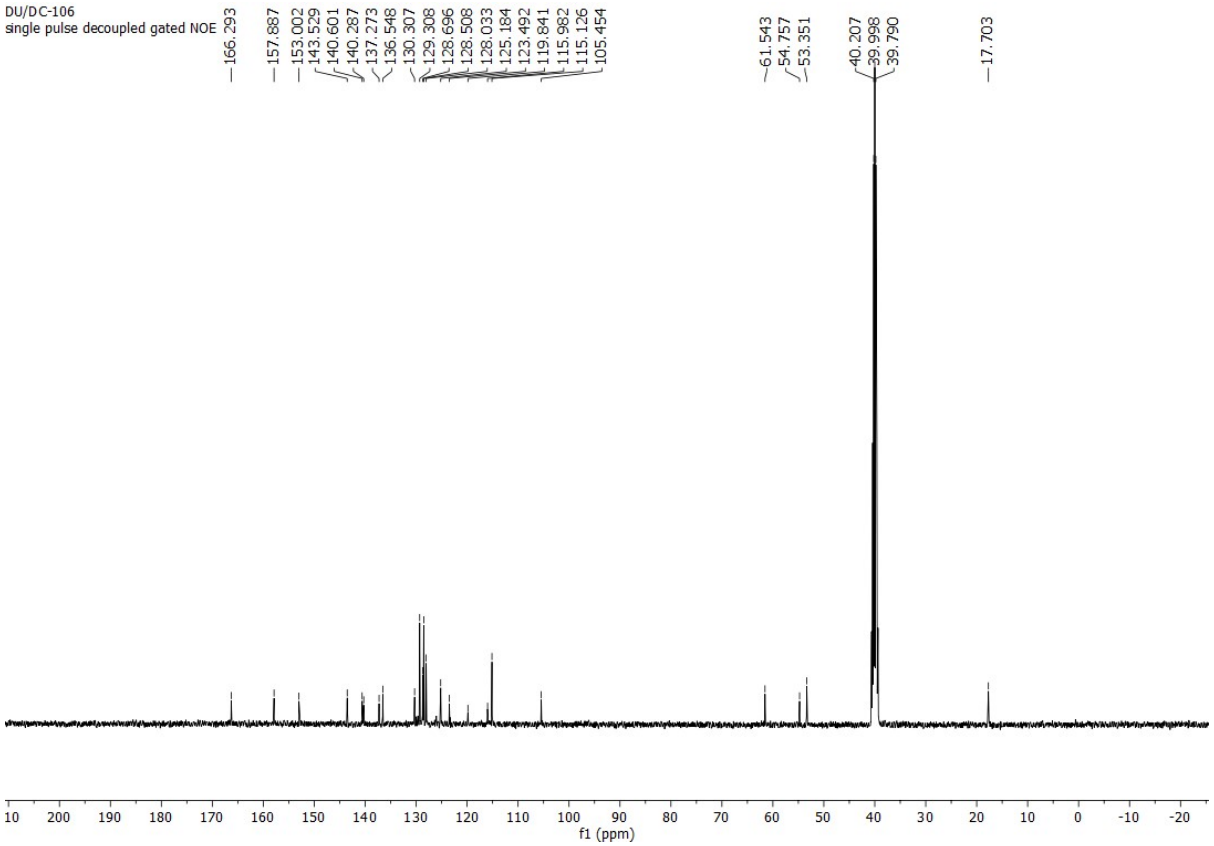


Figure S14. ^{13}C NMR spectrum of compound **4f** at 150 MHz in DMSO-d6

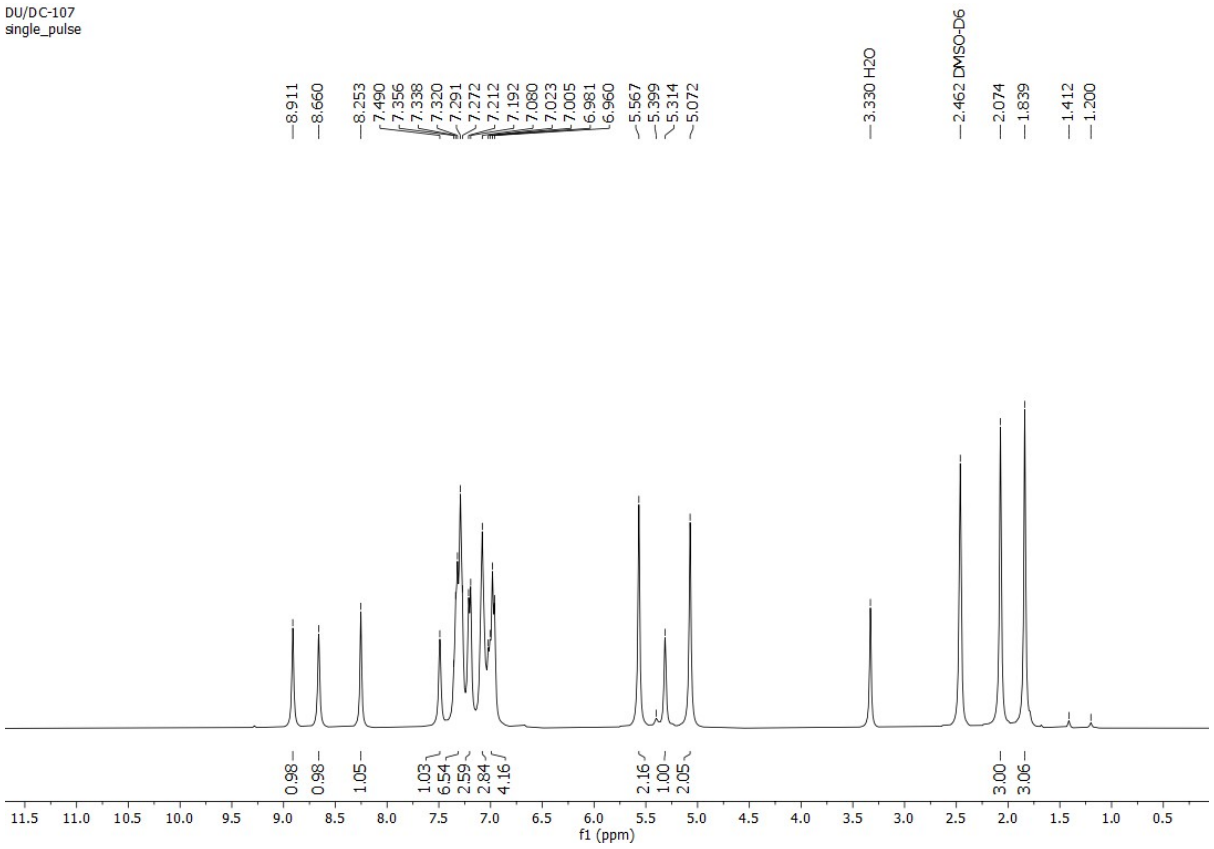


Figure S15. ^{1}H NMR spectrum of compound **4g** at 400 MHz in DMSO-d6

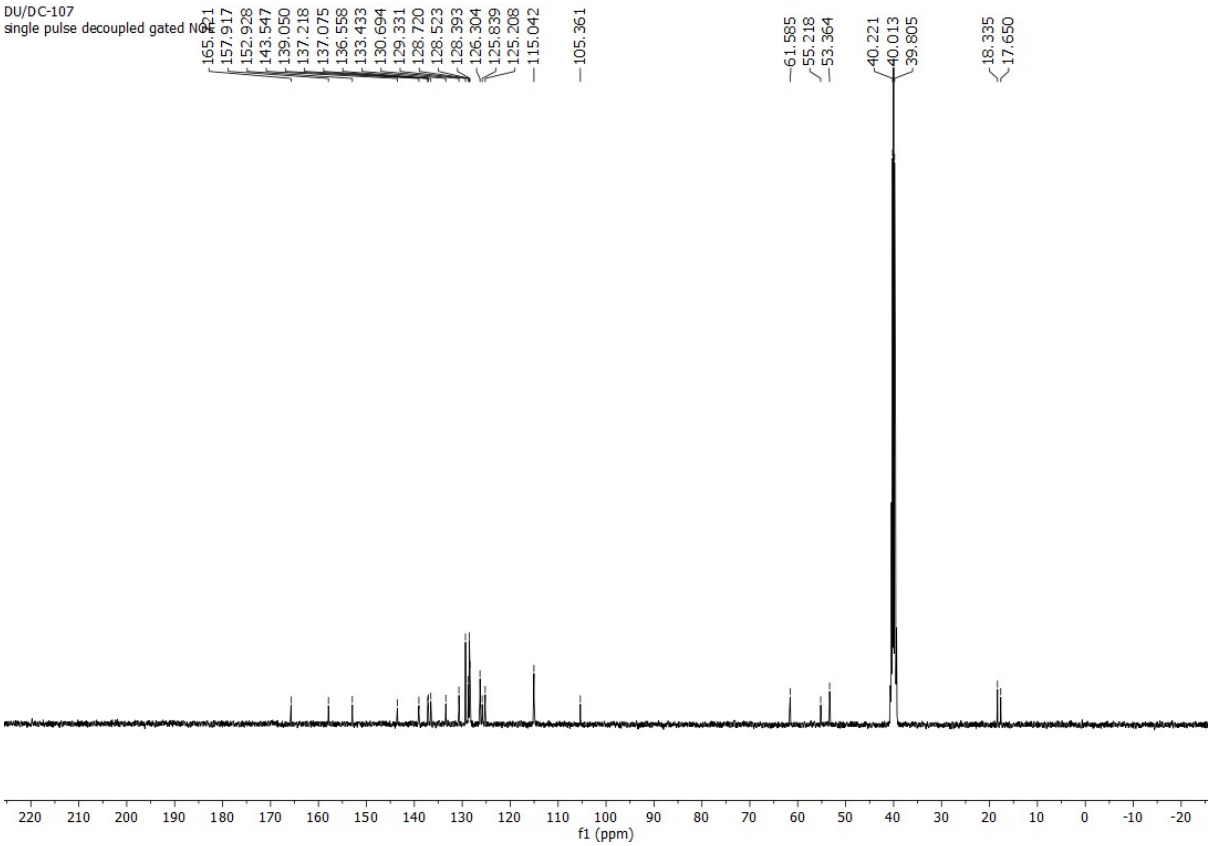


Figure S16. ^{13}C NMR spectrum of compound **4g** at 150 MHz in DMSO-d6

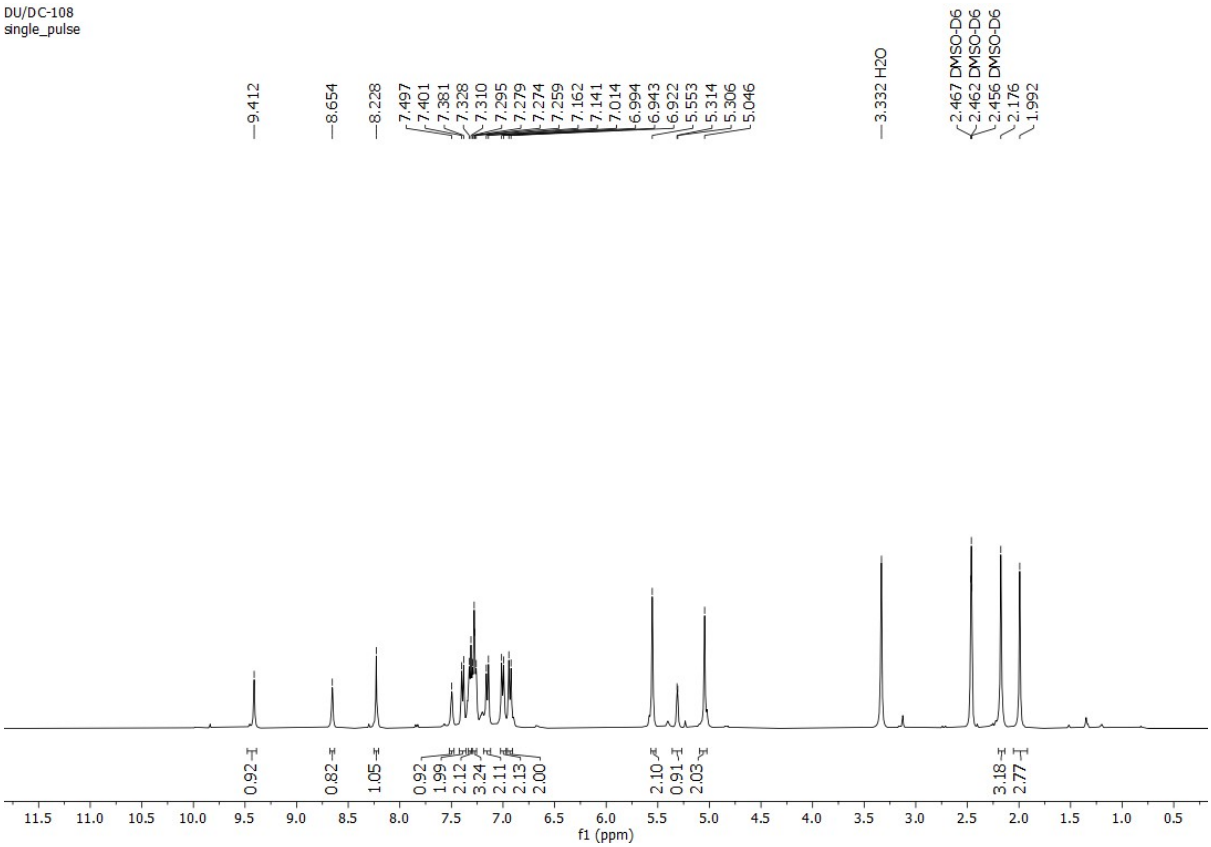


Figure S17. ^{1}H NMR spectrum of compound **4h** at 400 MHz in DMSO-d6

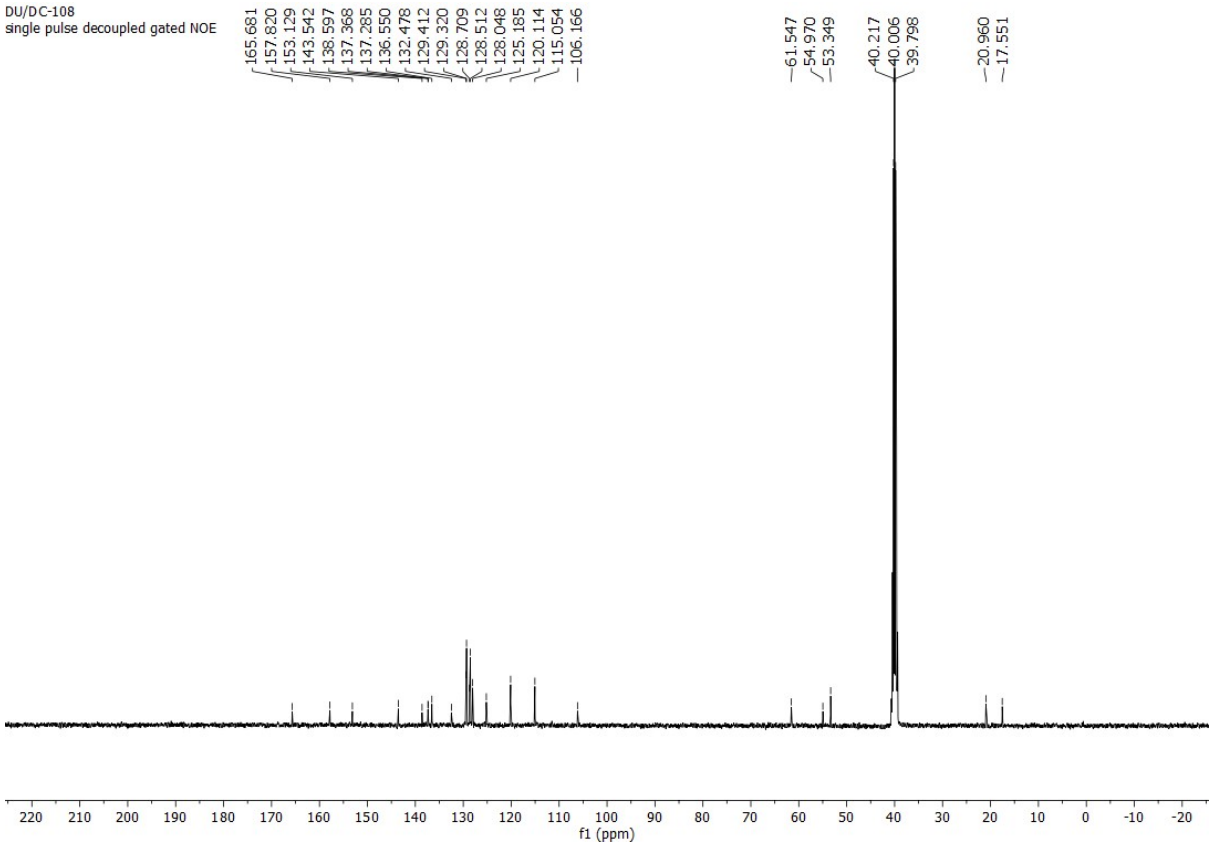


Figure S18. ^{13}C NMR spectrum of compound **4h** at 150 MHz in DMSO-d6

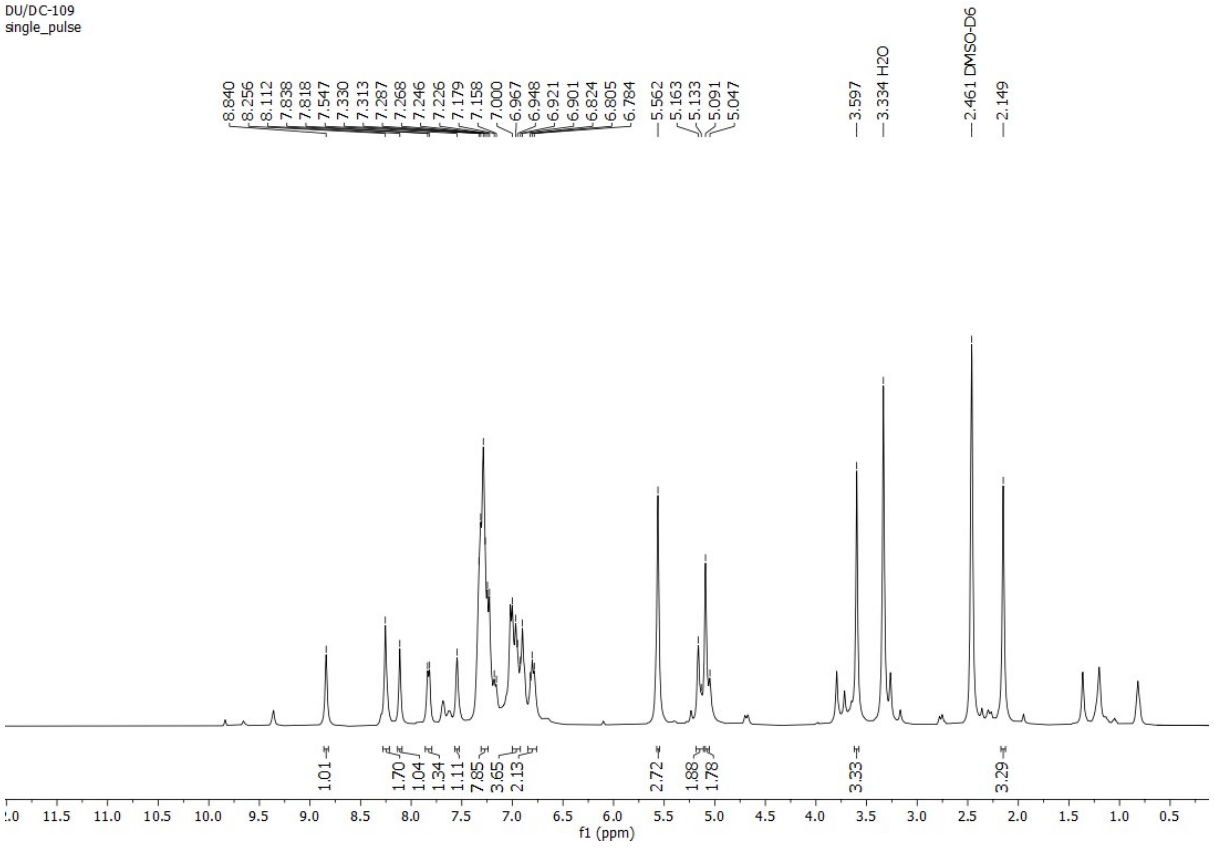


Figure S19. ^{1}H NMR spectrum of compound **4i** at 400 MHz in DMSO-d6

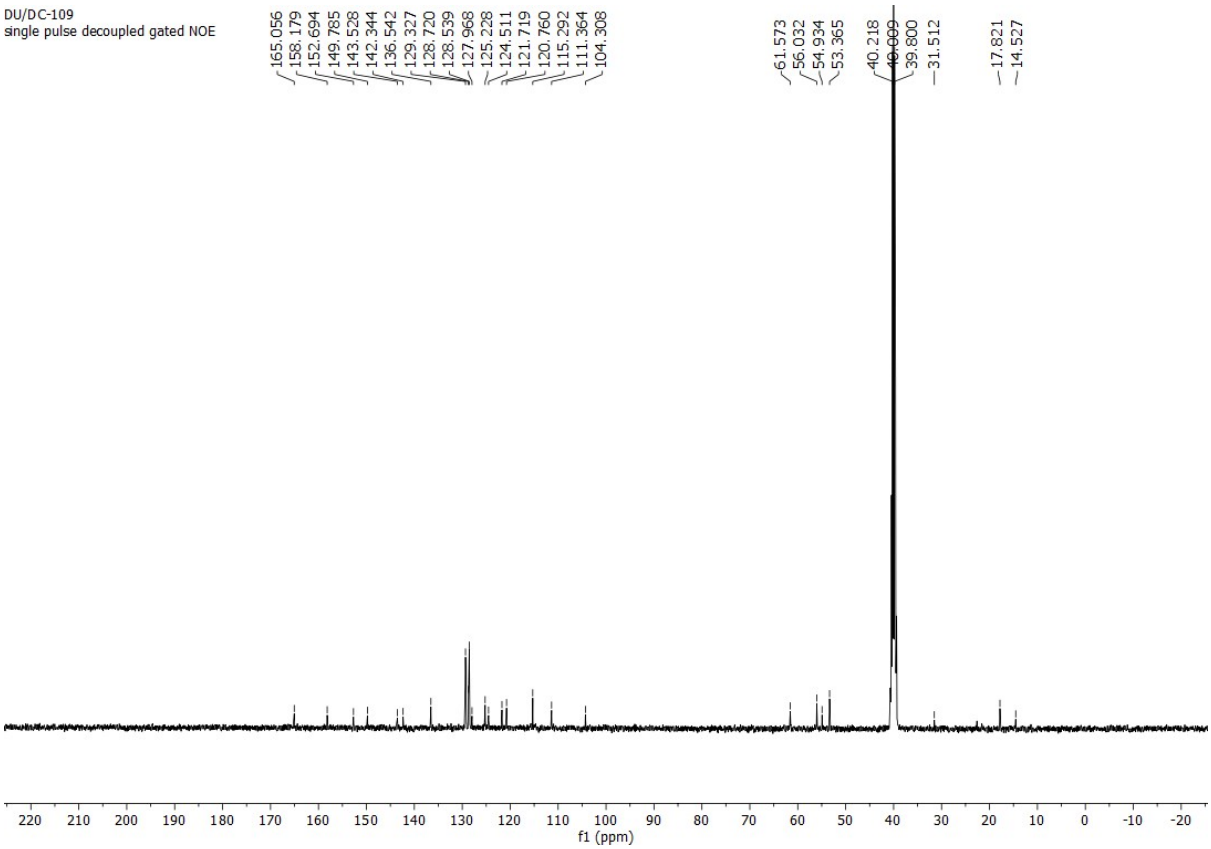


Figure S20. ^{13}C NMR spectrum of compound **4i** at 150 MHz in DMSO-d6

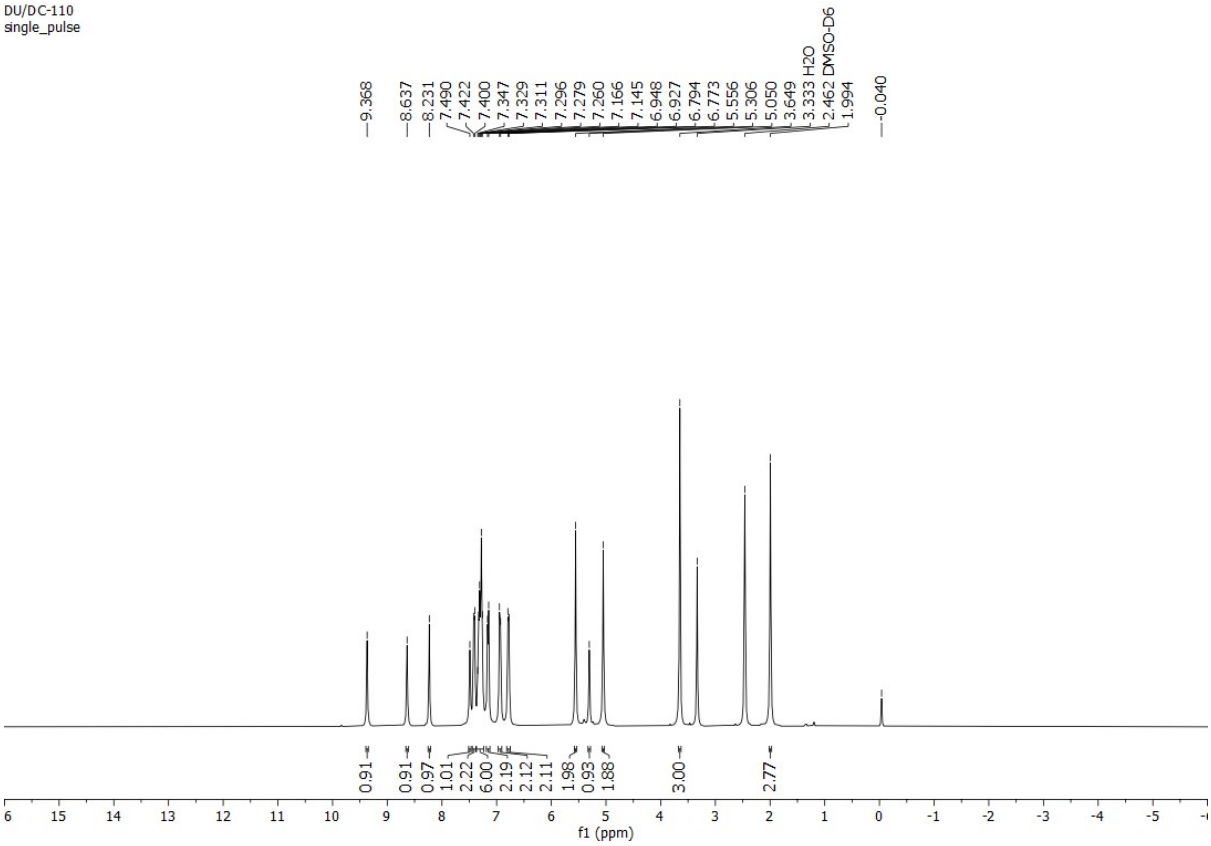


Figure S21. ^{1}H NMR spectrum of compound **4j** at 400 MHz in DMSO-d6

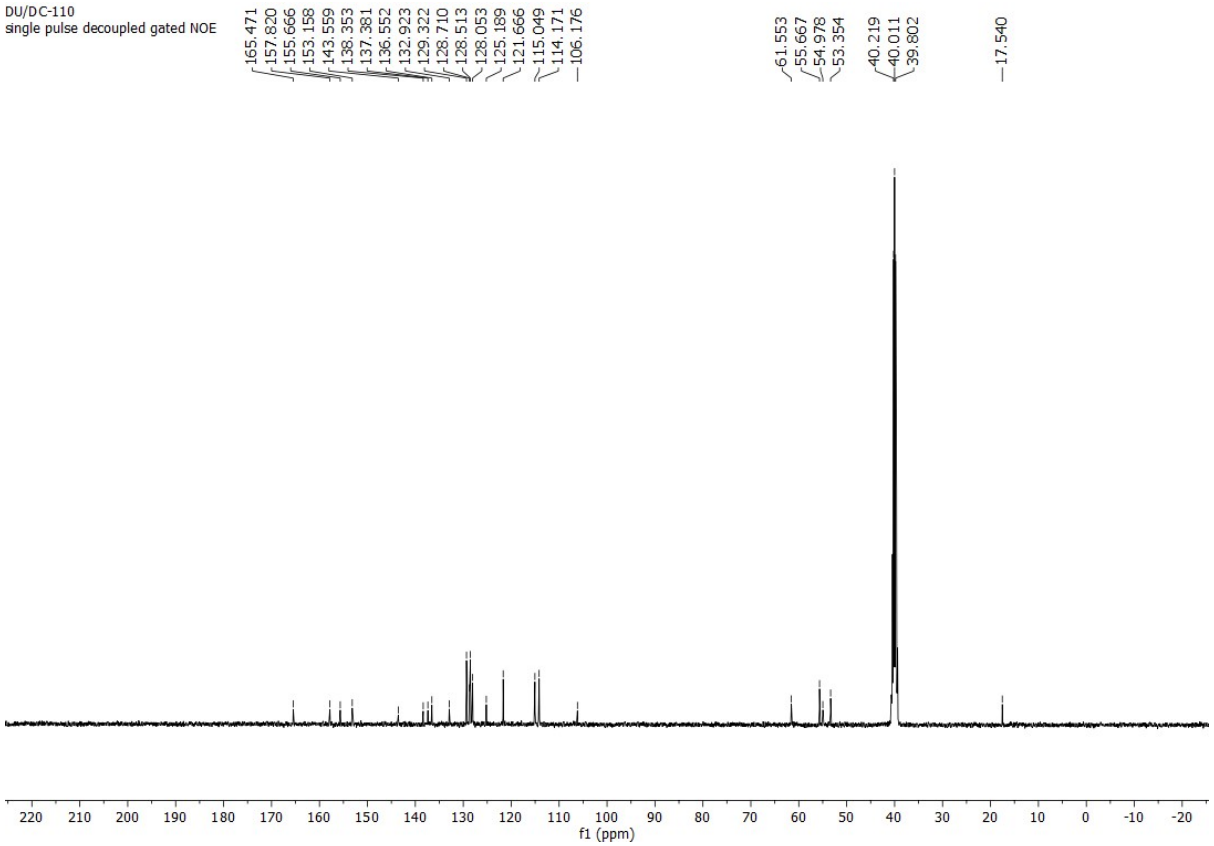


Figure S22. ^{13}C NMR spectrum of compound **4j** at 150 MHz in DMSO-d6

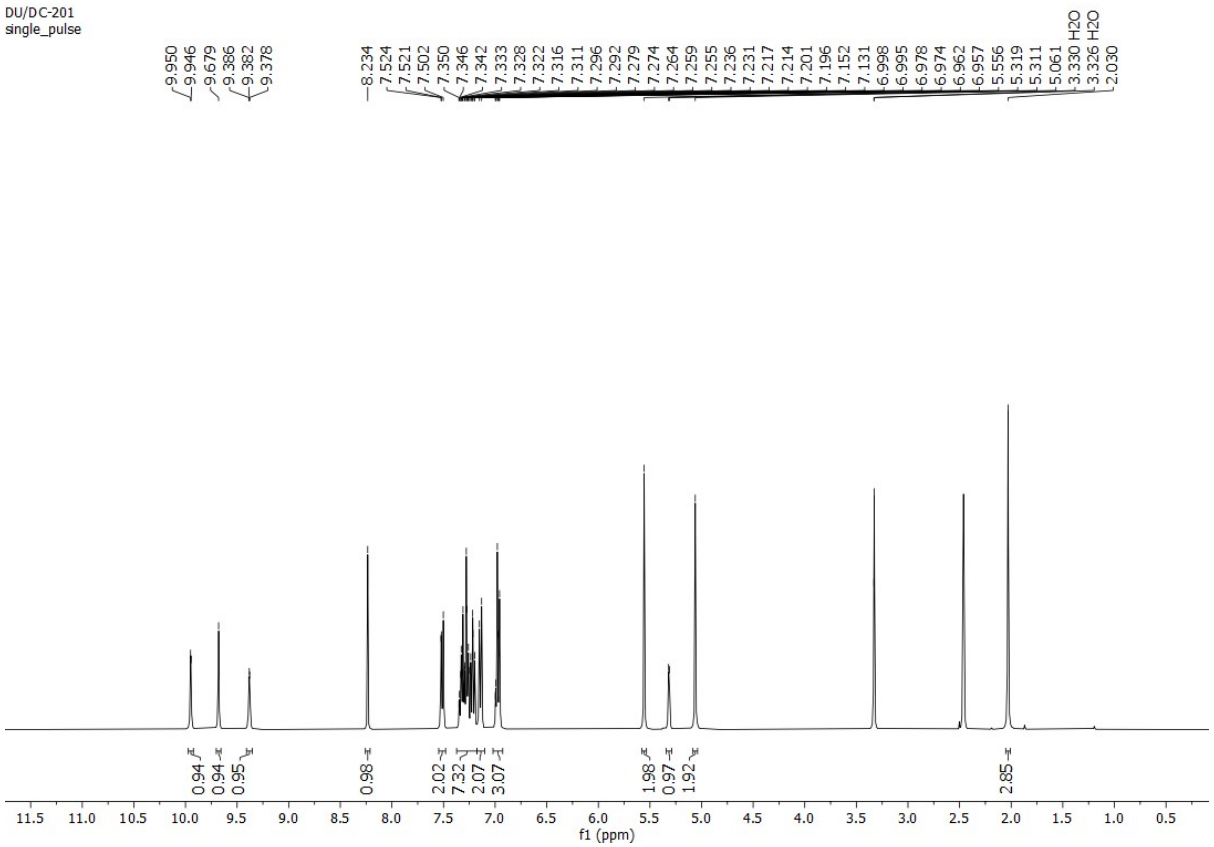


Figure S23. ^{1}H NMR spectrum of compound **4k** at 400 MHz in DMSO-d6

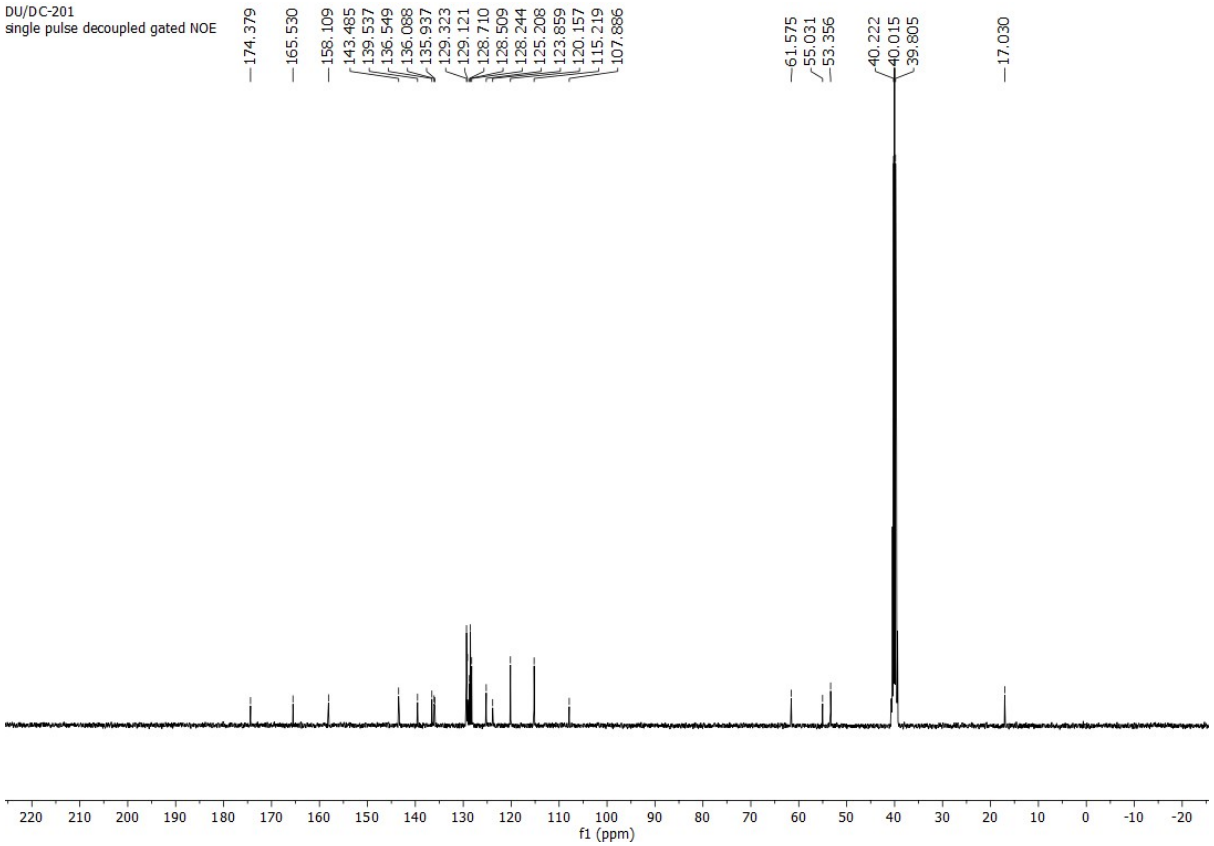


Figure S24. ^{13}C NMR spectrum of compound **4k** at 150 MHz in DMSO-d$_6$

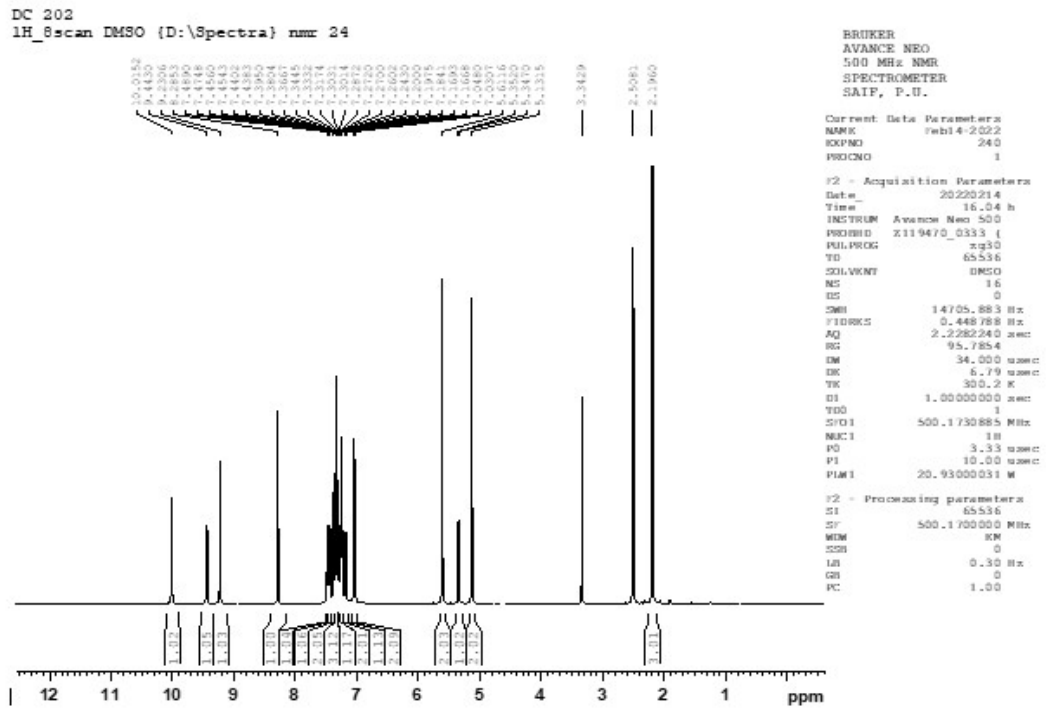


Figure S25. ^{1}H NMR spectrum of compound **4l** at 400 MHz in DMSO-d$_6$

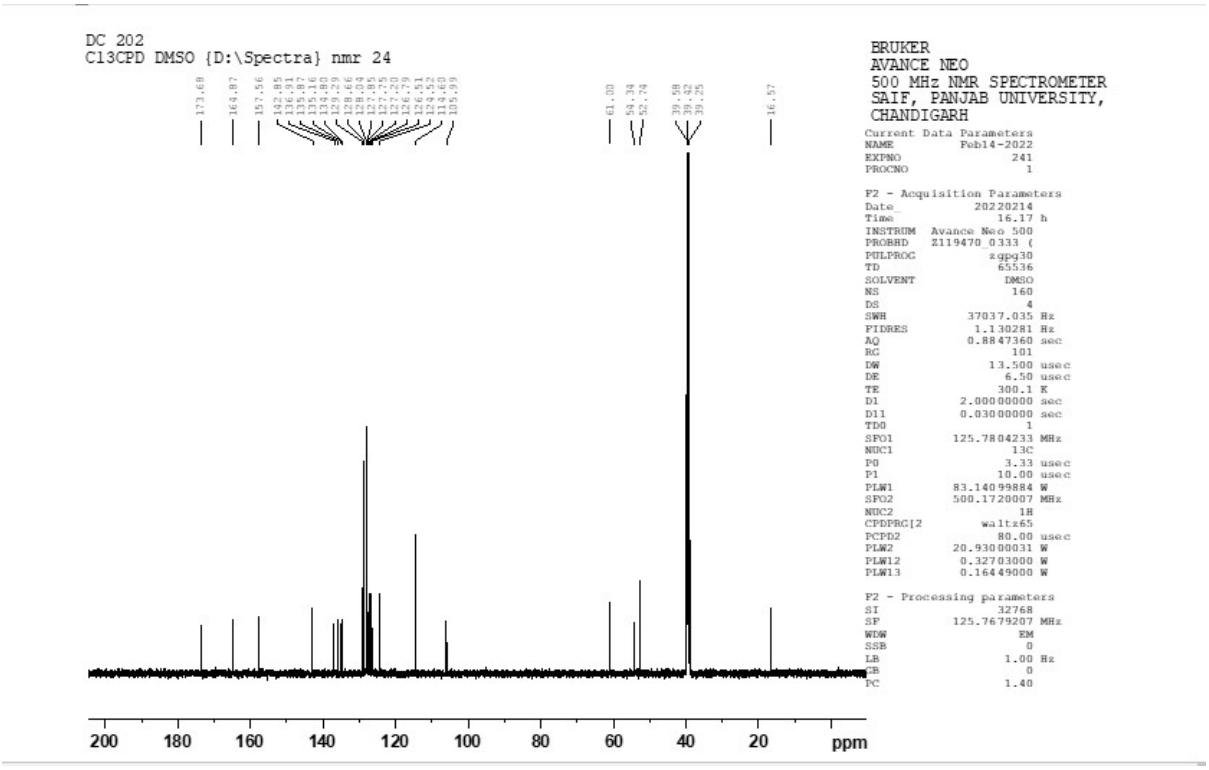


Figure S26. ^{13}C NMR spectrum of compound **4l** at 150 MHz in DMSO-d6

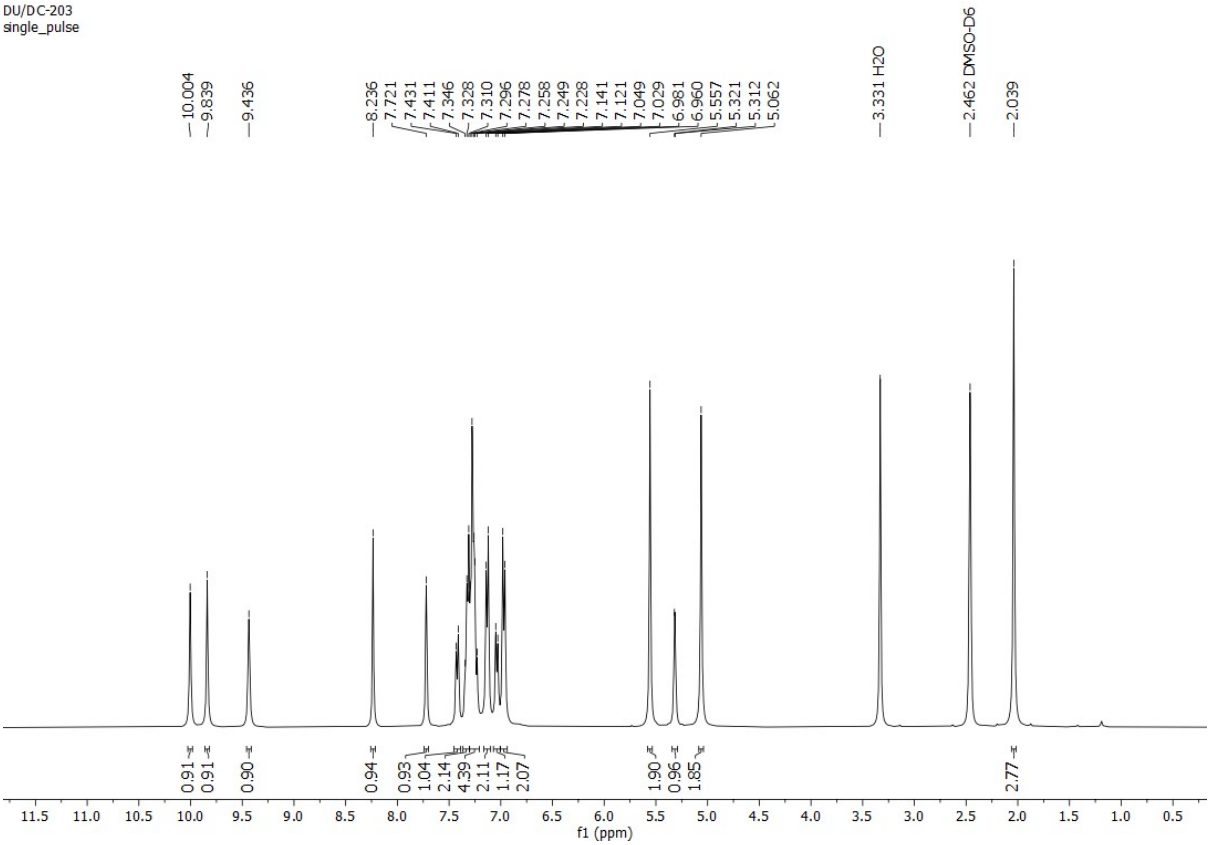


Figure S27. ^{1}H NMR spectrum of compound **4m** at 400 MHz in DMSO-d6

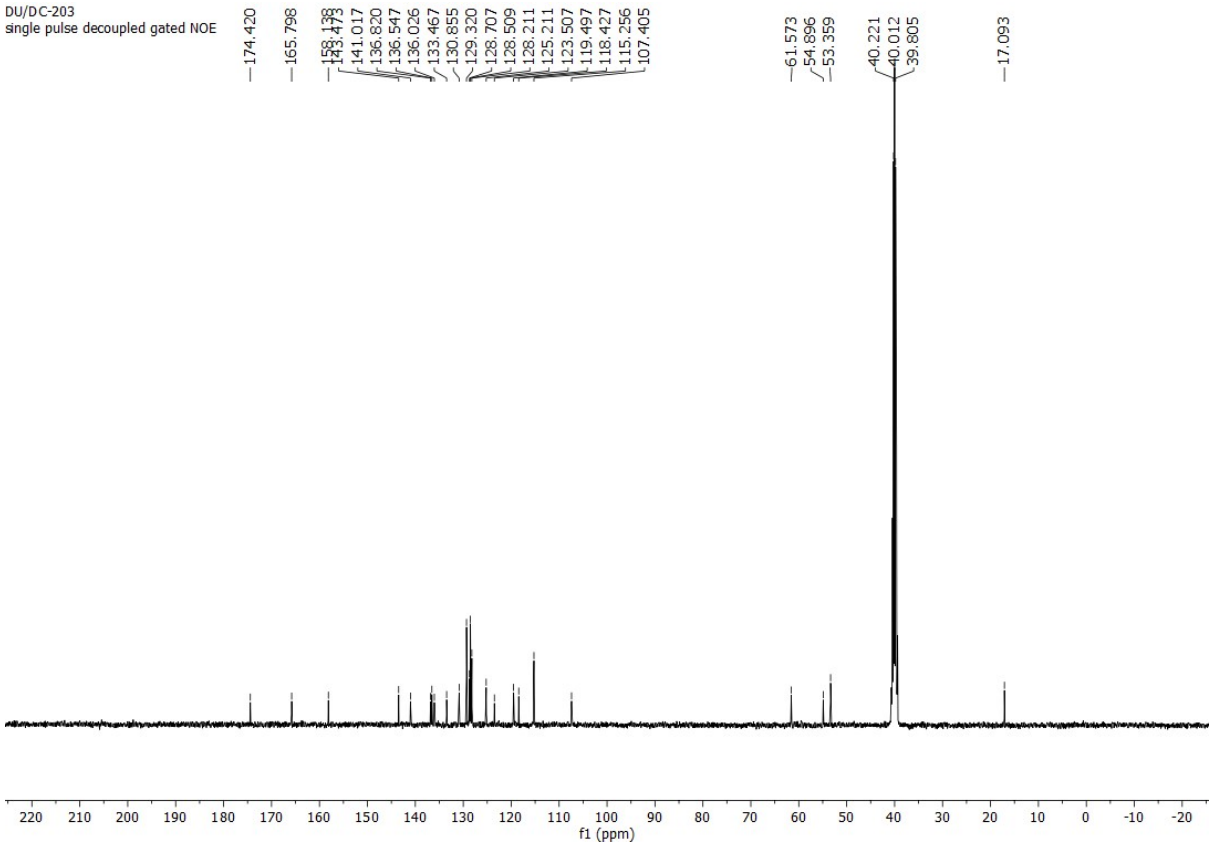


Figure S28. ^{13}C NMR spectrum of compound **4m** at 150 MHz in DMSO-d6

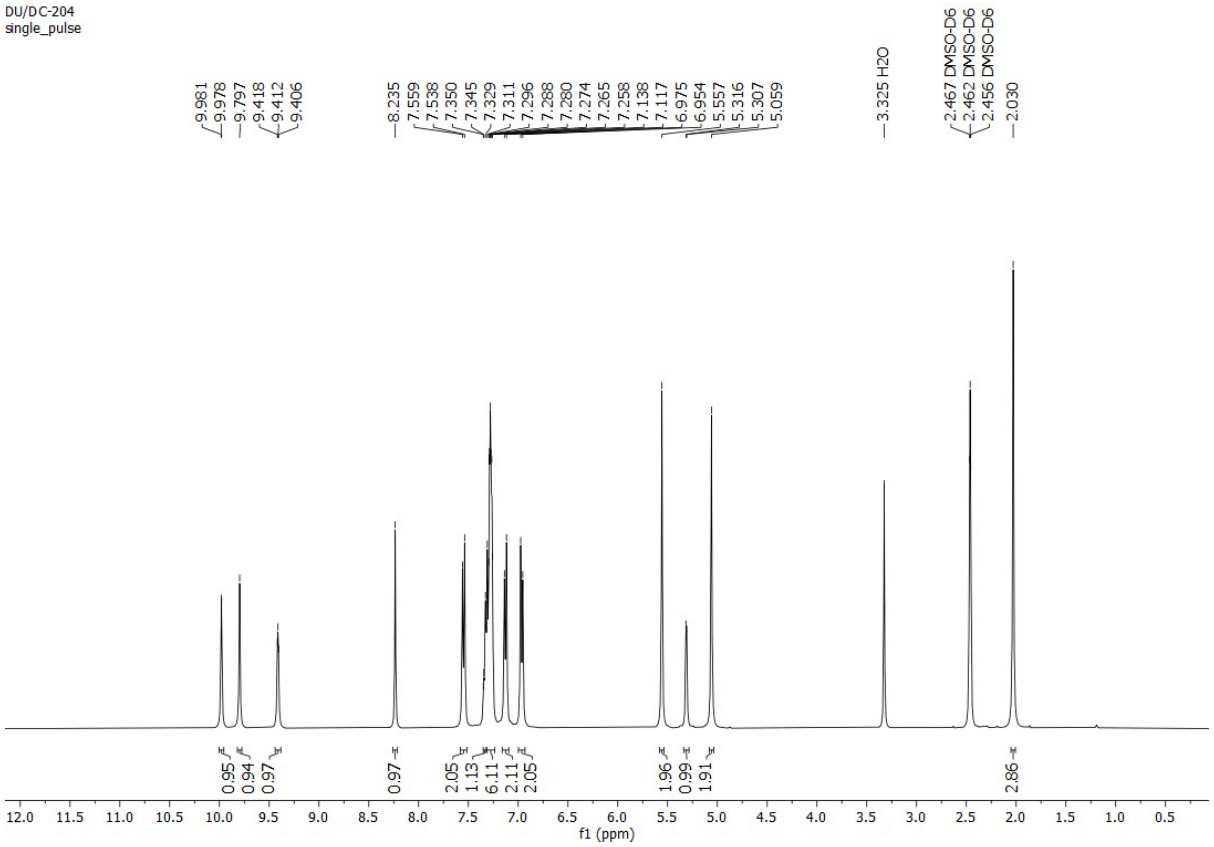


Figure S29. ^{1}H NMR spectrum of compound **4n** at 400 MHz in DMSO-d6

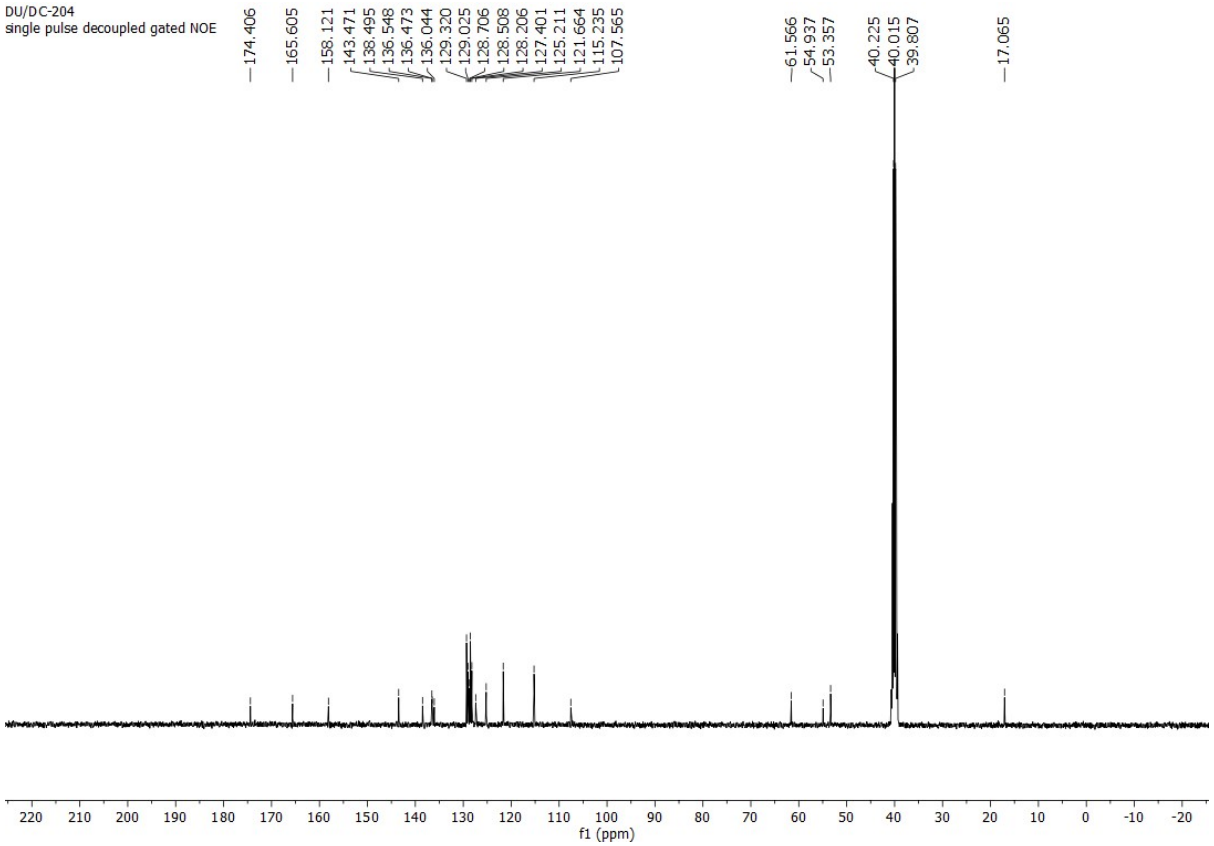


Figure S30. ^{13}C NMR spectrum of compound **4n** at 150 MHz in DMSO-d6

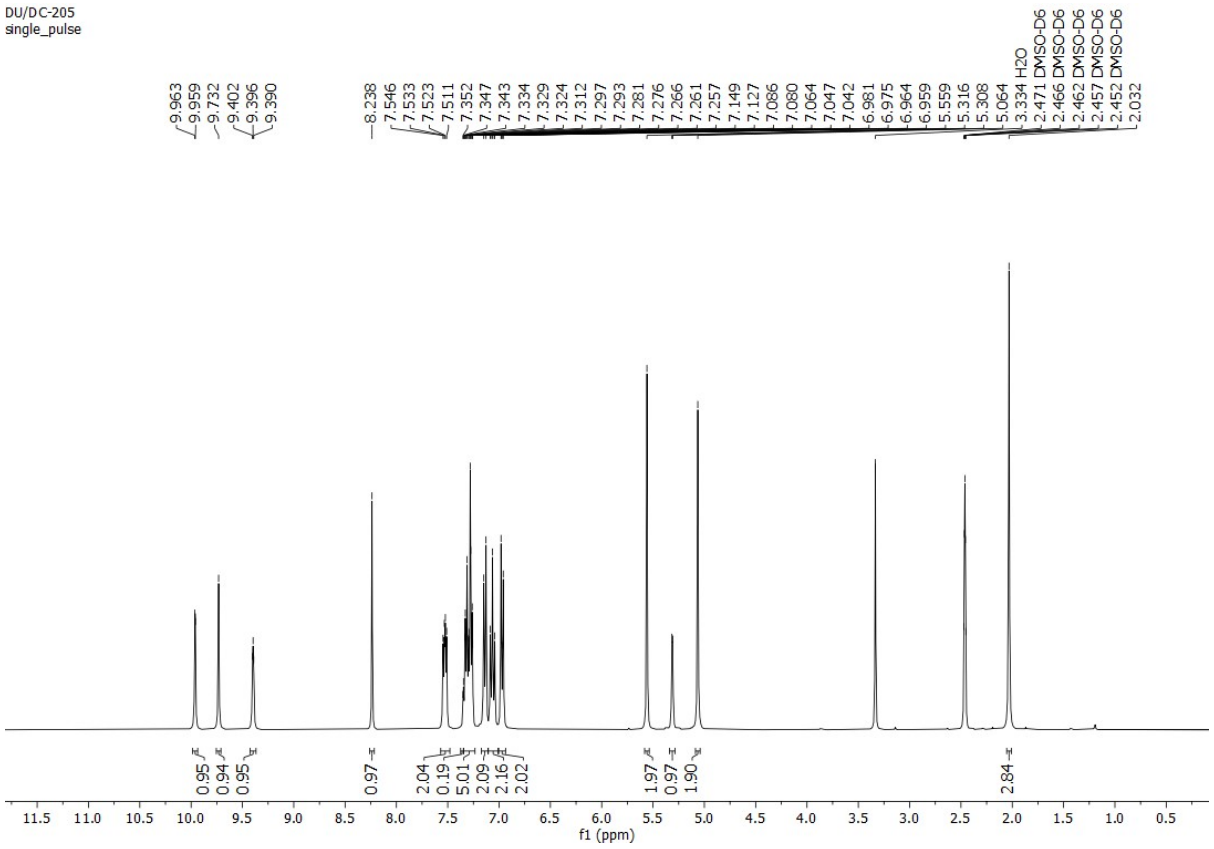


Figure S31. ^{1}H NMR spectrum of compound **4o** at 400 MHz in DMSO-d6

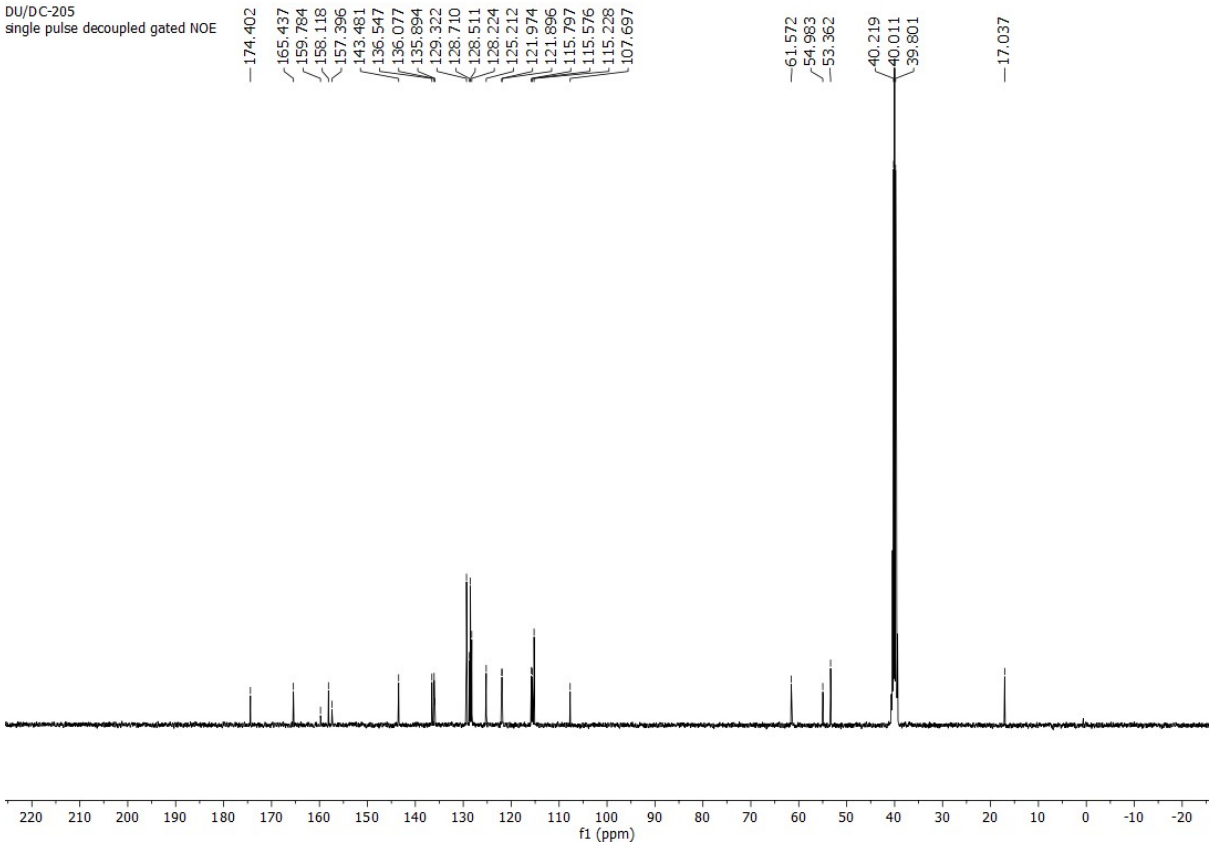


Figure S32. ^{13}C NMR spectrum of compound **4o** at 150 MHz in DMSO-d6

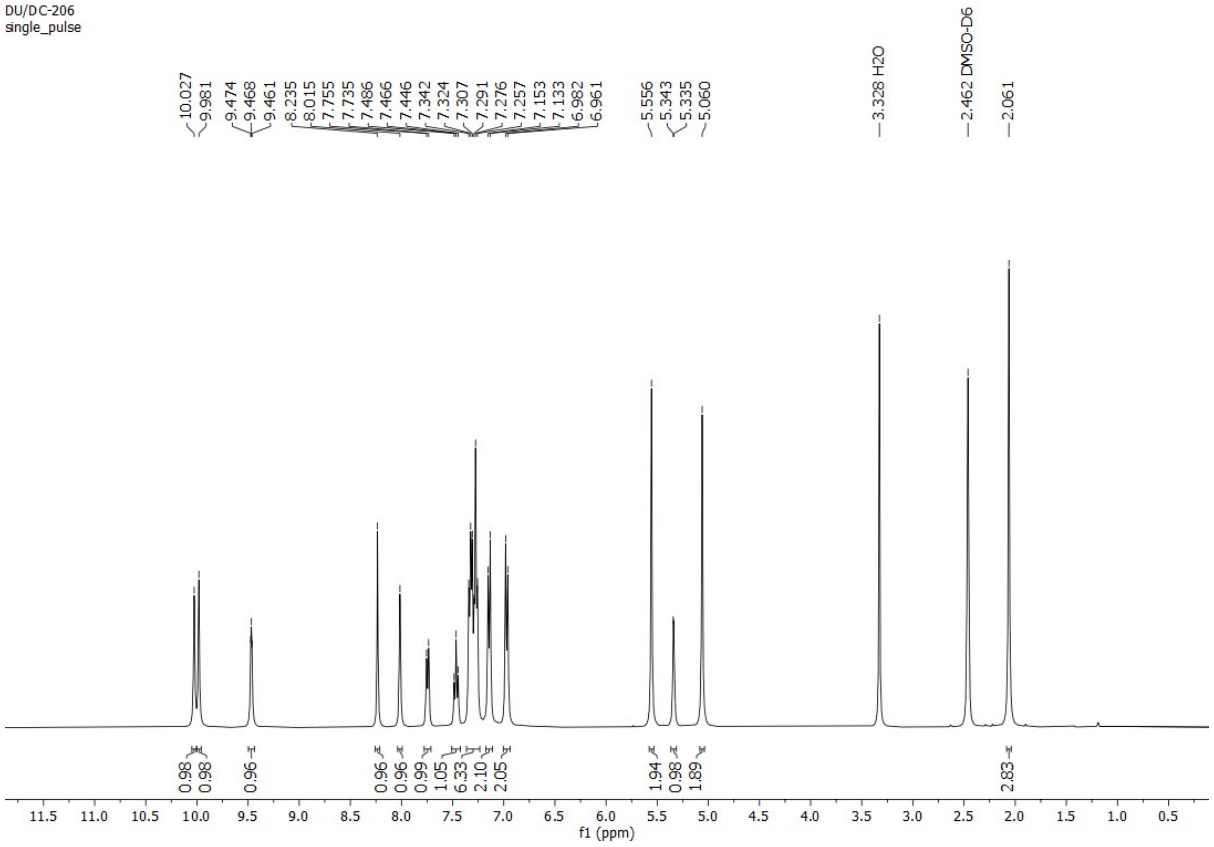


Figure S33. ^{1}H NMR spectrum of compound **4p** at 400 MHz in DMSO-d6

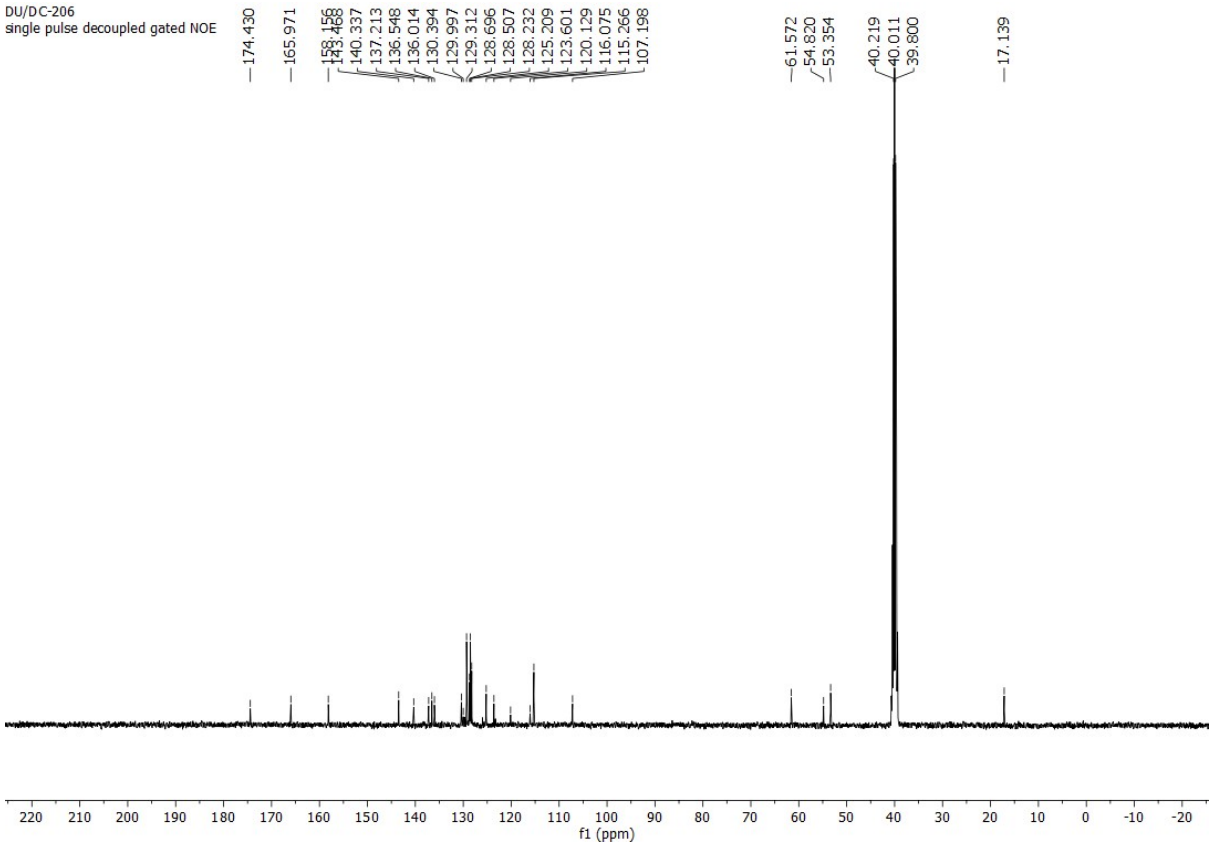


Figure S34. ^{13}C NMR spectrum of compound **4p** at 150 MHz in DMSO-d6

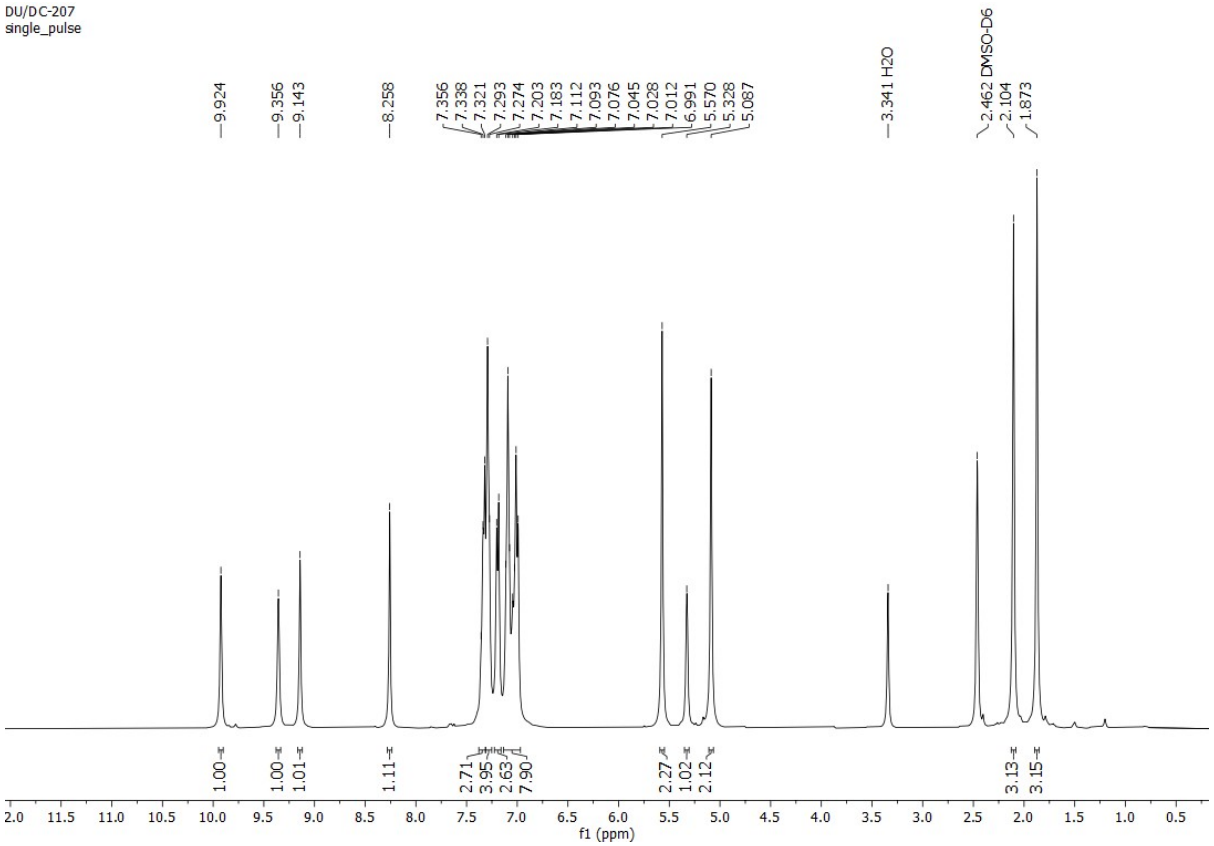


Figure S35. ^{1}H NMR spectrum of compound **4q** at 400 MHz in DMSO-d6

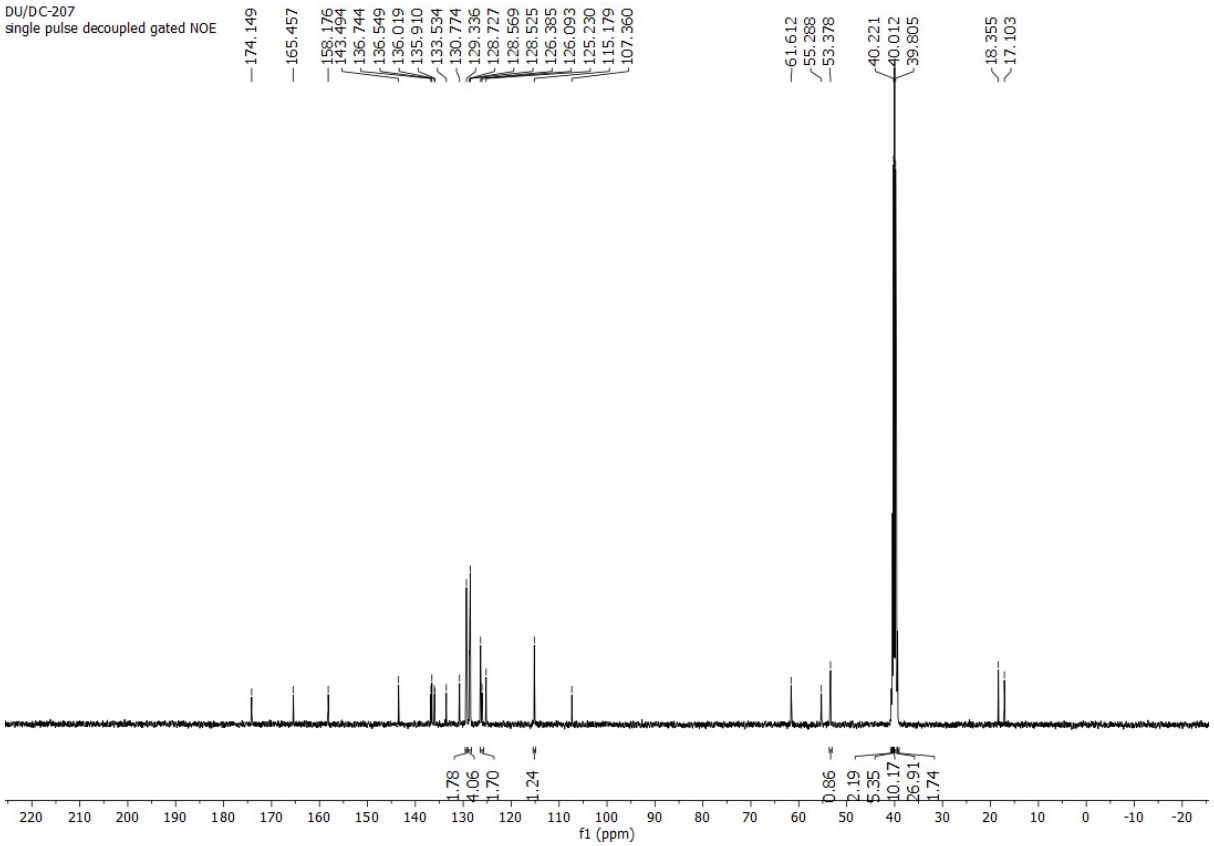


Figure S36. ^{13}C NMR spectrum of compound **4q** at 150 MHz in DMSO-d6

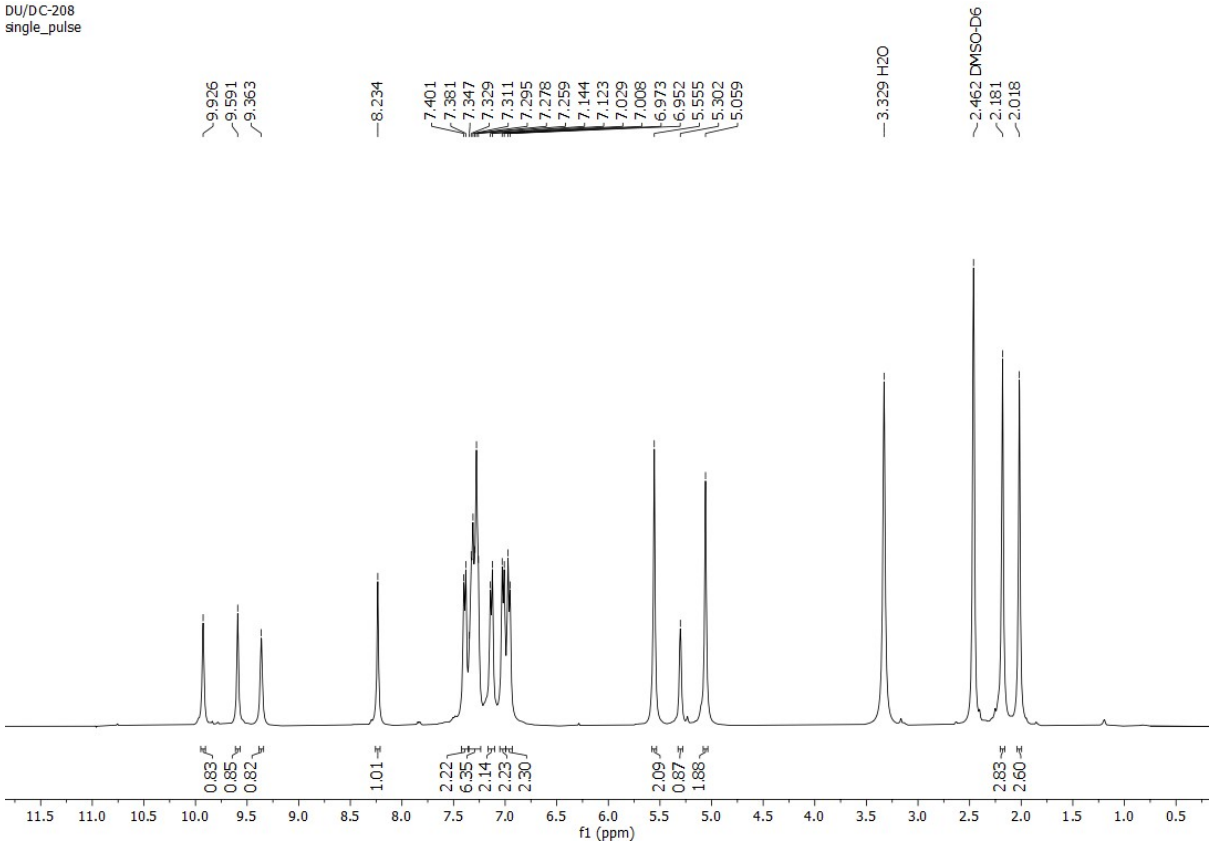


Figure S37. ^{1}H NMR spectrum of compound **4r** at 400 MHz in DMSO-d6

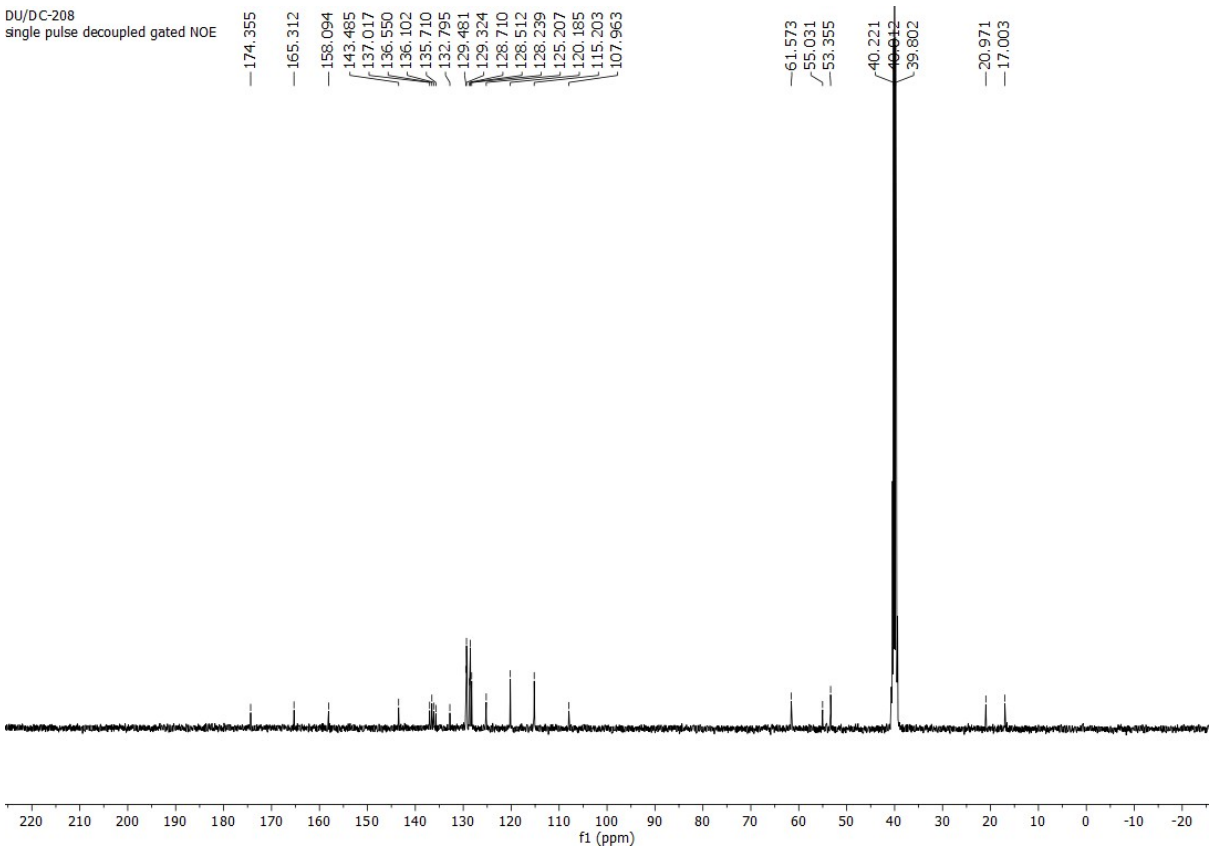


Figure S38. ^{13}C NMR spectrum of compound **4r** at 150 MHz in DMSO-d6

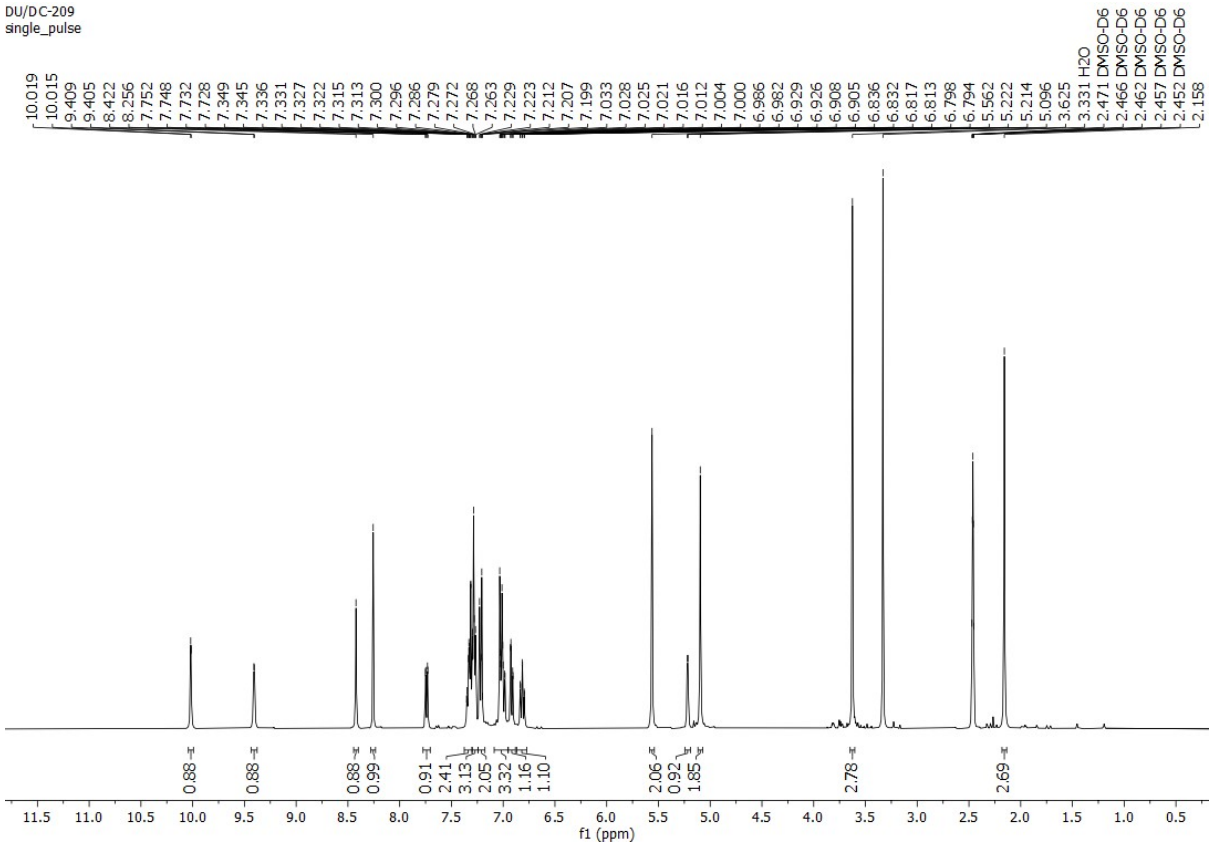


Figure S39. ^{1}H NMR spectrum of compound **4s** at 400 MHz in DMSO-d6

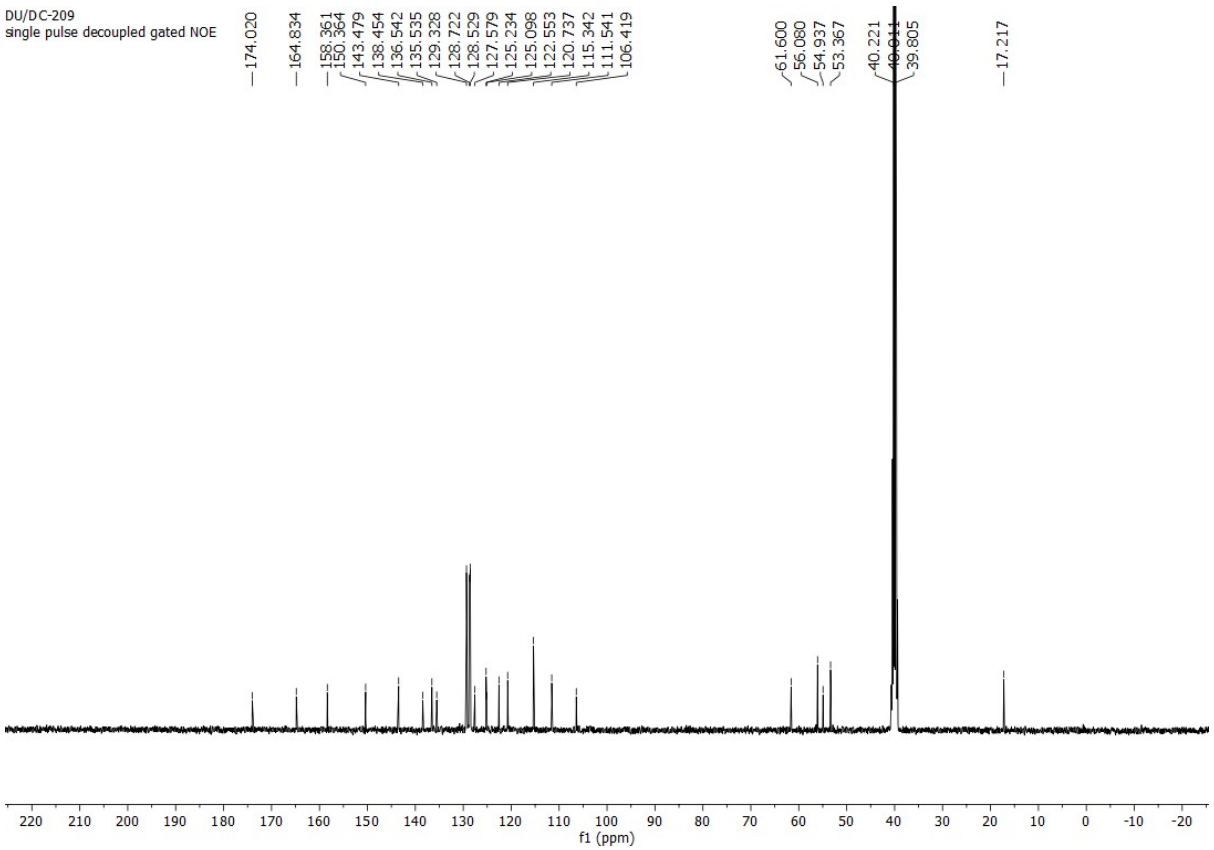


Figure S40. ^{13}C NMR spectrum of compound **4s** at 150 MHz in DMSO-d6

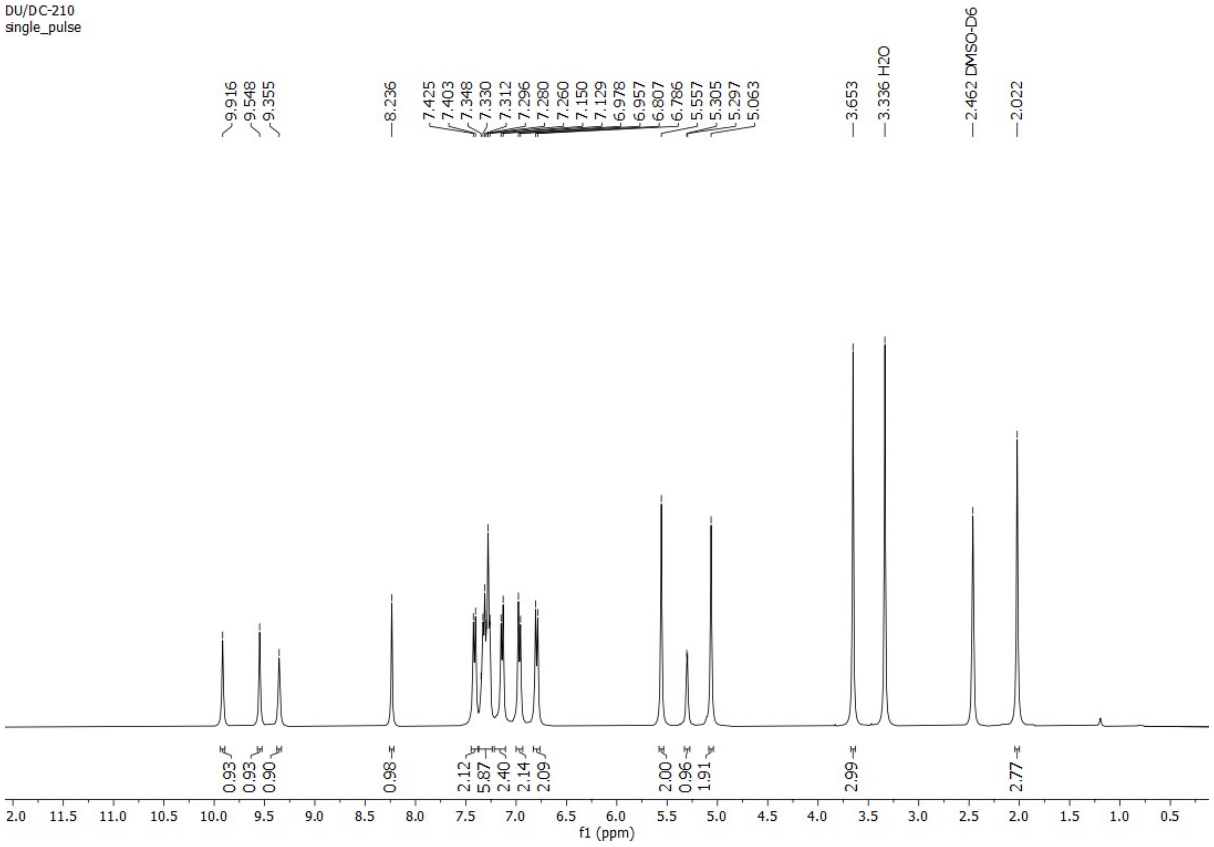


Figure S41. ^{1}H NMR spectrum of compound **4t** at 400 MHz in DMSO-d6

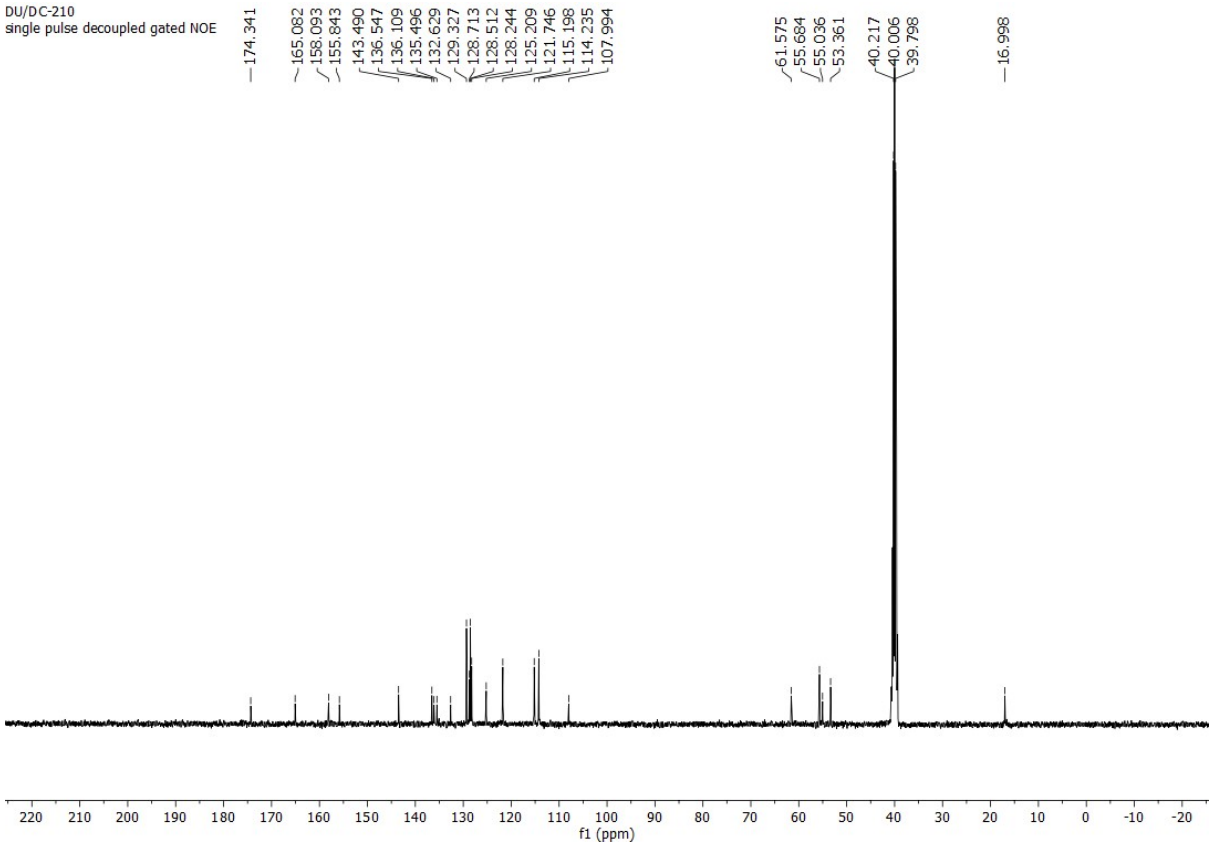


Figure S42. ^{13}C NMR spectrum of compound **4b** at 150 MHz in DMSO-d6

Mass spectra of **4a**-**4t**

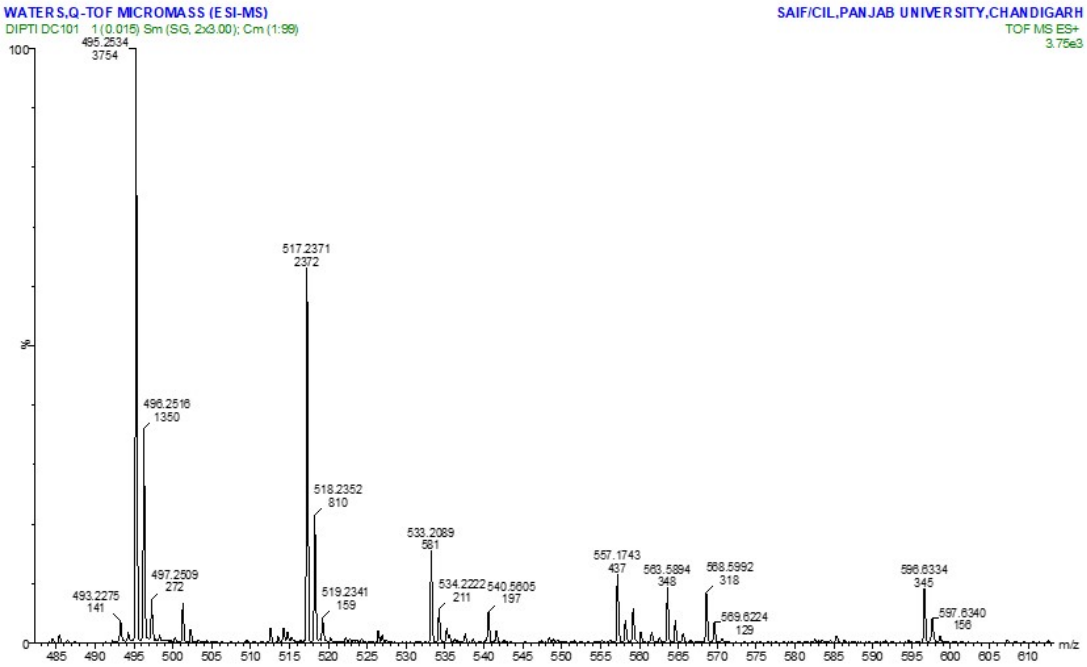
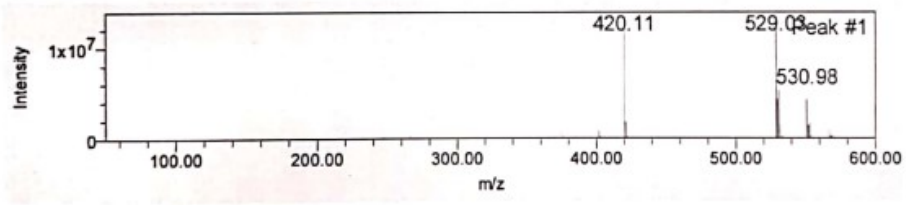


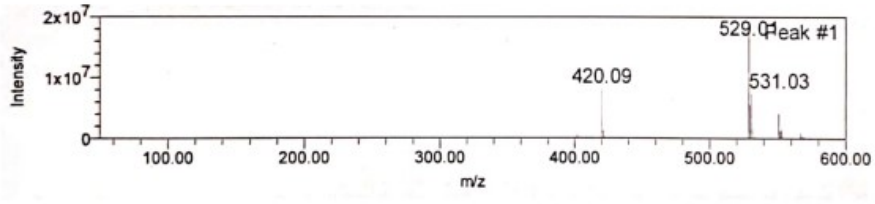
Figure S43. HRMS of compound **4a**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	20.009	337927508	100.00		529.03

Figure S44. LCMS of compound **4b**



Peak Results

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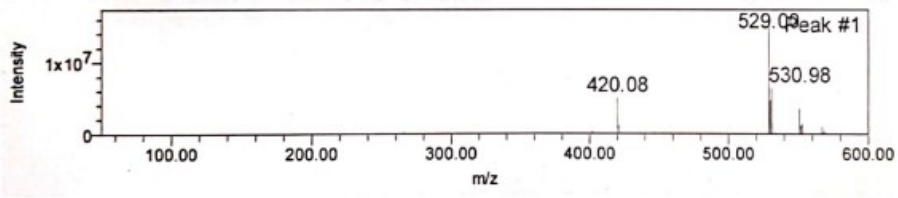
1	21.057	391689307	100.00		529.01

Figure S45. LCMS of compound **4c**



Peak Results

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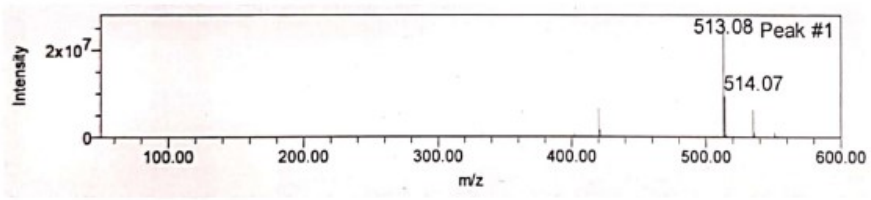
1	21.080	281838188	100.00		529.00

Figure S46. LCMS of compound **4d**



Peak Results

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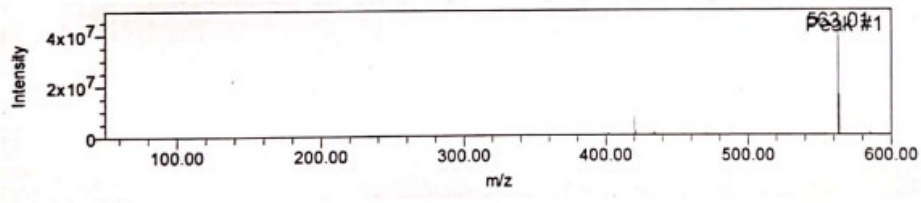
1	19.502	378301089	100.00		513.08

Figure S47. LCMS of compound **4e**



Peak Results

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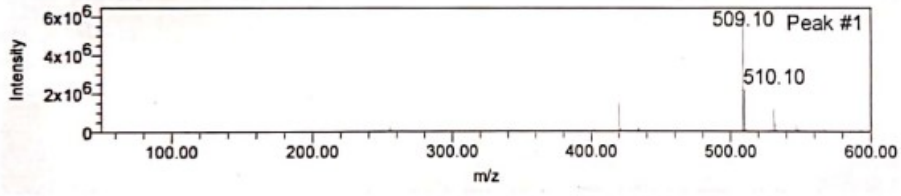
1	21.897	541048205	100.00		563.01

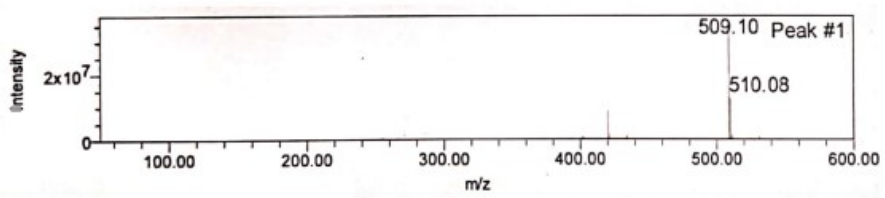
Figure S48. LCMS of compound **4f**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	18.903	69328238	100.00		509.10

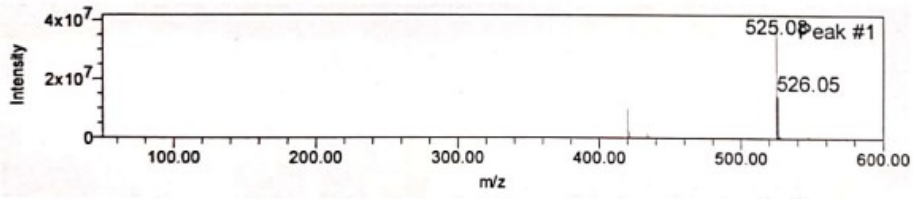
Figure S49. LCMS of compound **4g**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	20.018	771578598	100.00		509.10

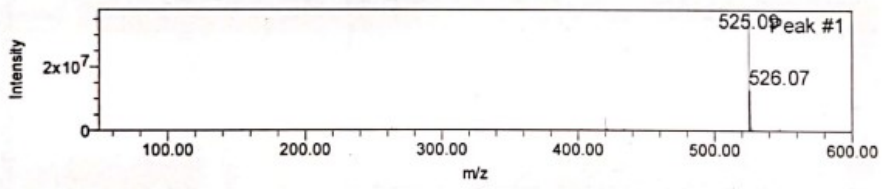
Figure S50. LCMS of compound **4h**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	19.640	575852929	100.00		525.08

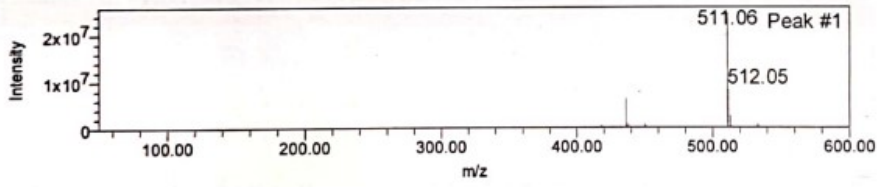
Figure S51. LCMS of compound **4i**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	18.485	373959080	100.00		525.09

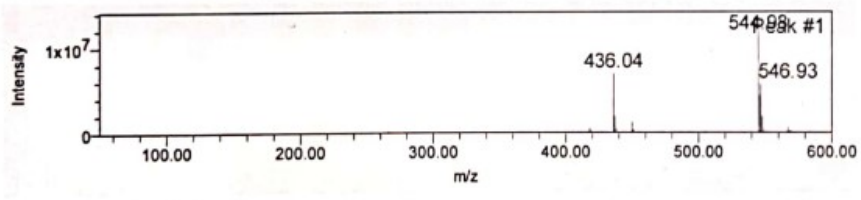
Figure S52. LCMS of compound **4j**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	20.433	466055335	100.00		511.06

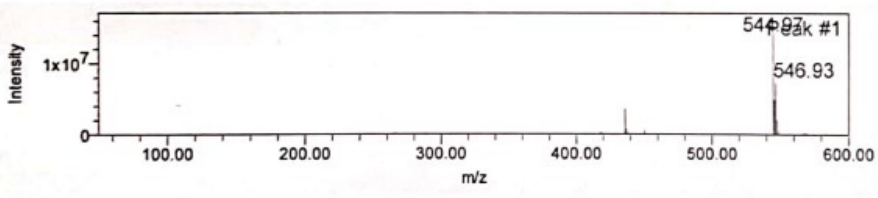
Figure S53. LCMS of compound **4k**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	21.348	373579212	100.00		544.98

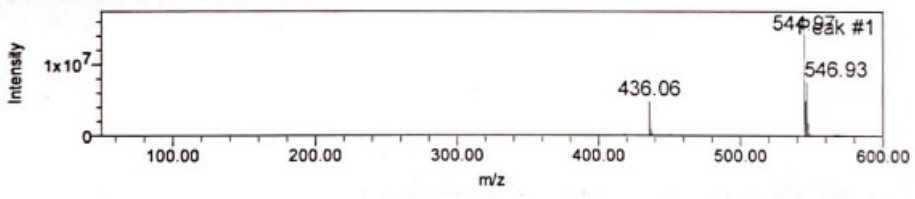
Figure S54. LCMS of compound **4l**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	22.557	537694879	100.00		544.97

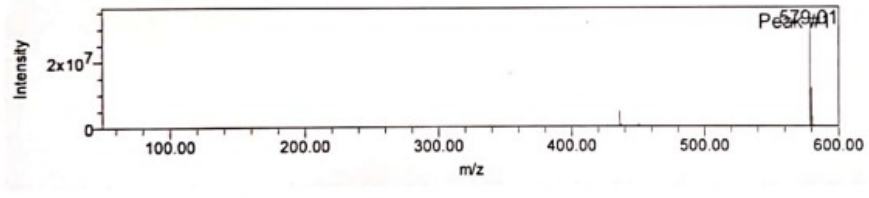
Figure S55. LCMS of compound **4m**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	22.376	366963147	100.00		544.97

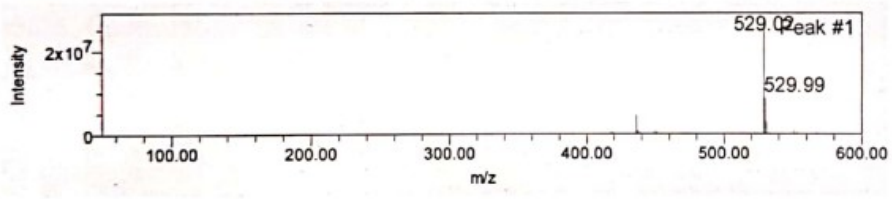
Figure S56. LCMS of compound **4n**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	23.250	463429659	100.00		579.01

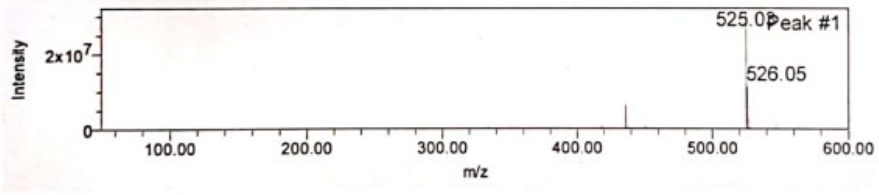
Figure S57. LCMS of compound **4p**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	20.750	444407778	100.00		529.02

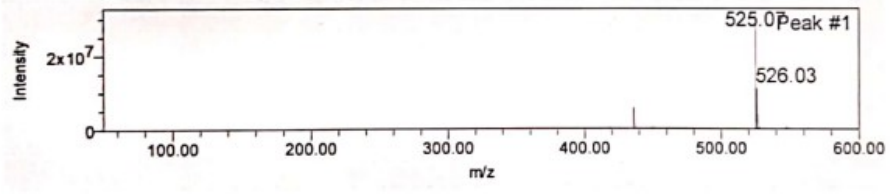
Figure S58. LCMS of compound **4p**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	20.321	534054667	100.00		525.03

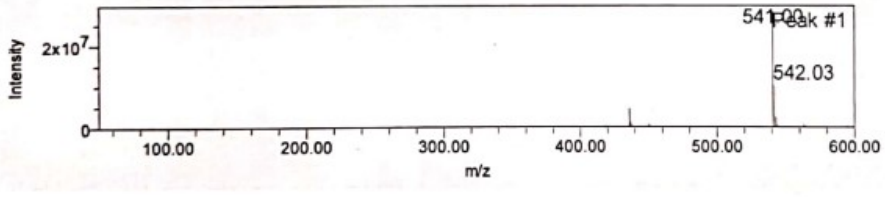
Figure S59. LCMS of compound **4q**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	21.454	557440886	100.00		525.07

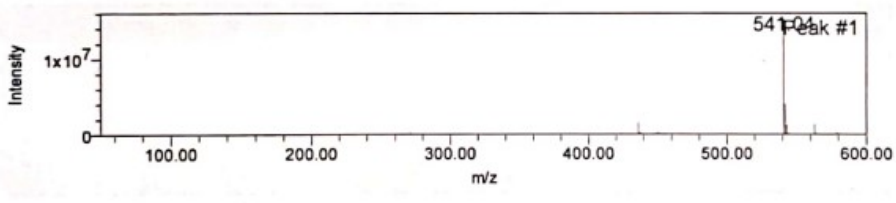
Figure S60. LCMS of compound **4r**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	21.074	758060040	100.00		541.00

Figure S61. LCMS of compound **4s**



Peak Results

	RT	Area	% Area	Name	Base Peak (m/z)
1	19.844	139043859	100.00		541.04

Figure S62. LCMS of compound **4t**