

Supplementary Materials

Design, Synthesis, and Biological Evaluation of Pyridinesulfonamide Derivatives as Novel PI3K/mTOR Dual Inhibitors

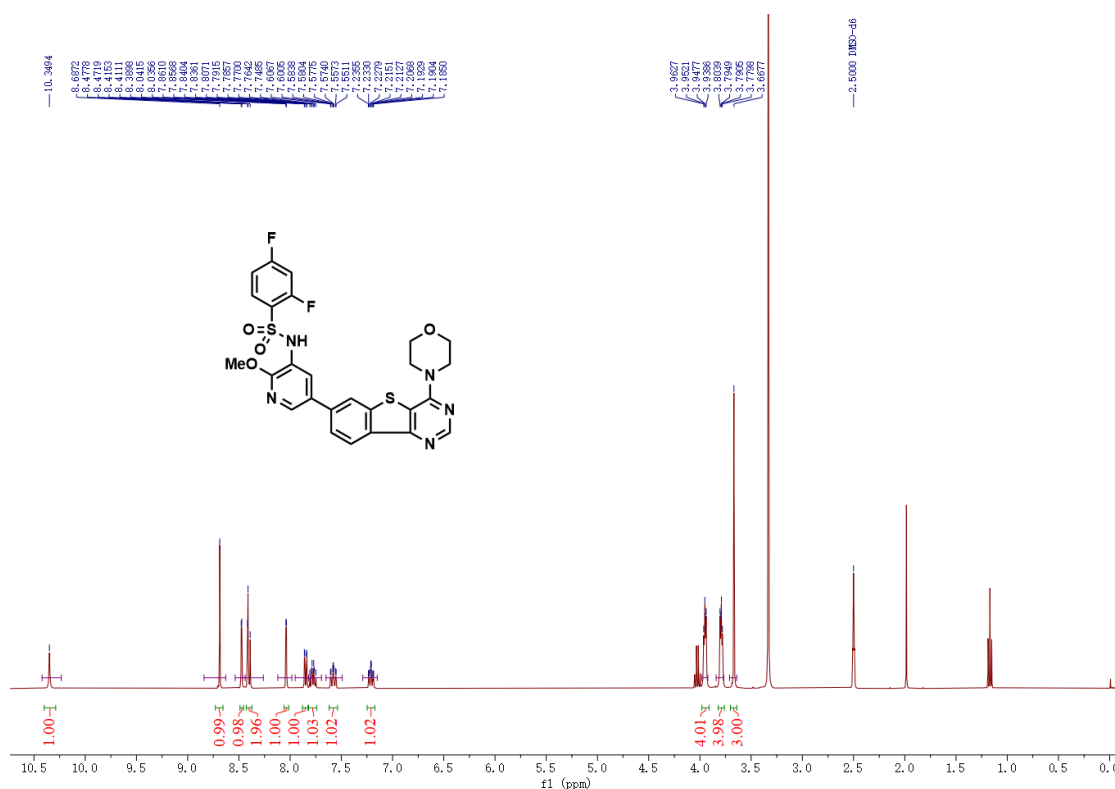
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NMR spectra for final compounds



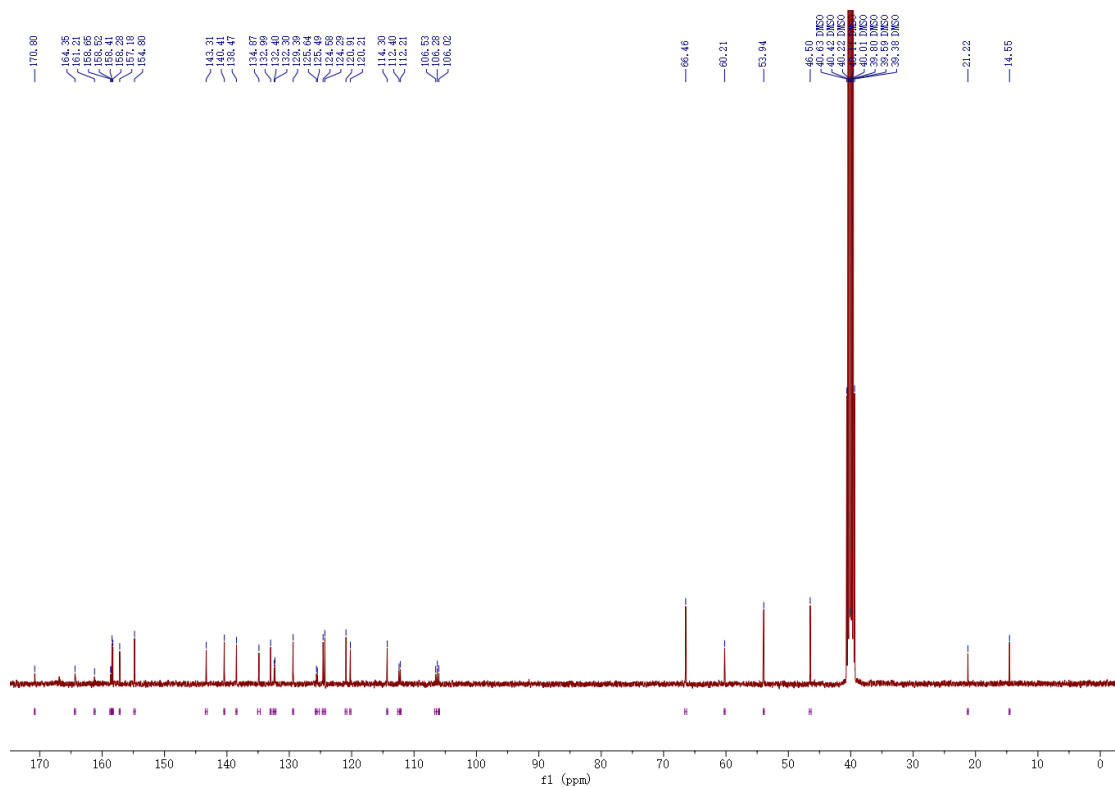


Figure S1. ^1H and ^{13}C NMR spectra of **11a** (DMSO- d_6).

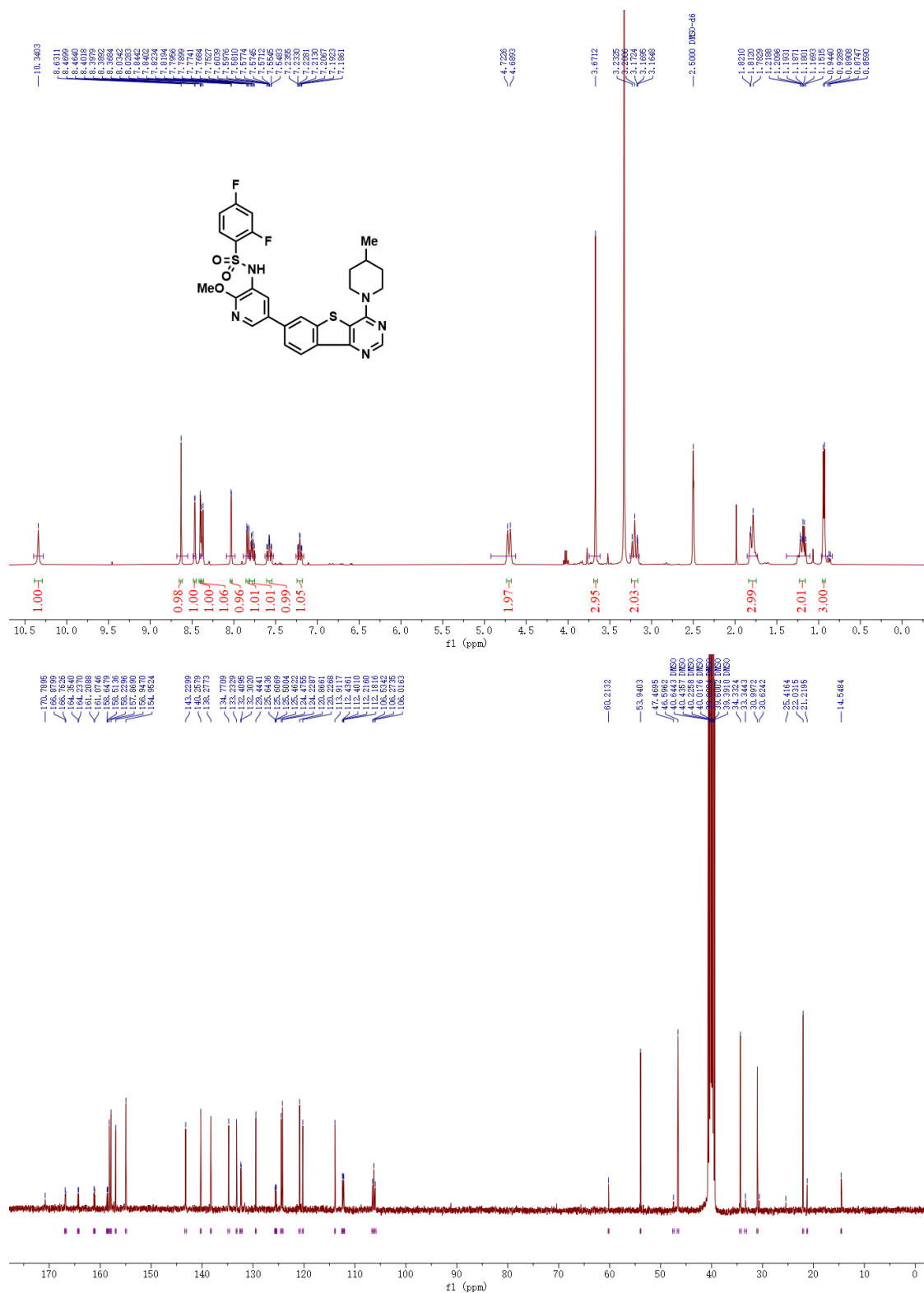


Figure S2. ¹H and ¹³C NMR spectra of **11b** (DMSO-d₆).

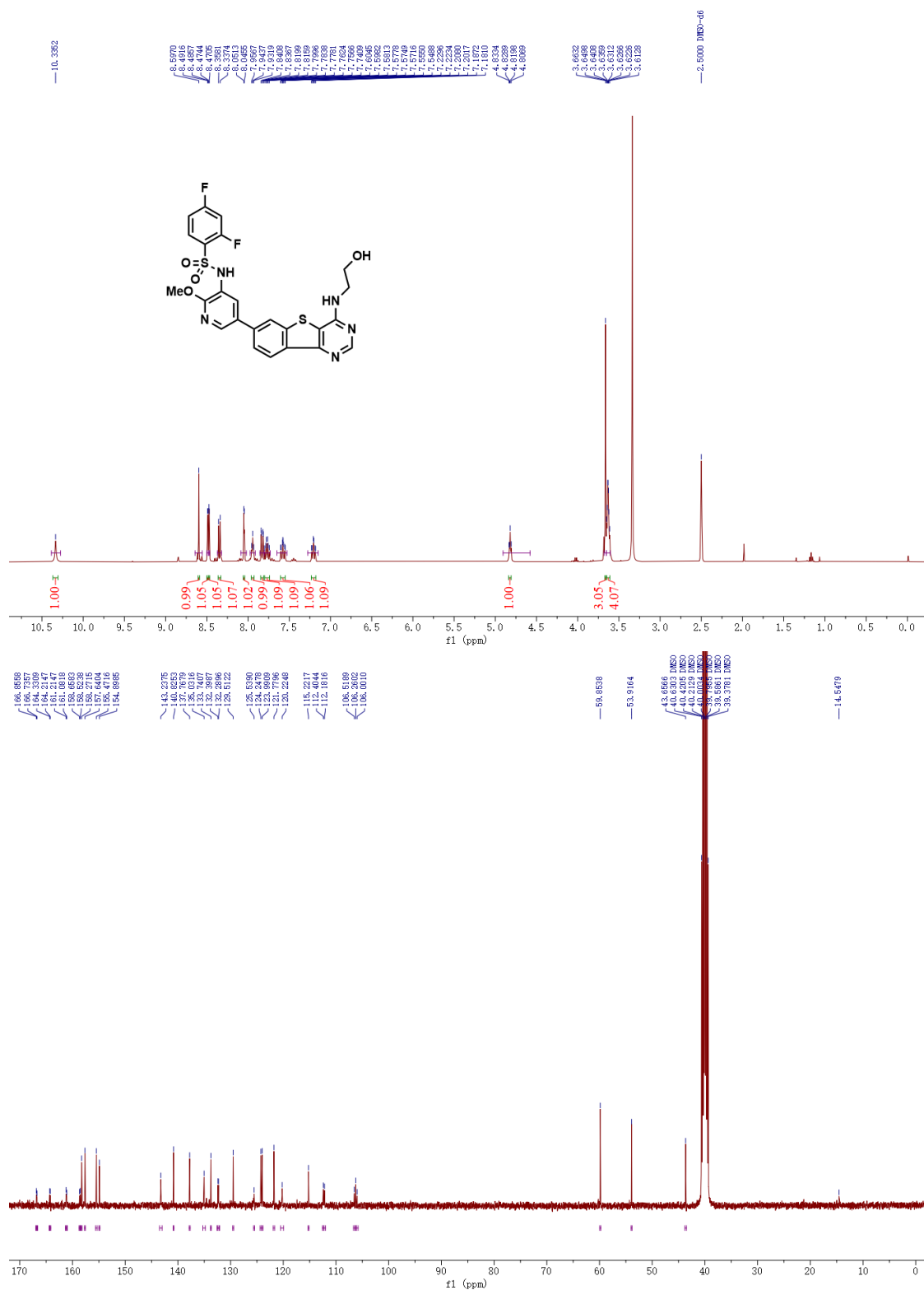


Figure S3. ¹H and ¹³C NMR spectra of 11c (DMSO-d₆).

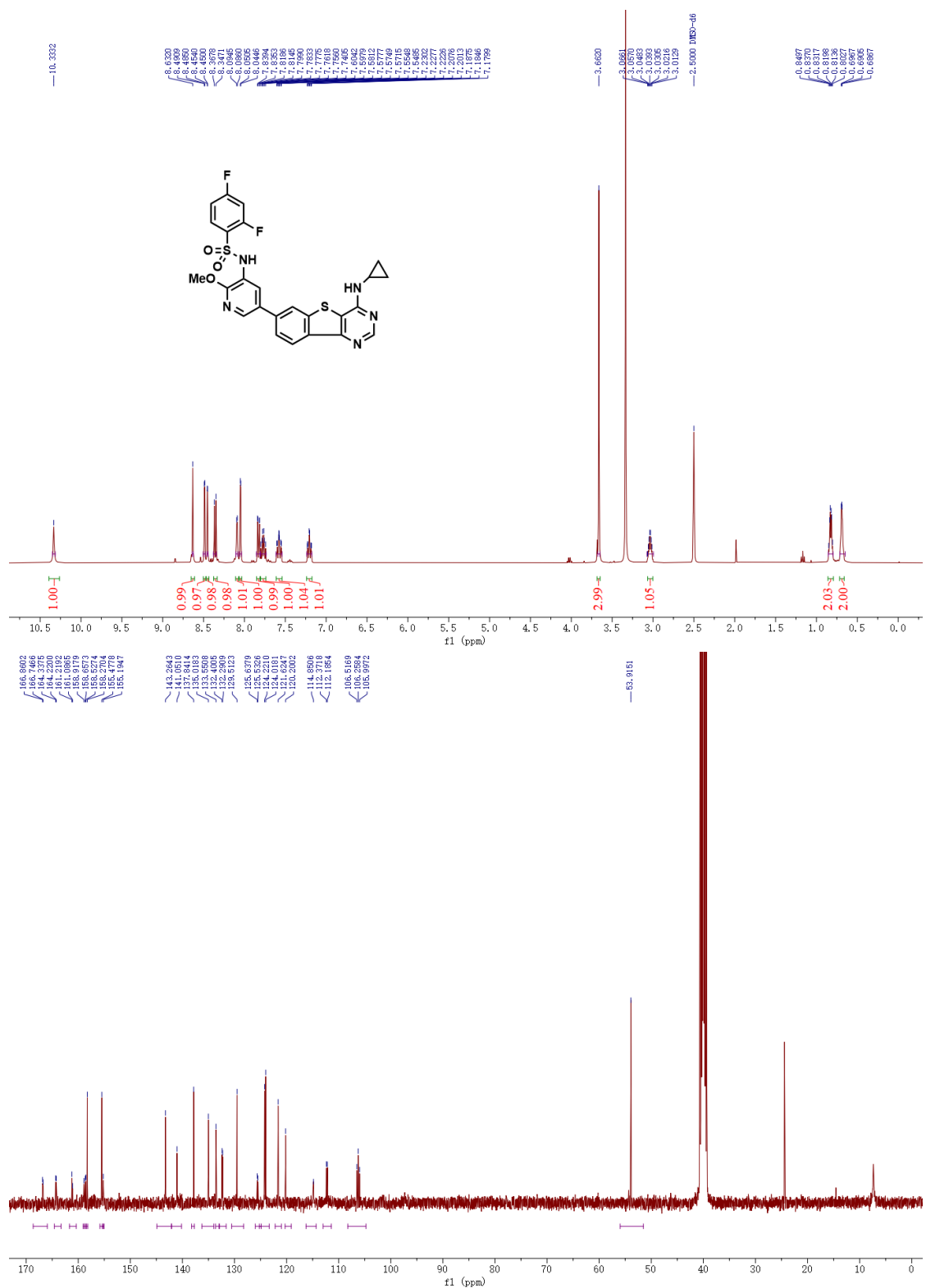


Figure S4. ¹H and ¹³C NMR spectra of **11d** (DMSO-d₆).

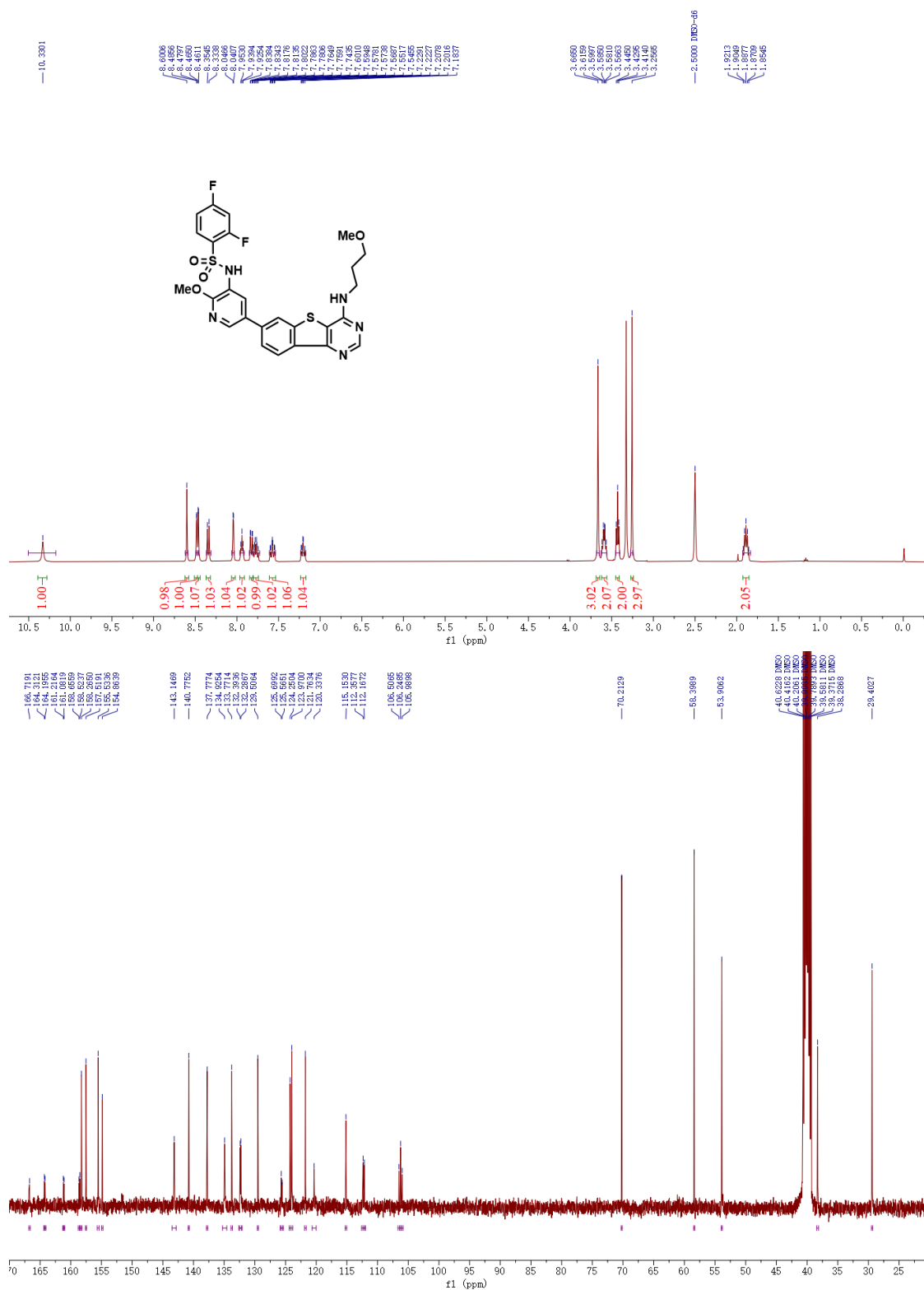


Figure S5. ¹H and ¹³C NMR spectra of 11e (DMSO-d₆).

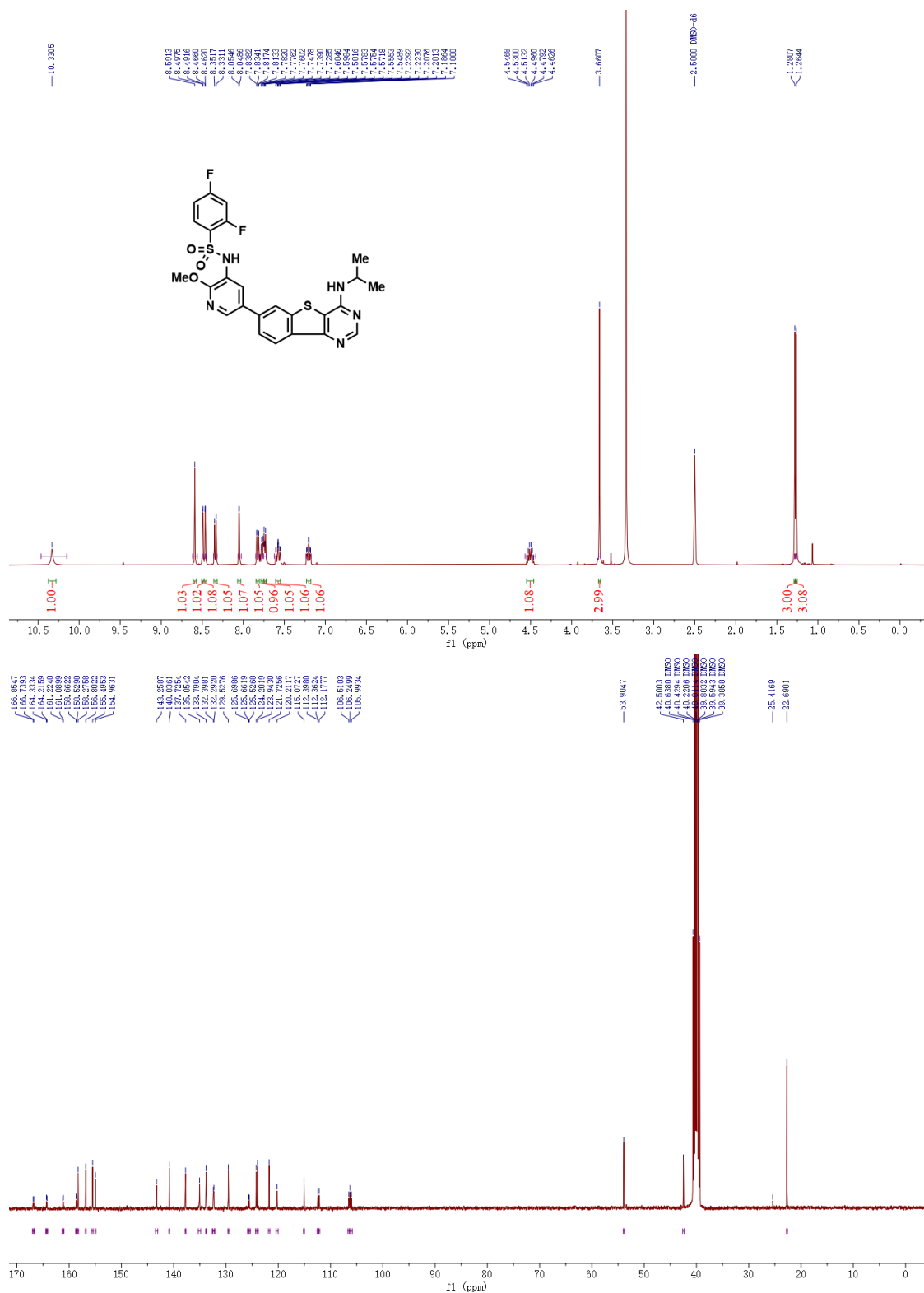


Figure S7. ¹H and ¹³C NMR spectra of 11g (DMSO-d₆).

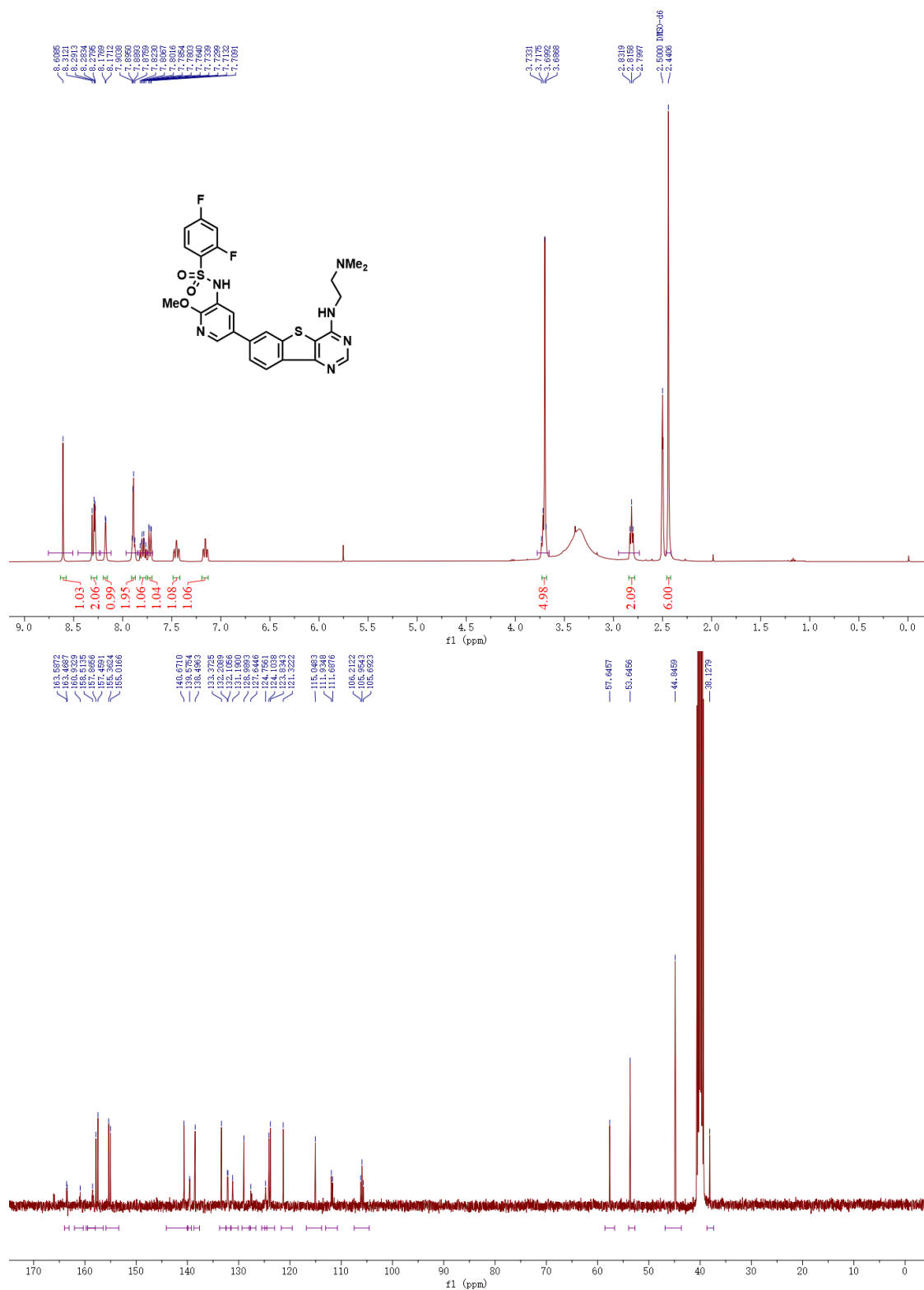


Figure S8 ¹H and ¹³C NMR spectra of **11h** (DMSO-d₆).

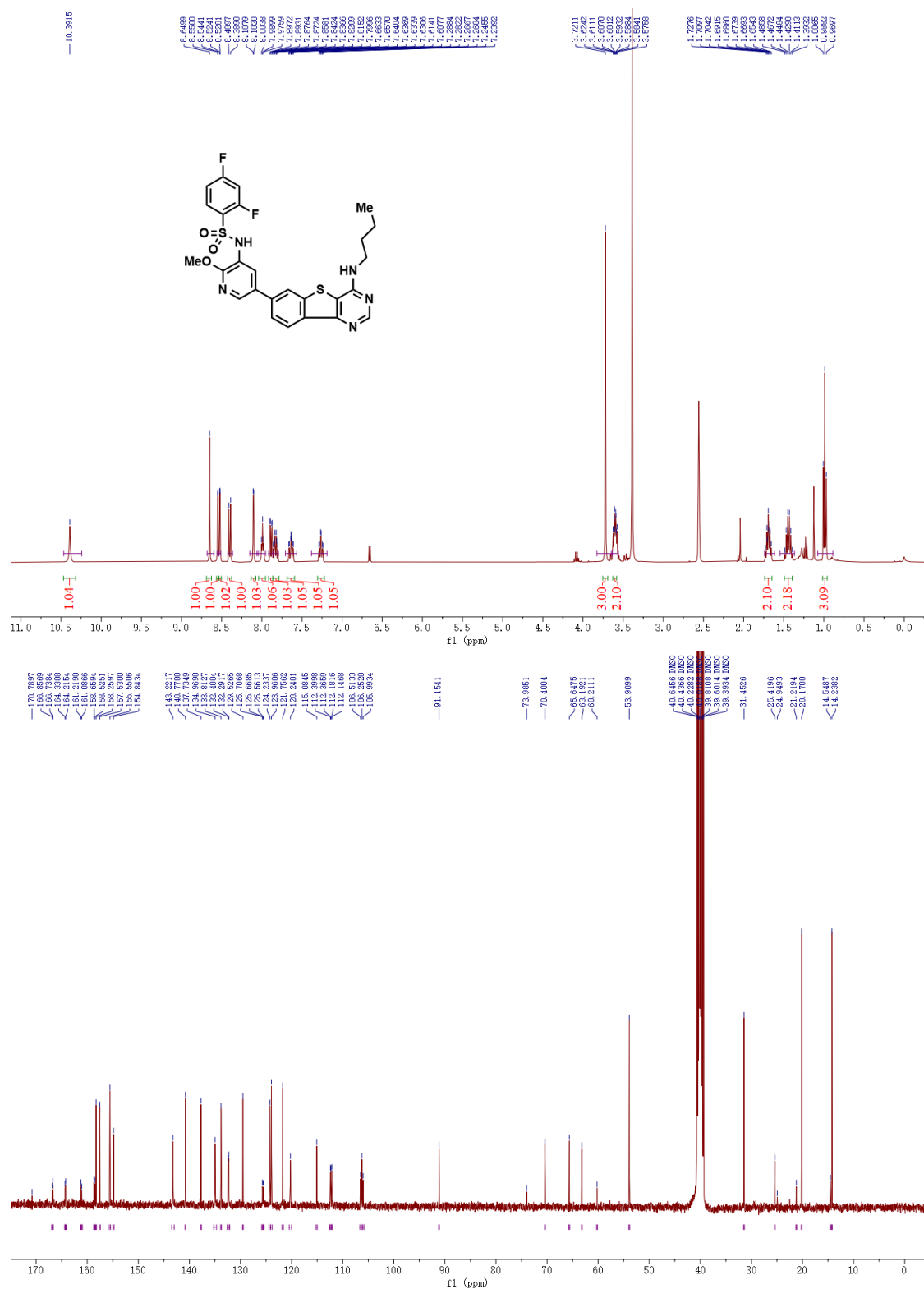


Figure S9. ¹H and ¹³C NMR spectra of **11i** (DMSO-d₆).

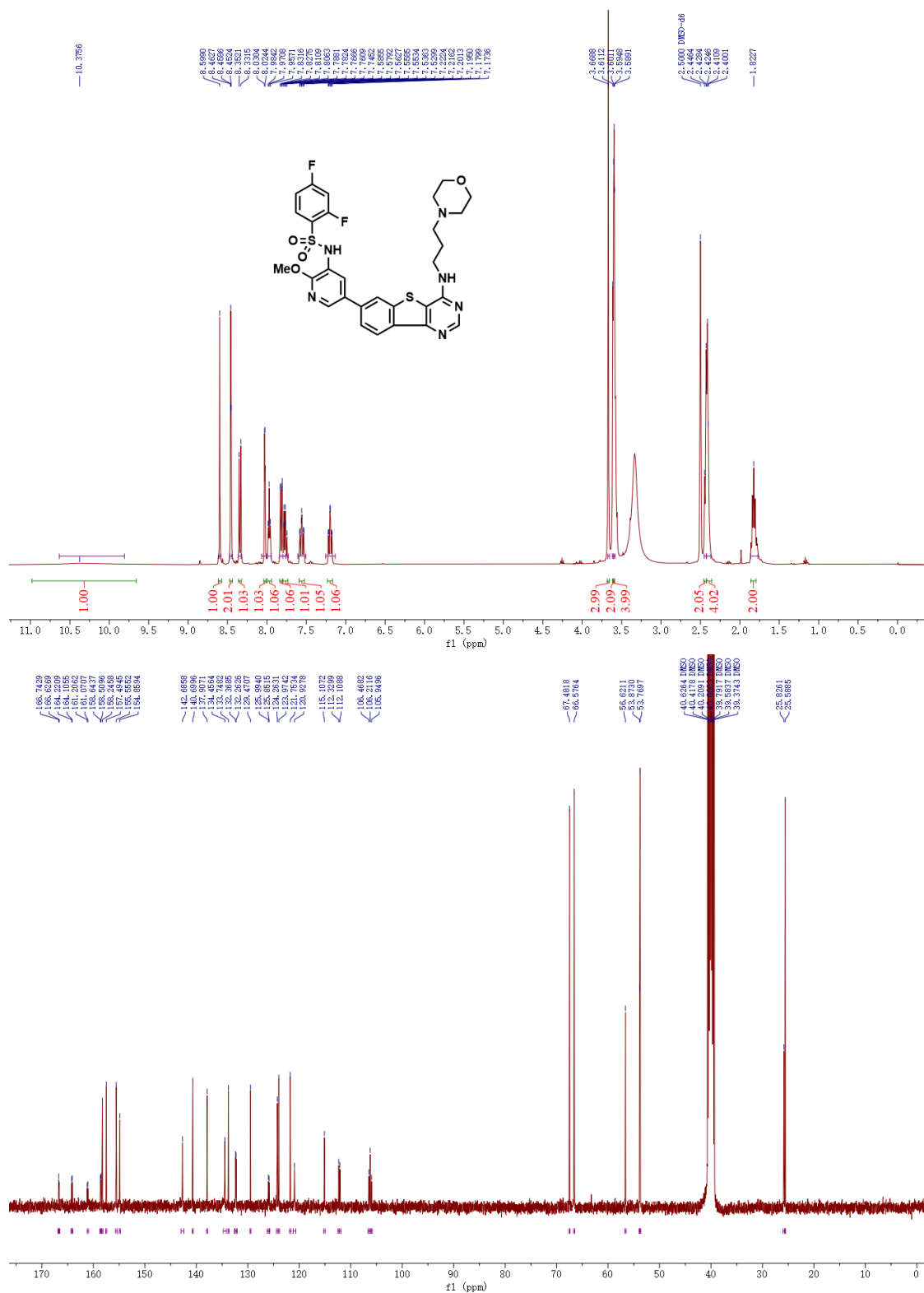


Figure S10. ¹H and ¹³C NMR spectra of **11j** (DMSO-d₆).

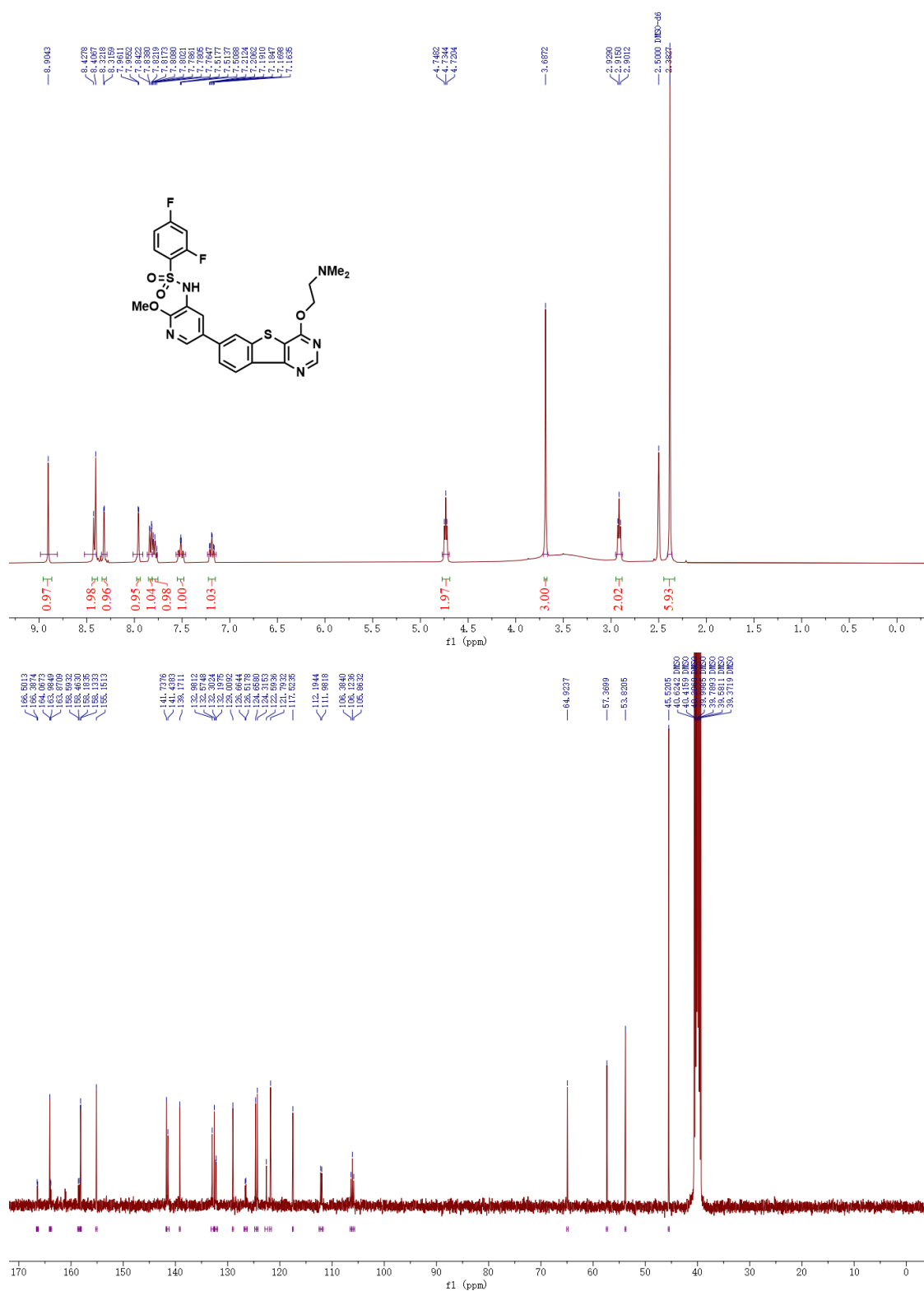


Figure S11. ¹H and ¹³C NMR spectra of **11k** (DMSO-d₆).

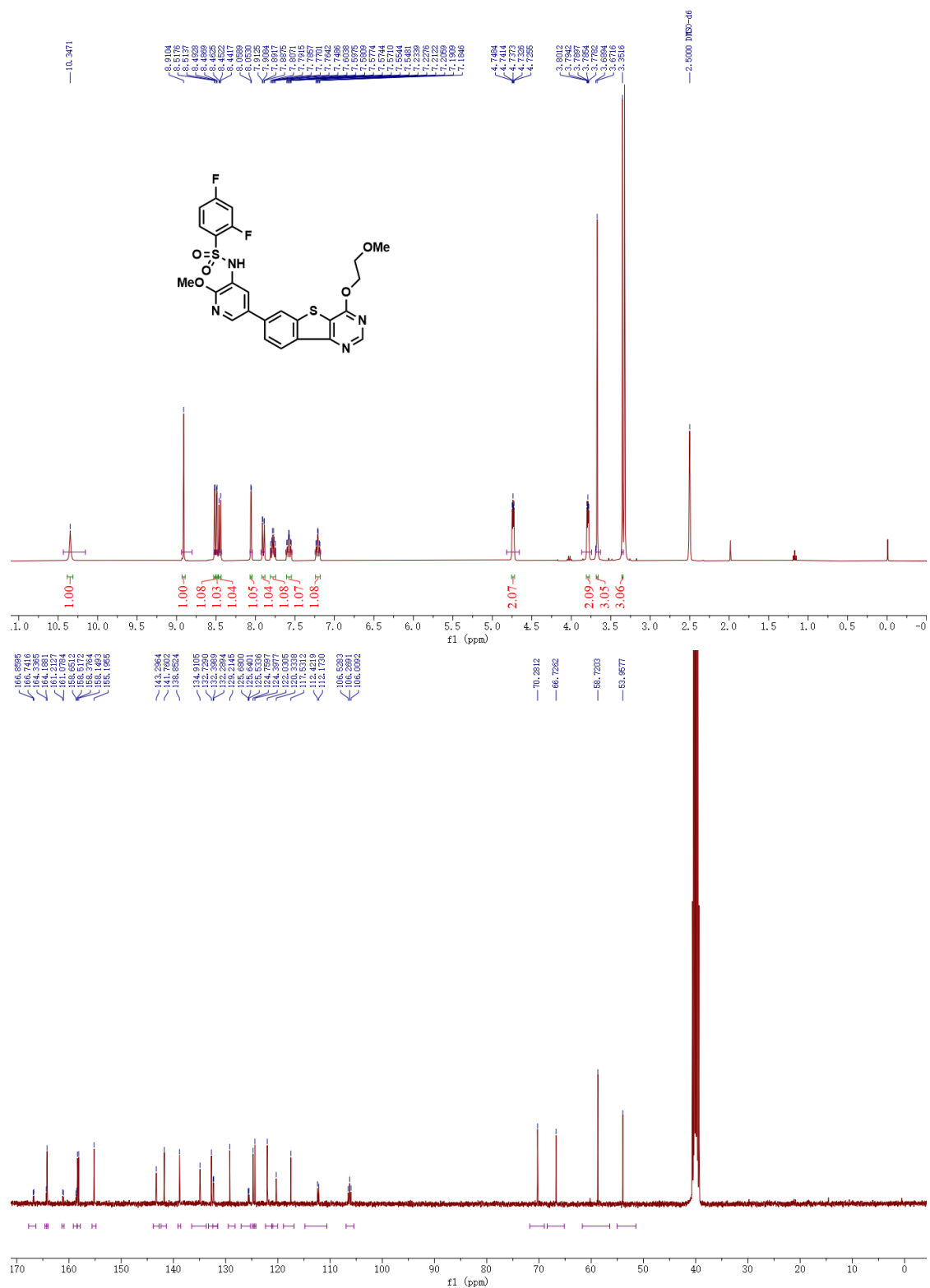


Figure S12. ¹H and ¹³C NMR spectra of **111** (DMSO-d₆).

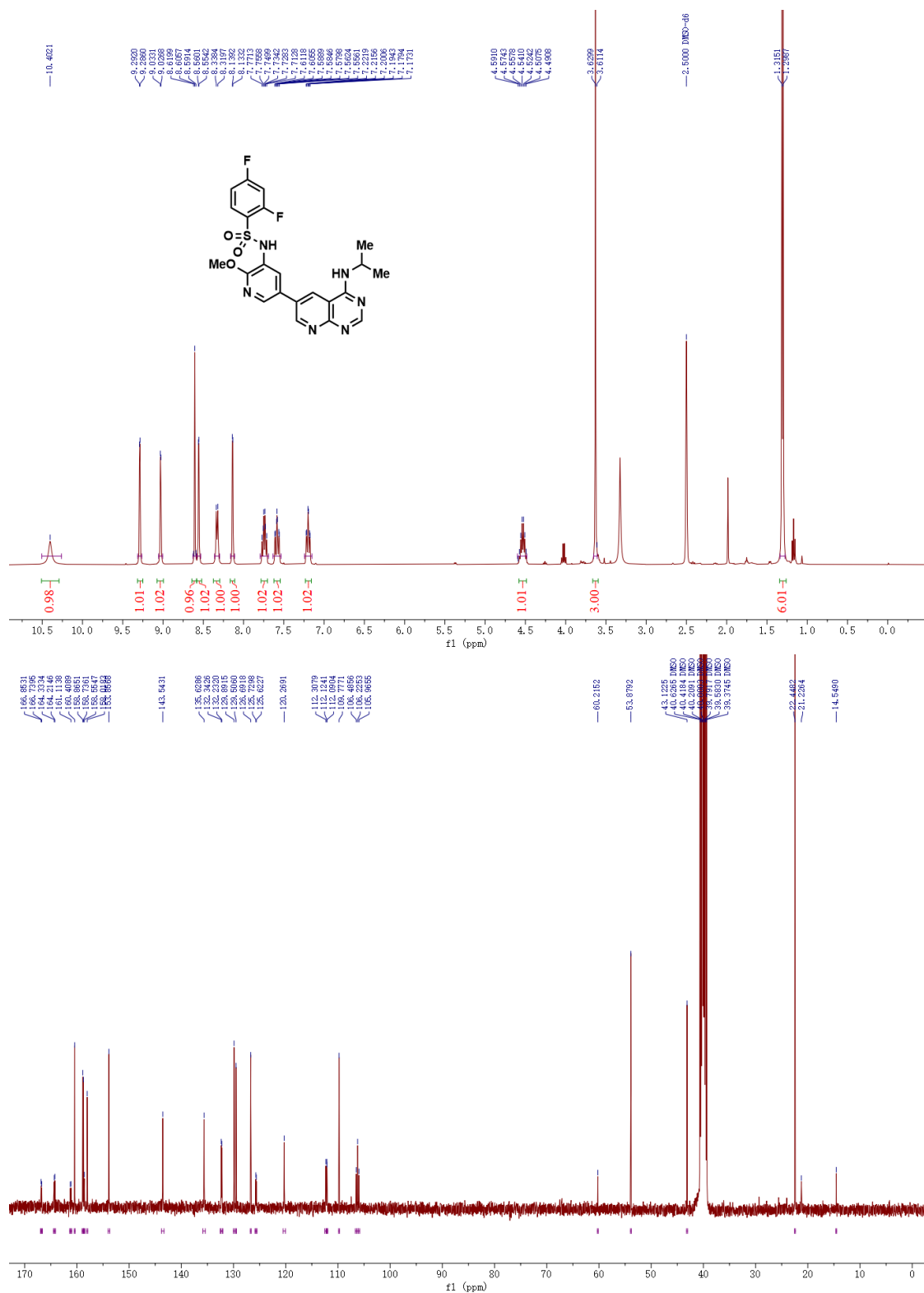


Figure S13. ¹H and ¹³C NMR spectra of **17a** (DMSO-d₆).

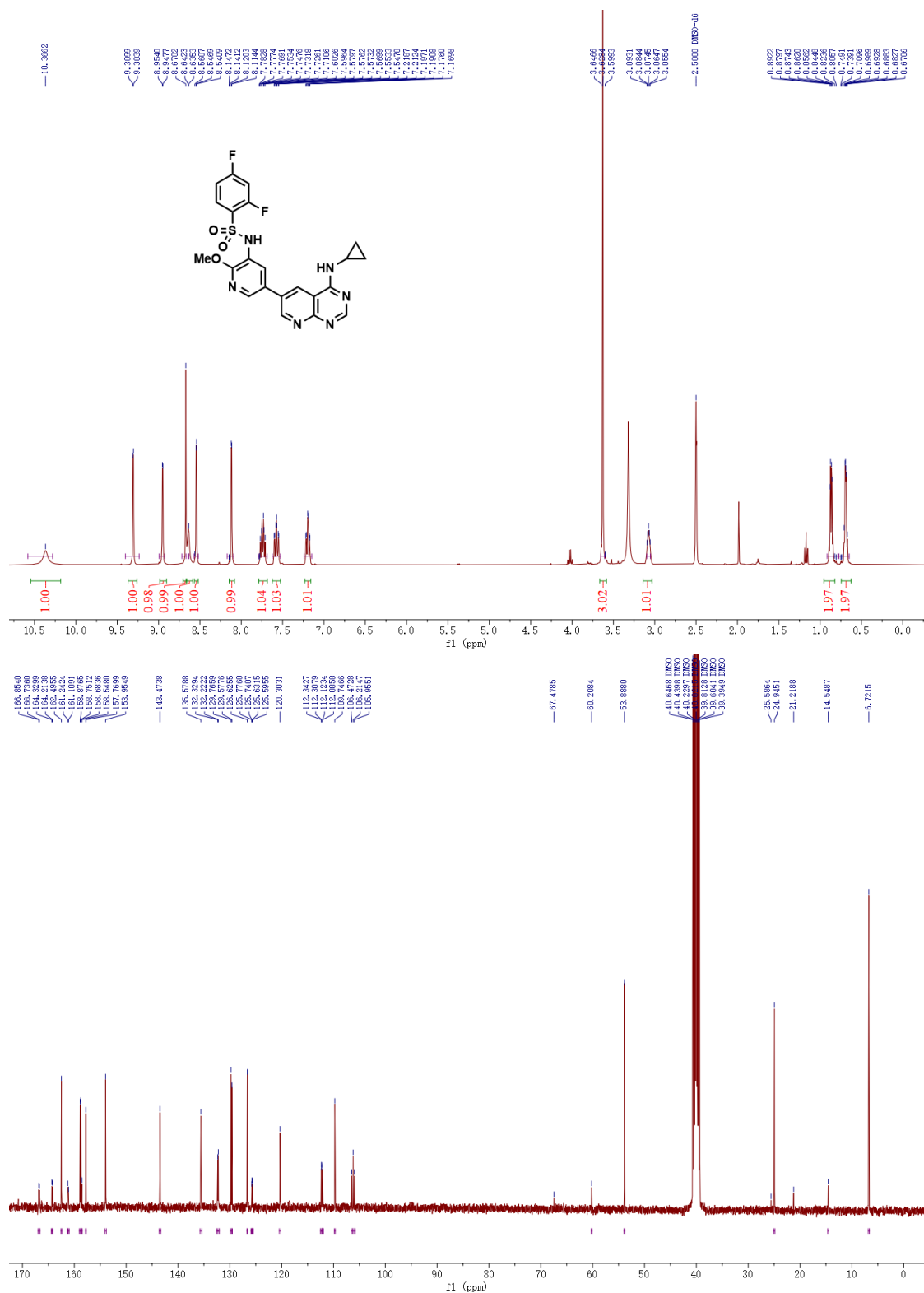


Figure S14. ¹H and ¹³C NMR spectra of **17b** (DMSO-d₆).

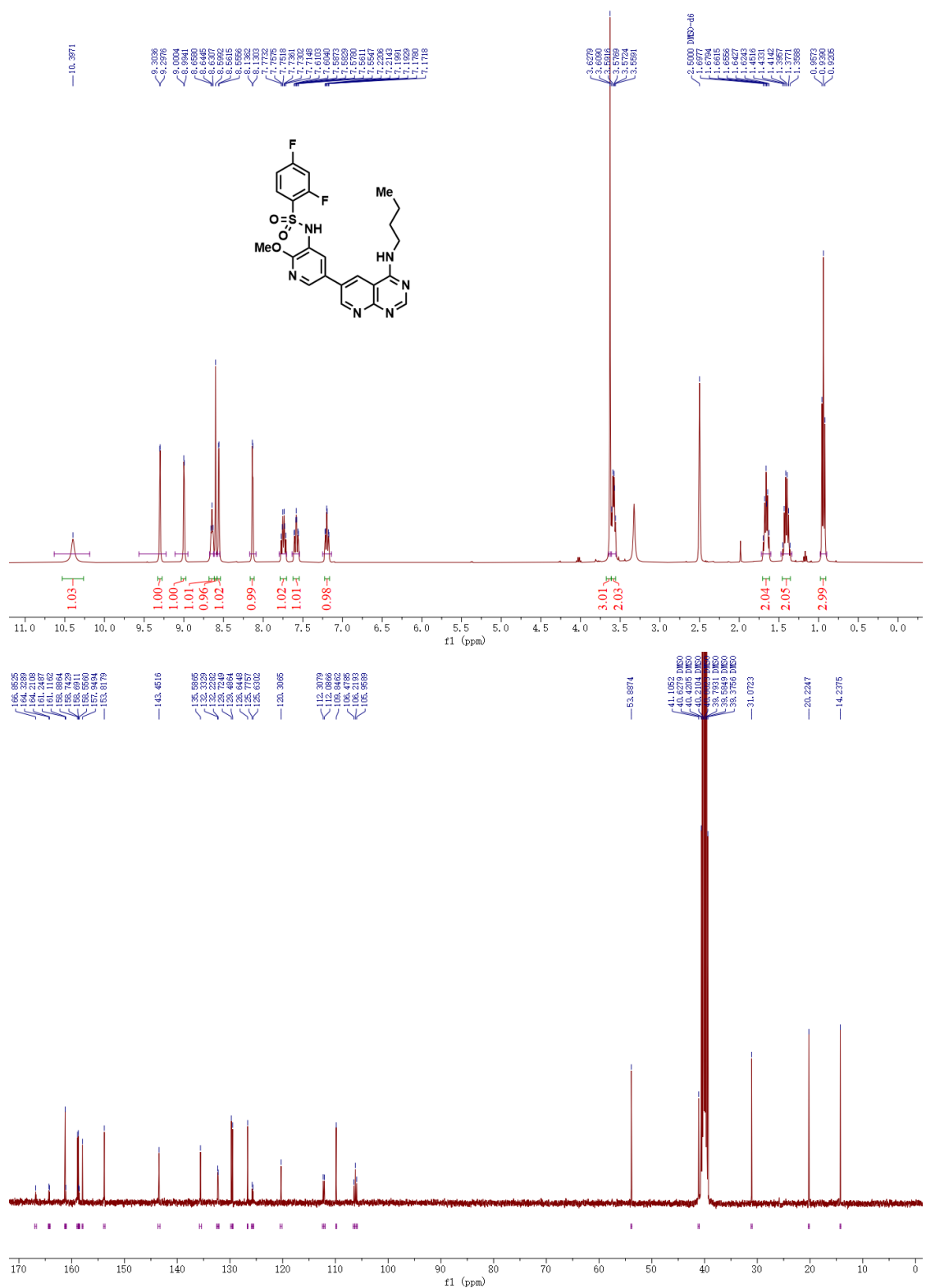


Figure S15 ¹H and ¹³C NMR spectra of **17c** (DMSO-d₆).

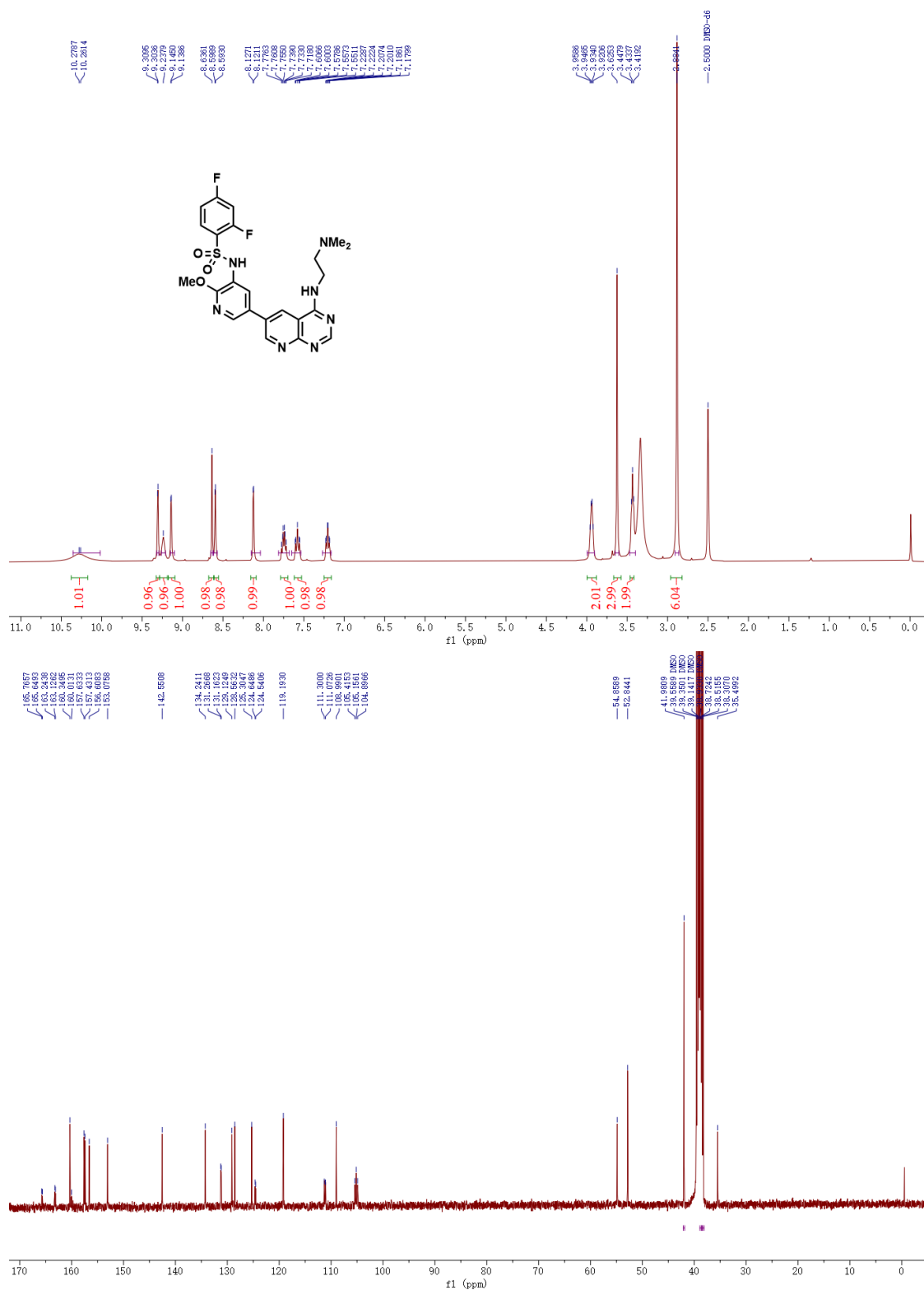


Figure S16. ¹H and ¹³C NMR spectra of **17d** (DMSO-d₆).

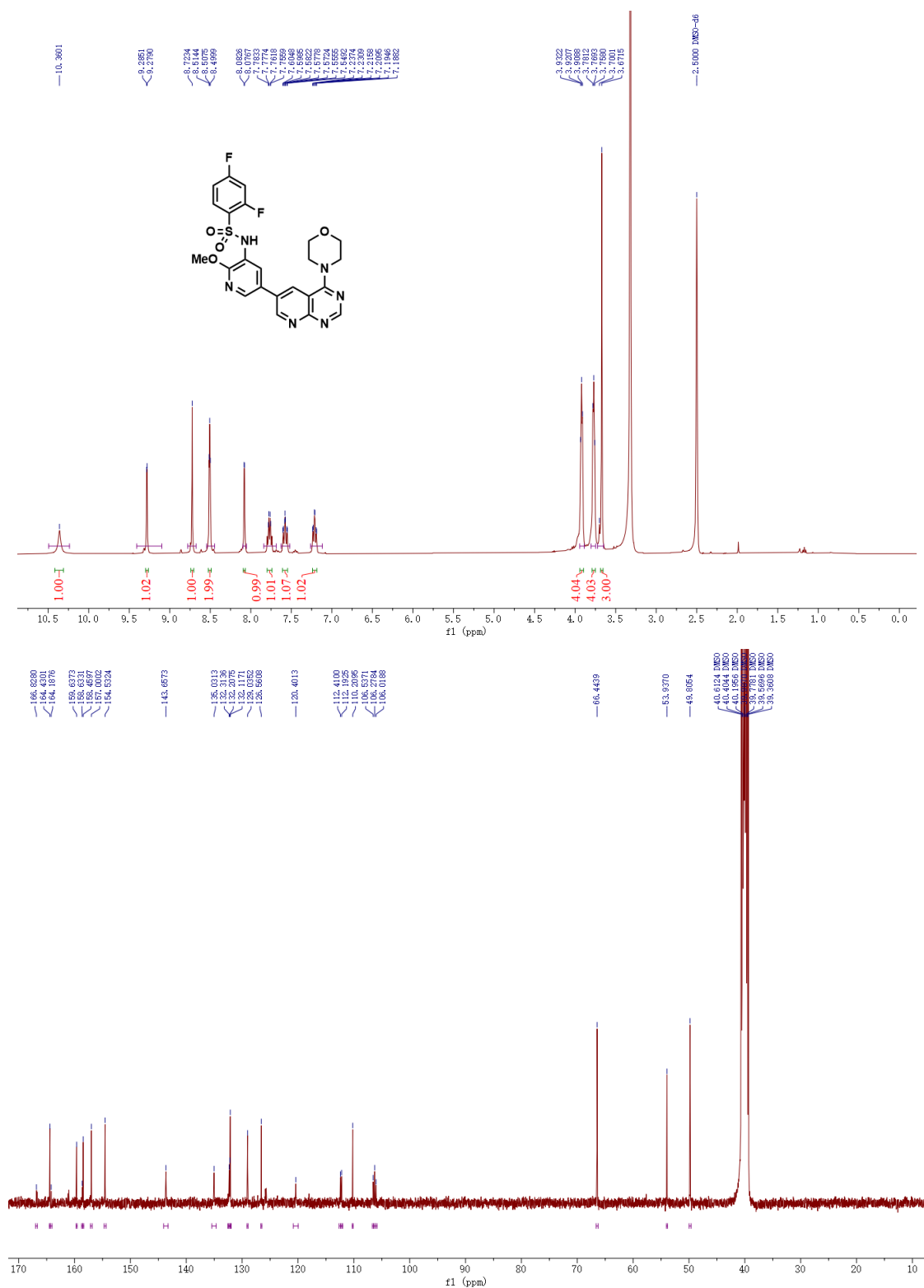


Figure S17. ¹H and ¹³C NMR spectra of **17e** (DMSO-d₆).

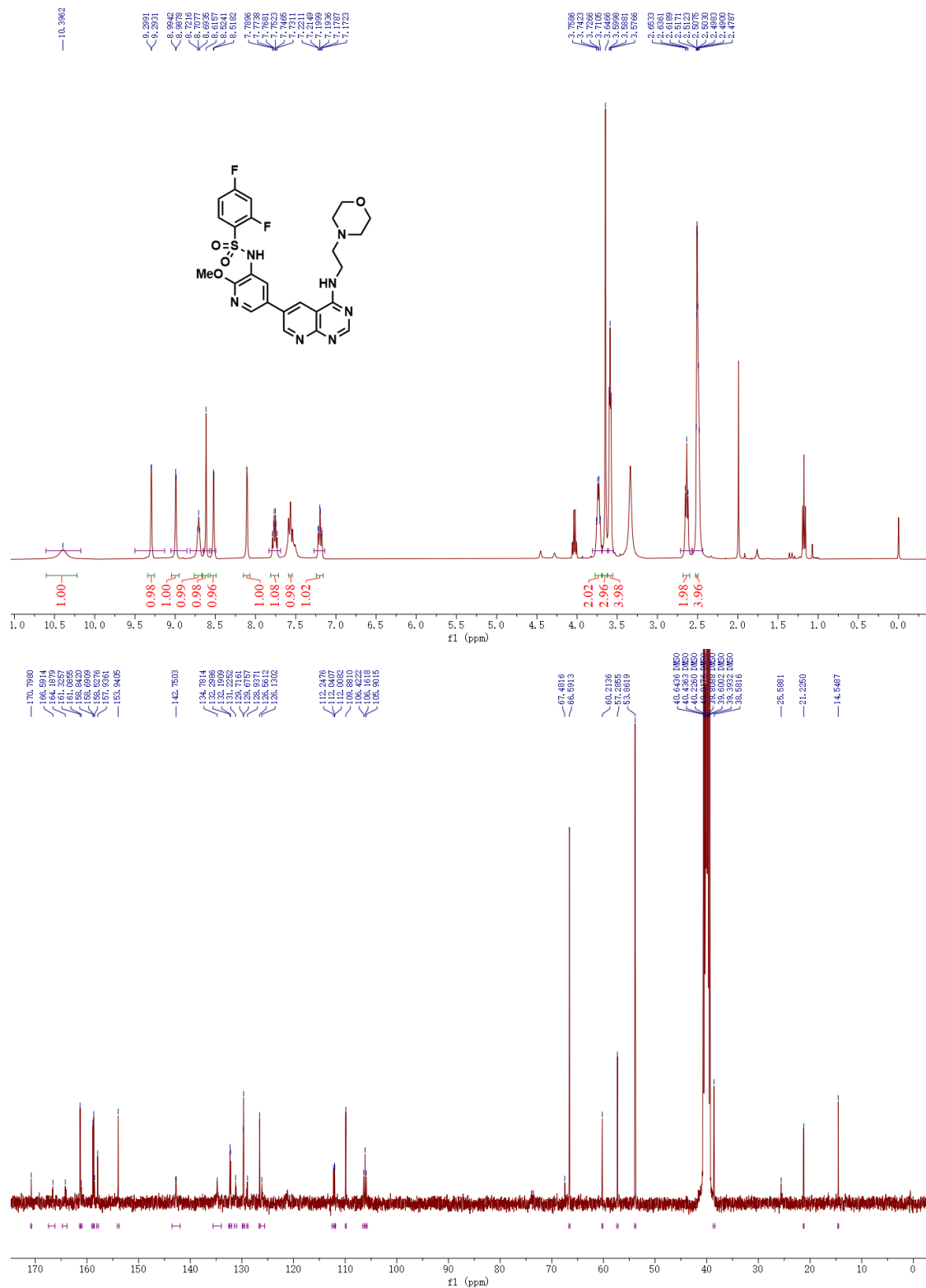


Figure S19. ¹H and ¹³C NMR spectra of **17g** (DMSO-d₆).

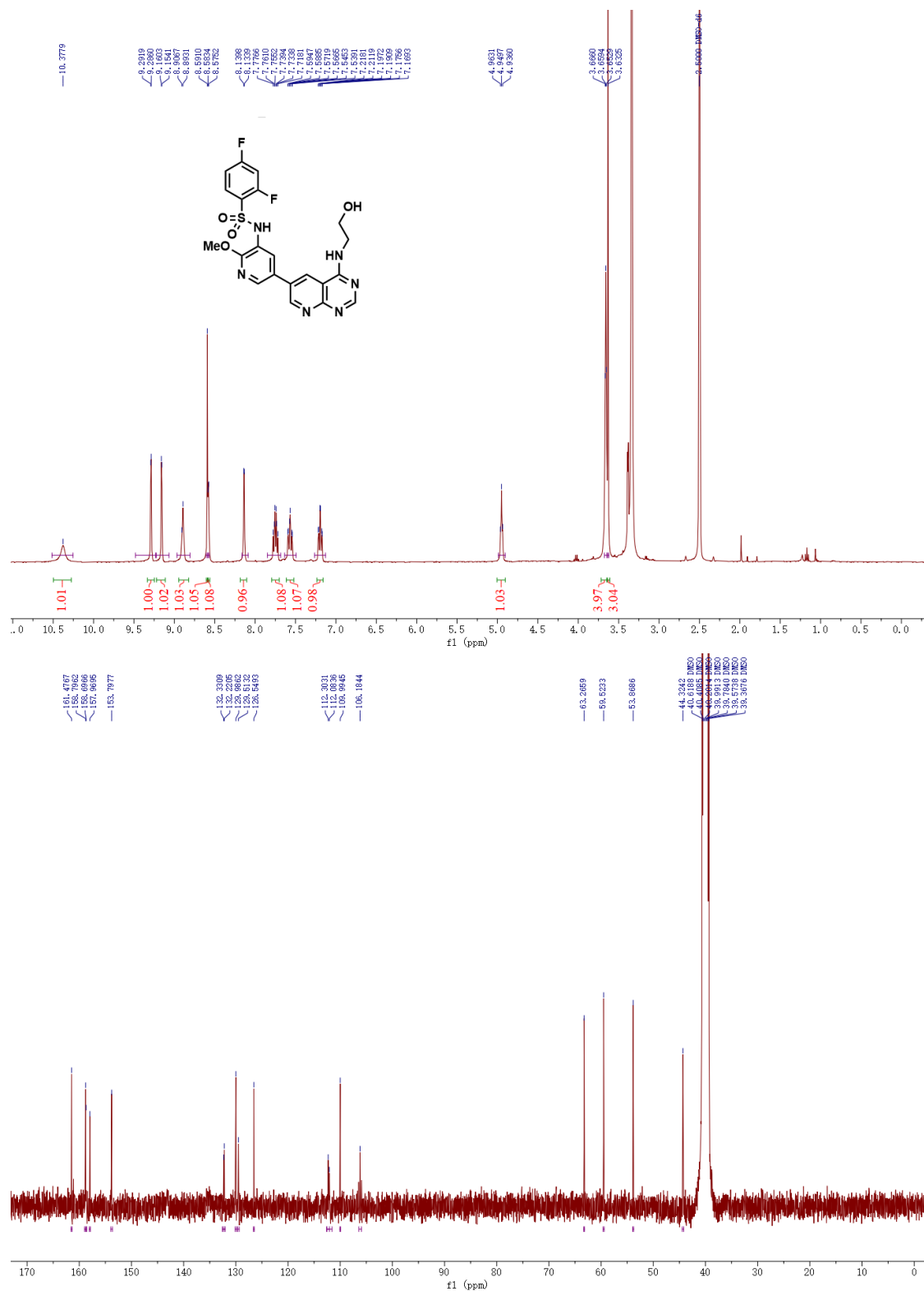


Figure S20. ¹H and ¹³C NMR spectra of **17h** (DMSO-d₆).

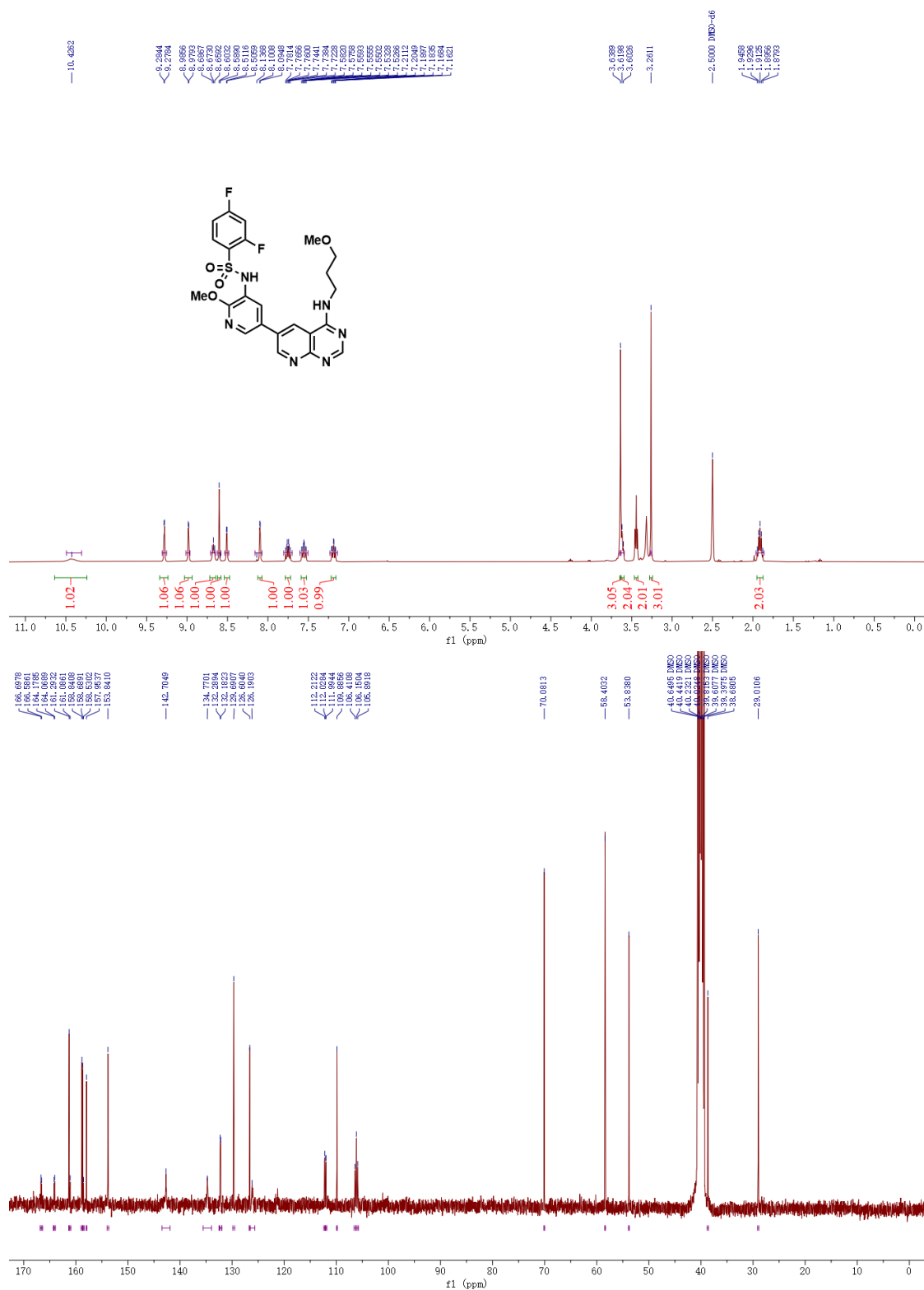


Figure S21. ¹H and ¹³C NMR spectra of **17i** (DMSO-d₆).

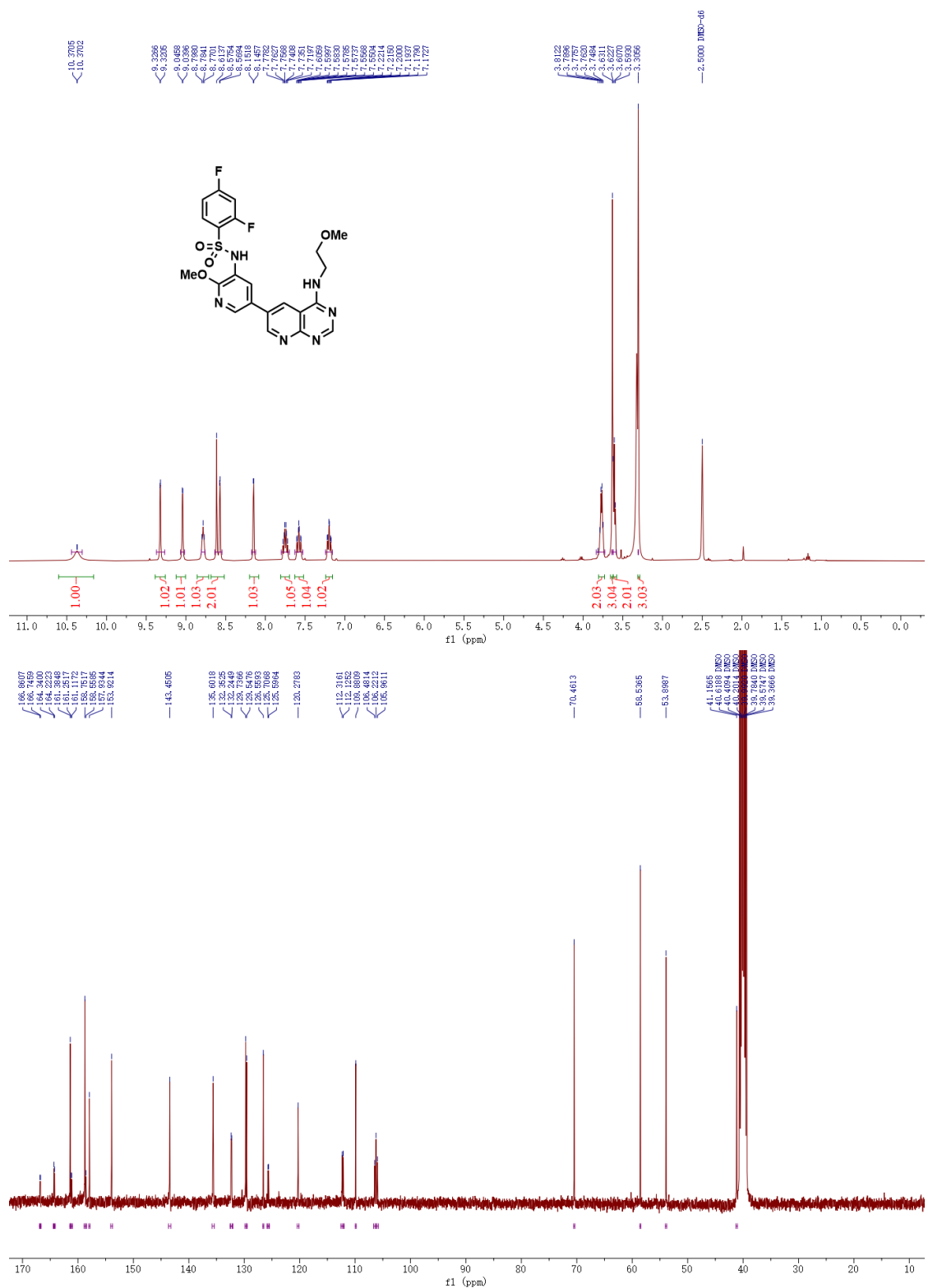


Figure S22. ¹H and ¹³C NMR spectra of **17j** (DMSO-d₆).

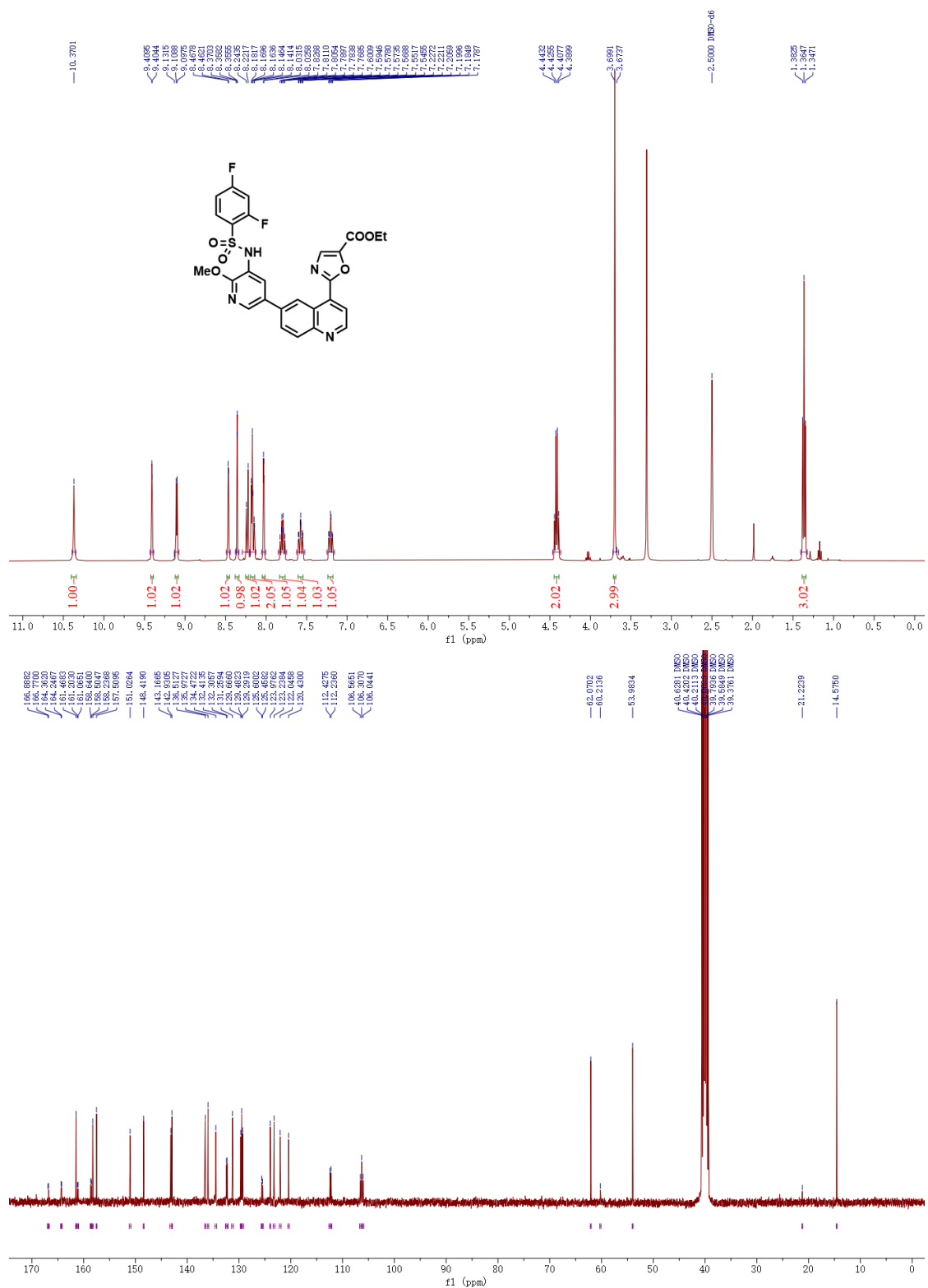


Figure S25. ¹H and ¹³C NMR spectra of **22a** (DMSO-d₆).

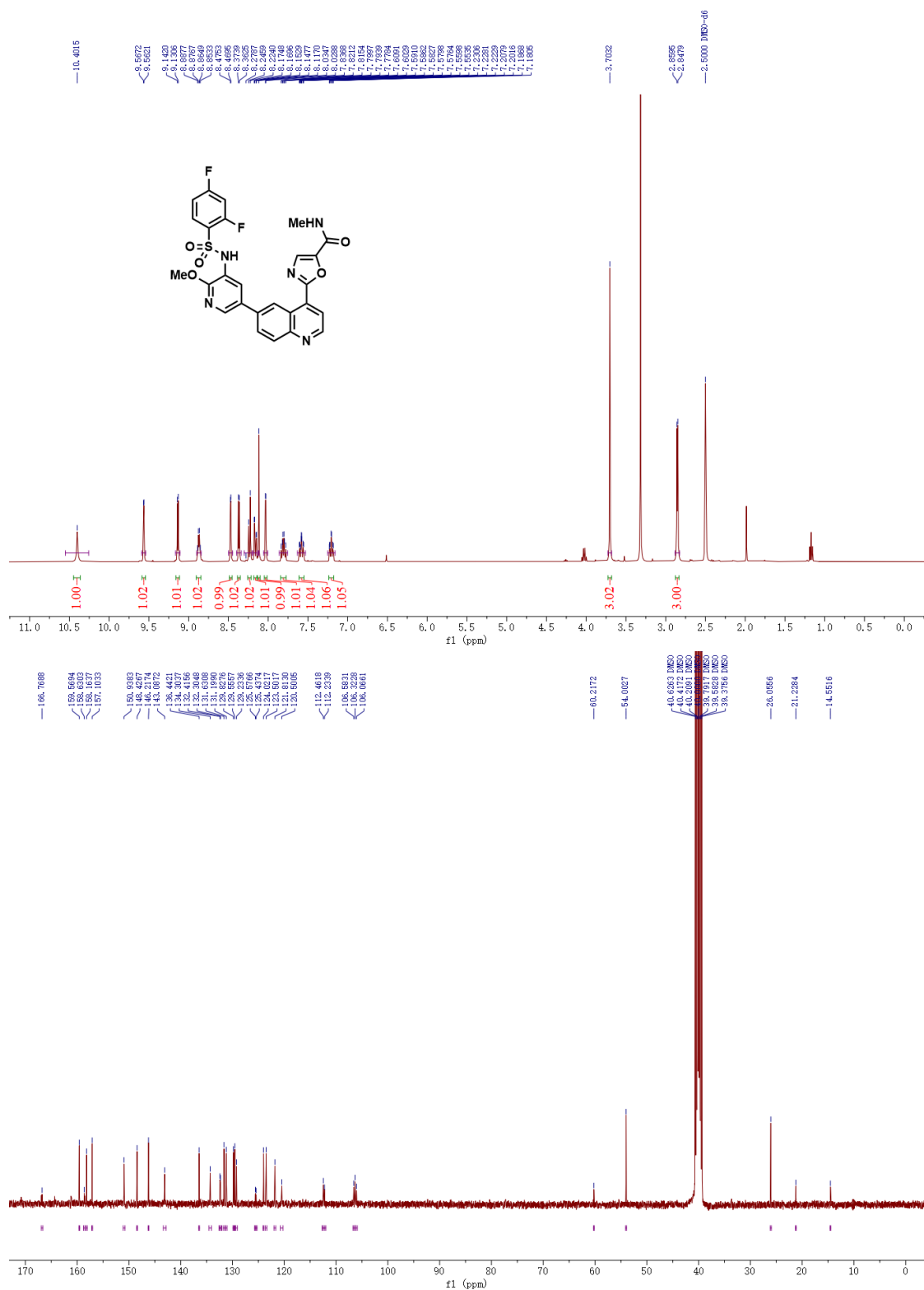


Figure S26. ¹H and ¹³C NMR spectra of **22b** (DMSO-d₆).

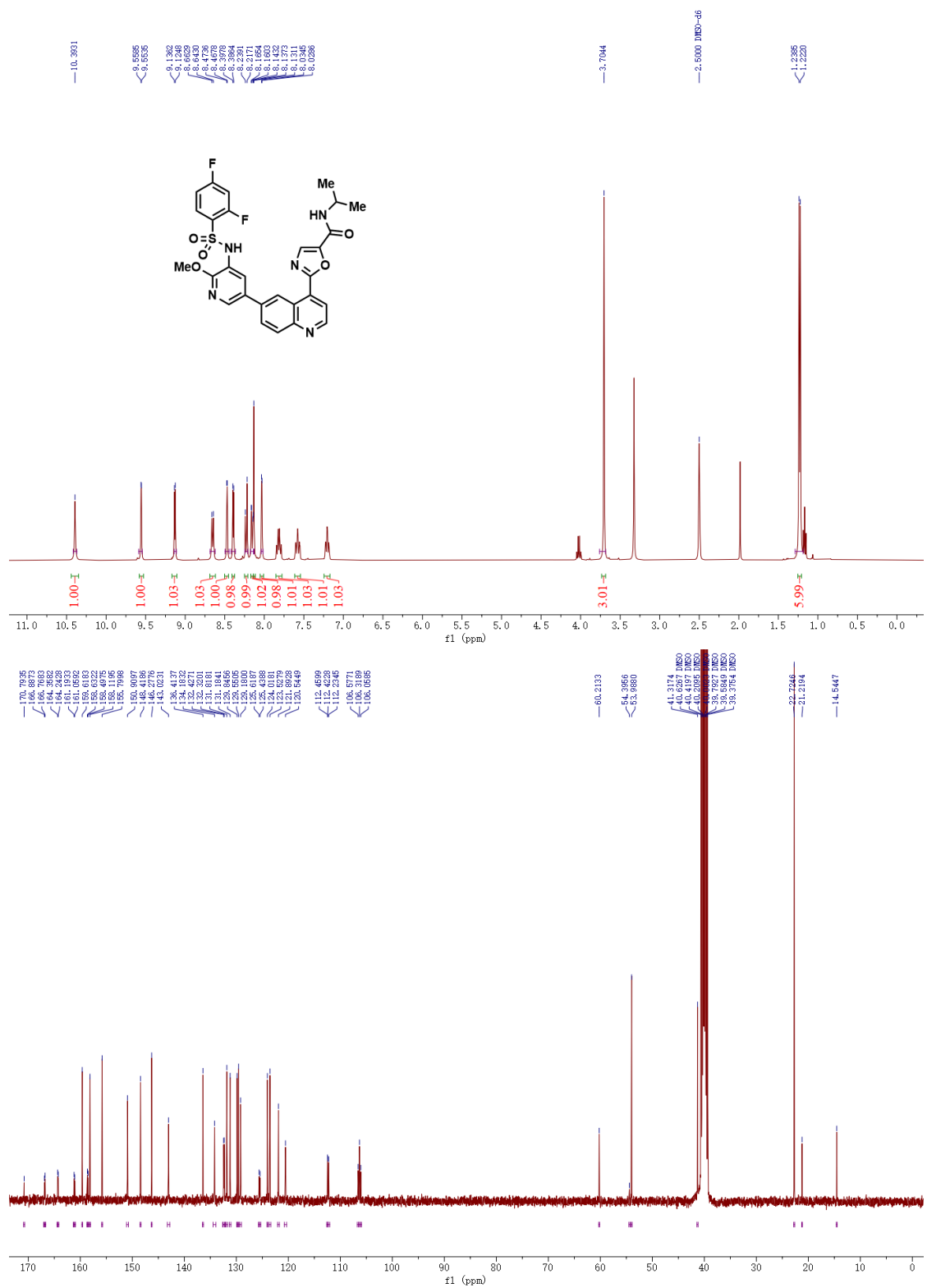


Figure S27. ^1H and ^{13}C NMR spectra of **22c** (DMSO- d_6).

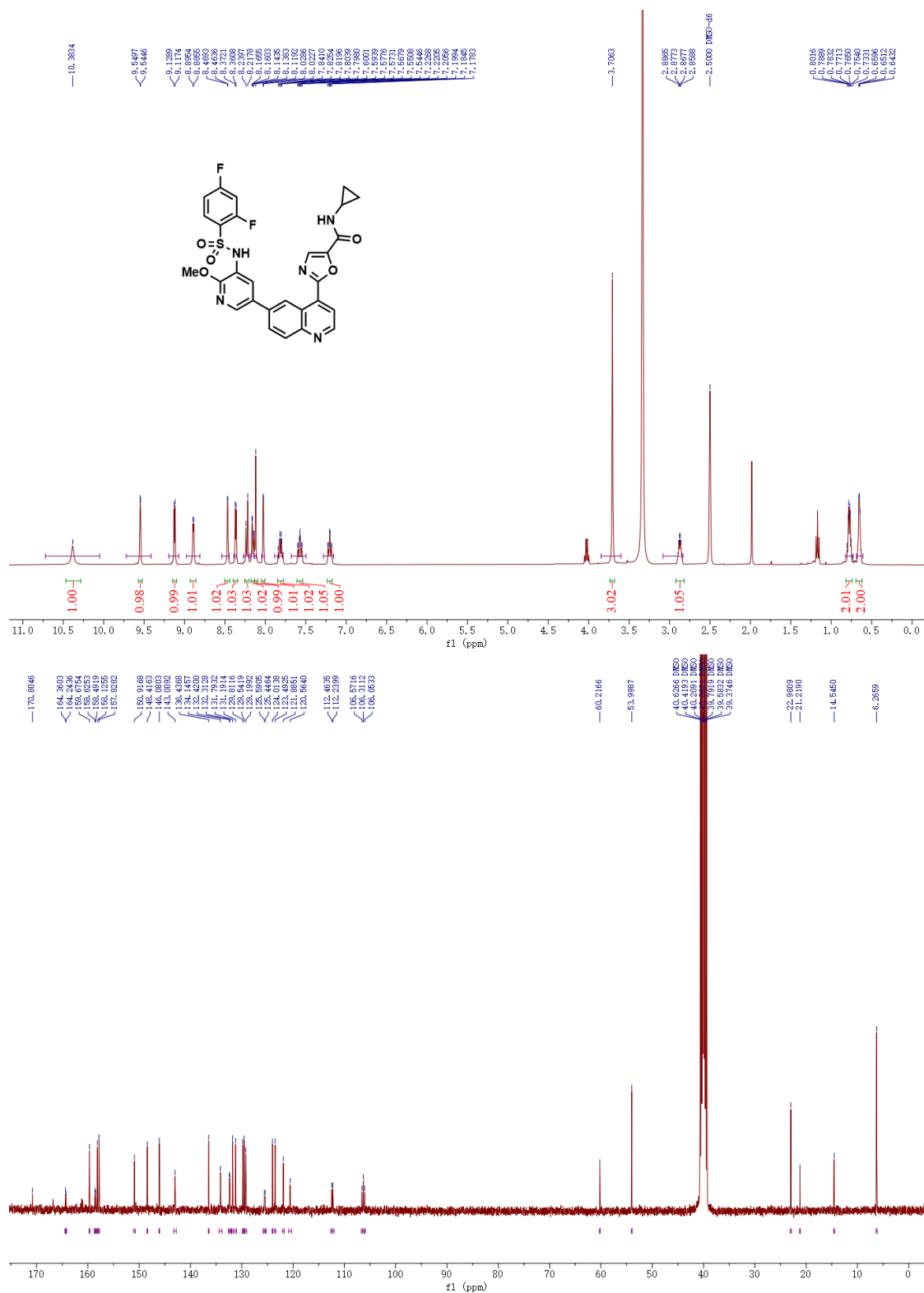
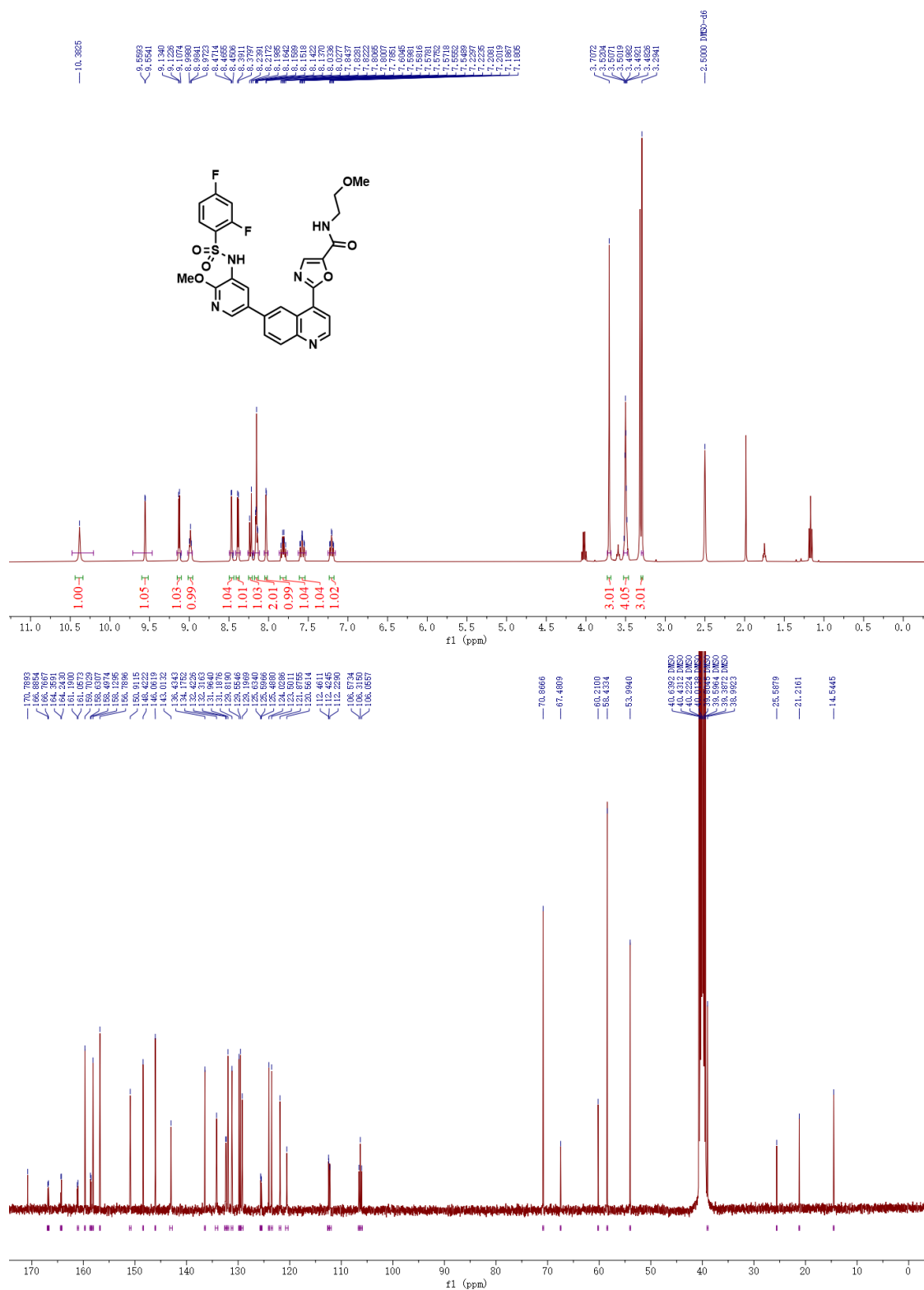


Figure S28. ¹H and ¹³C NMR spectra of **22d** (DMSO-d₆).



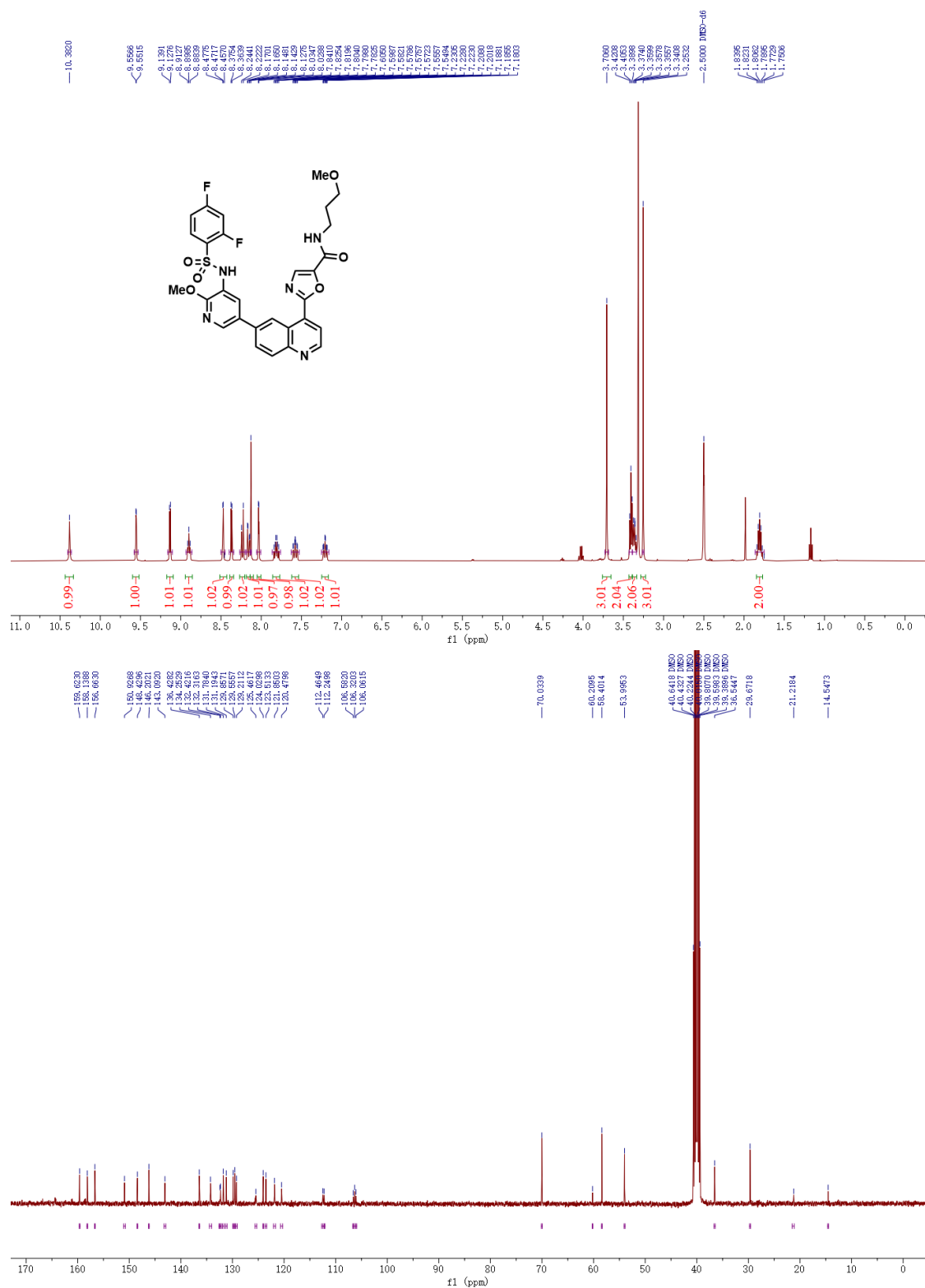


Figure S30. ¹H and ¹³C NMR spectra of **22f** (DMSO-d₆).

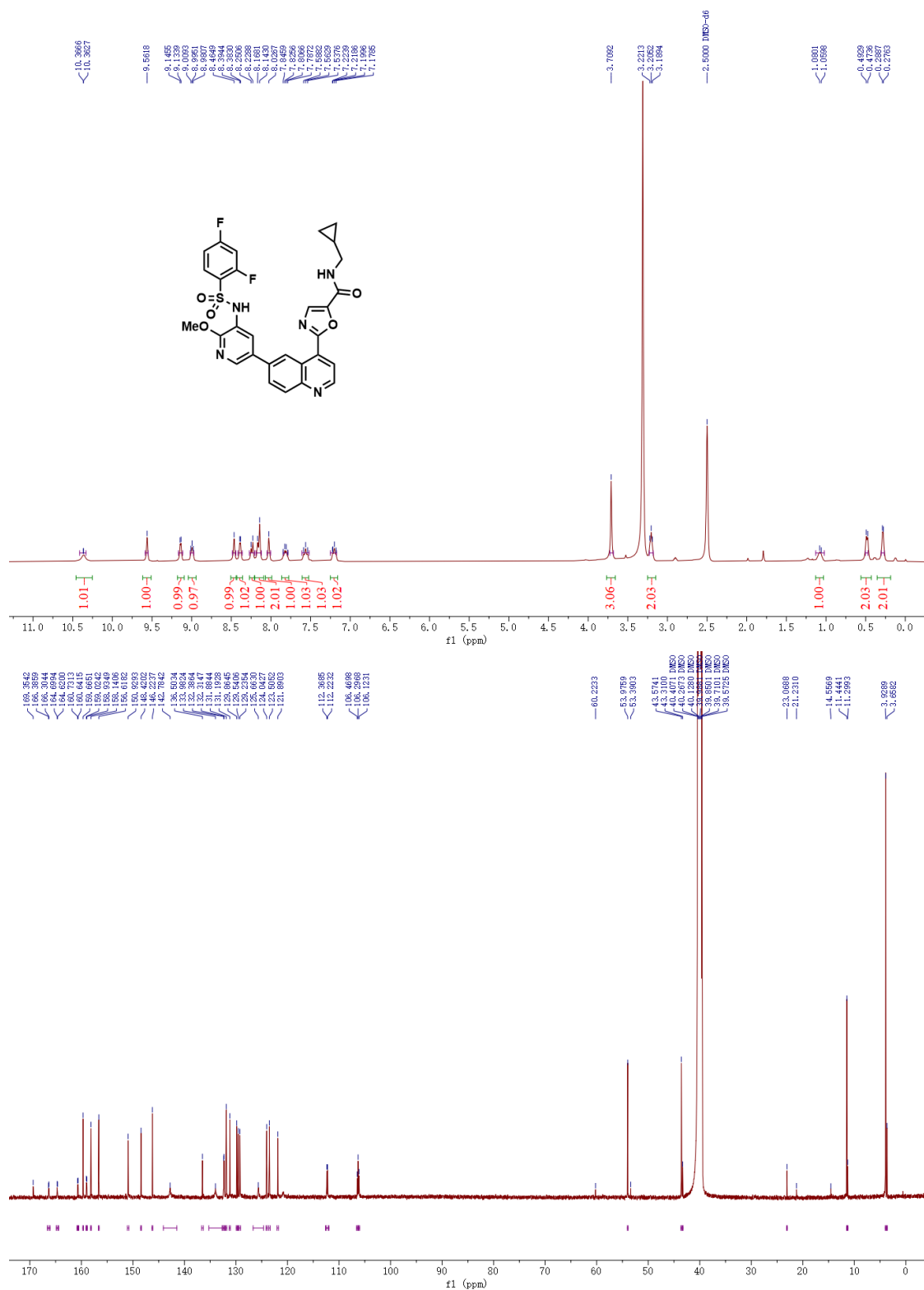


Figure S32. ¹H and ¹³C NMR spectra of **22h** (DMSO-d₆).

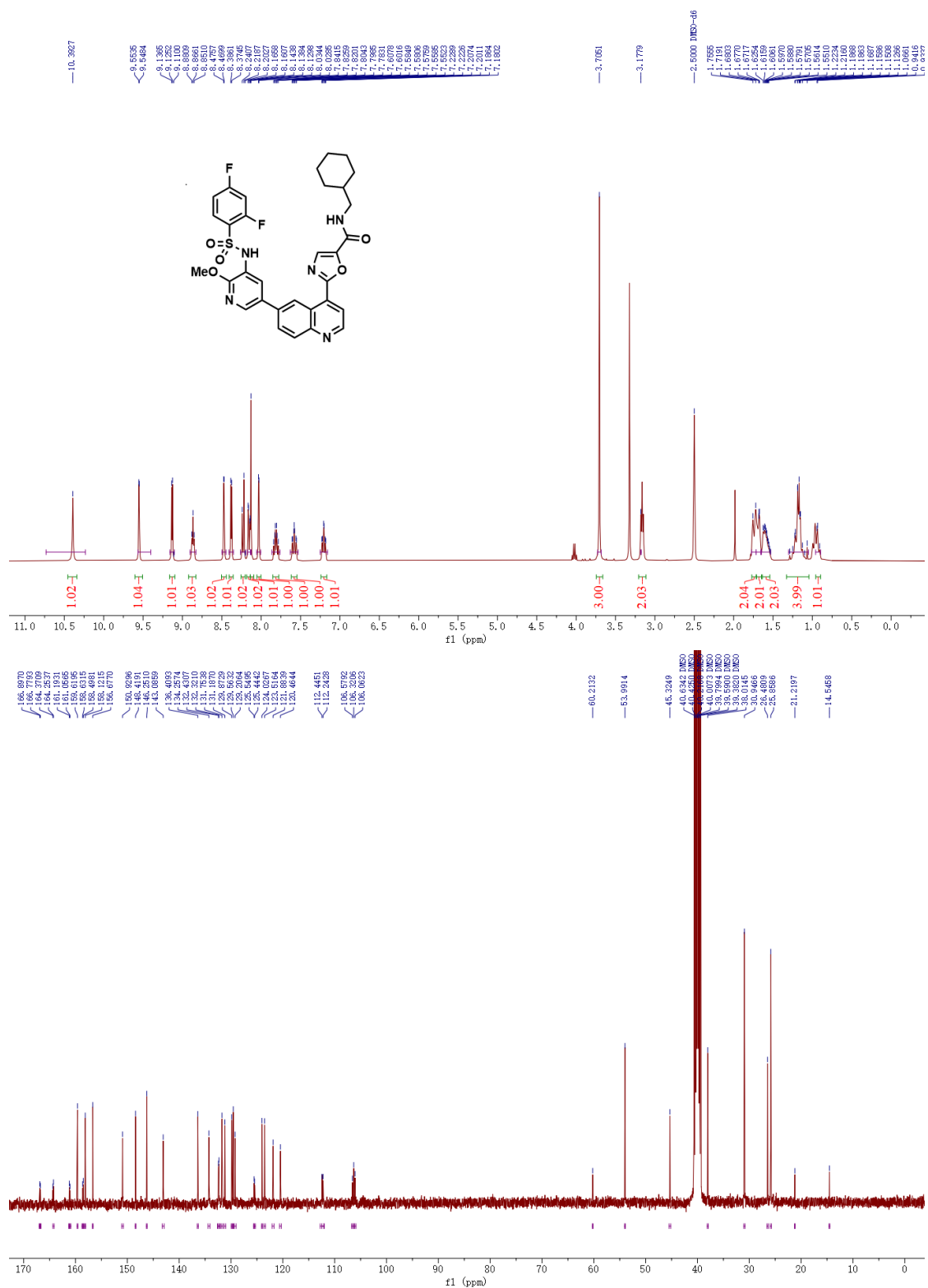


Figure S33. ¹H and ¹³C NMR spectra of **22i** (DMSO-d₆).

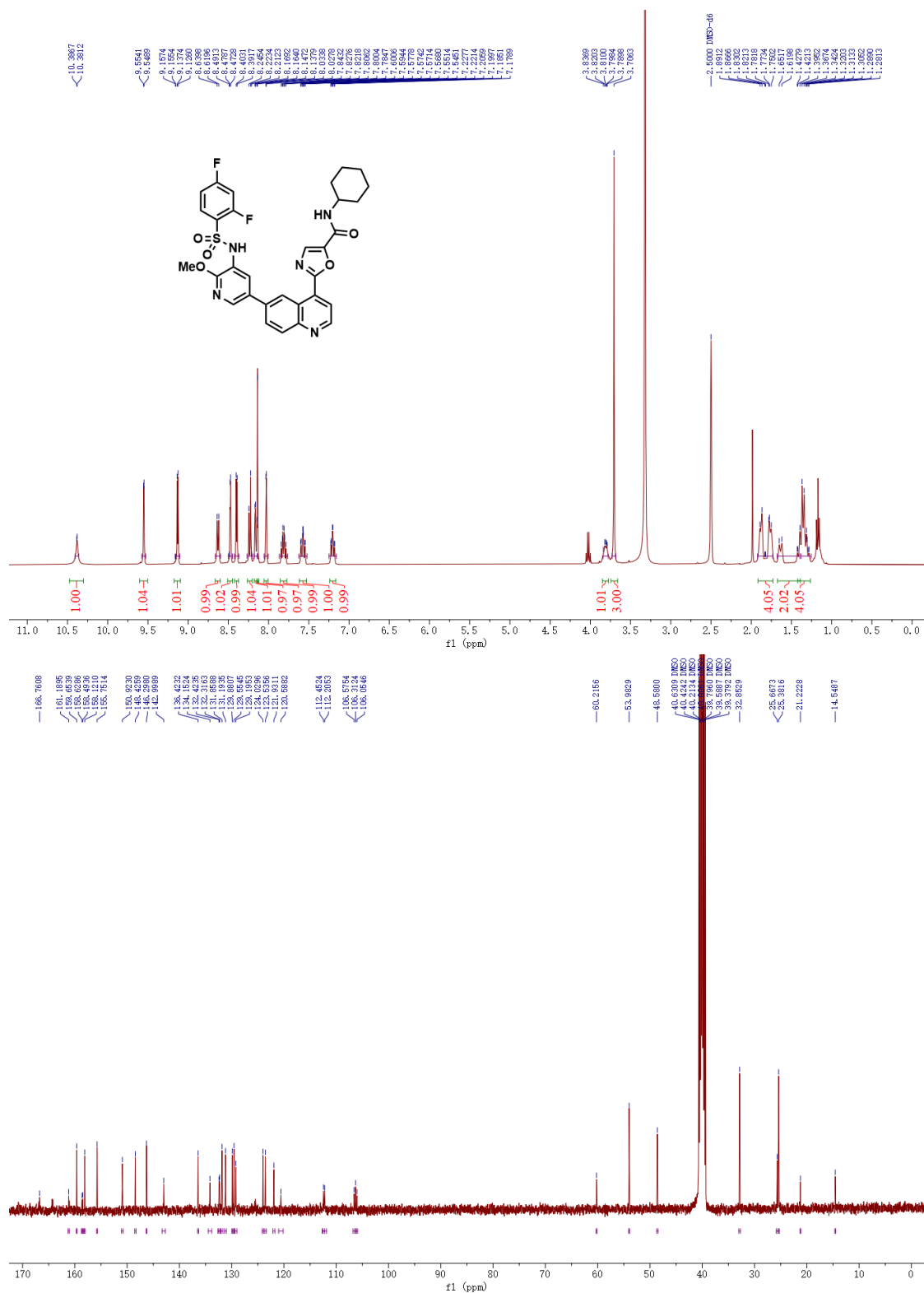


Figure S34. ¹H and ¹³C NMR spectra of **22j** (DMSO-d₆).

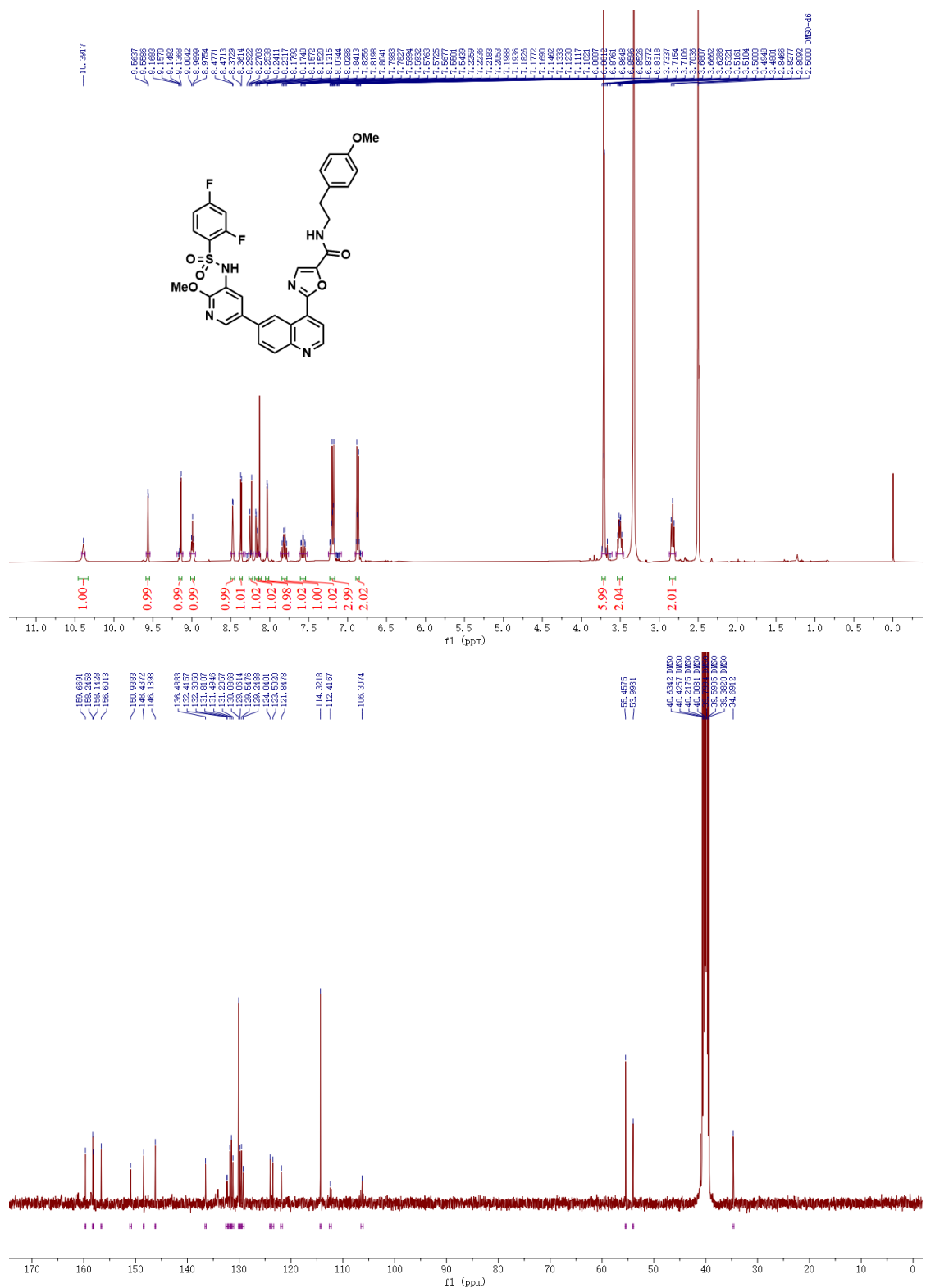


Figure S35. ¹H and ¹³C NMR spectra of **22k** (DMSO-d₆).

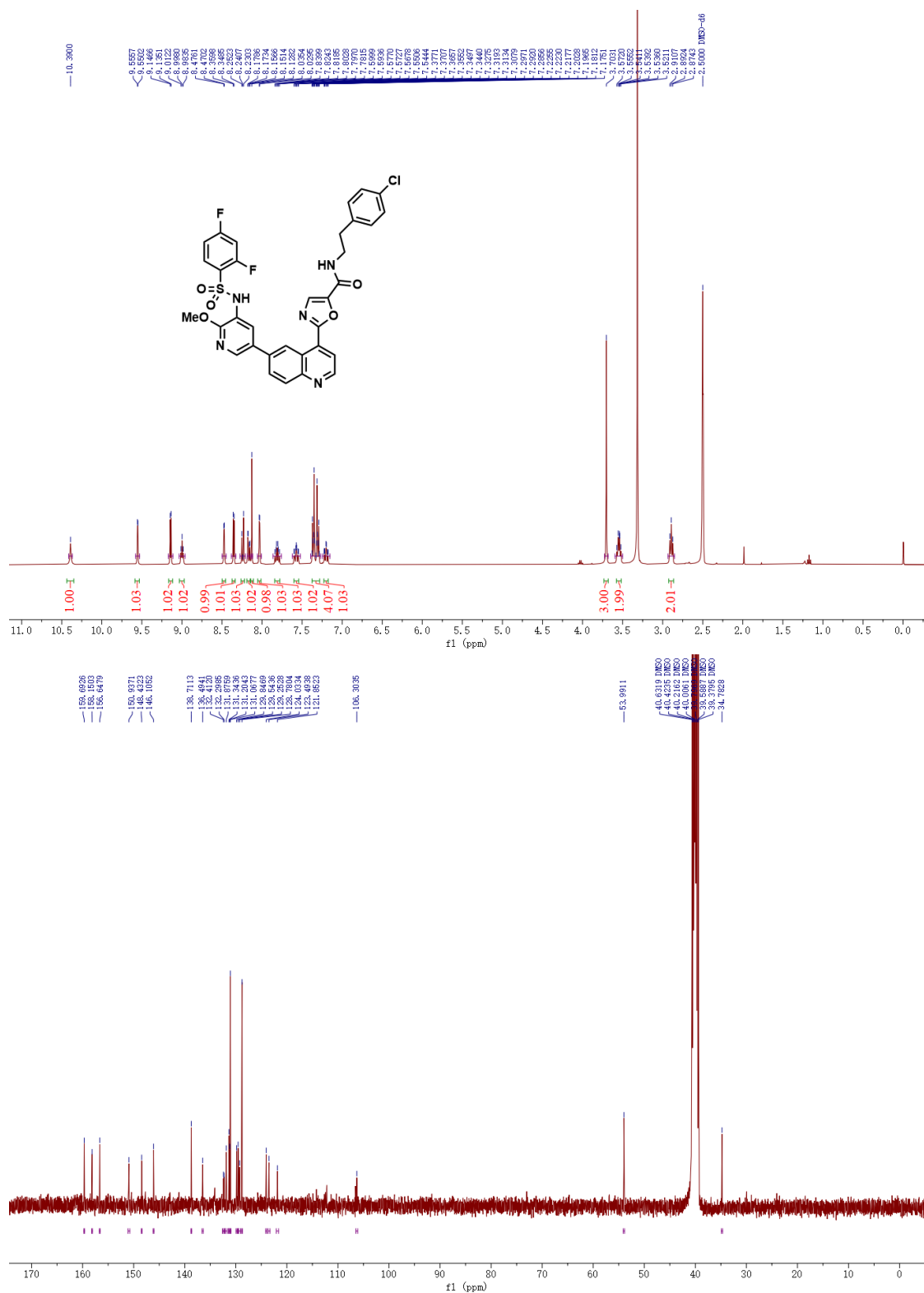


Figure S36. ¹H and ¹³C NMR spectra of **221** (DMSO-d₆).