

Reactivity of Steroidal 1-Azadienes Toward Enamines: An Approach to Novel Chiral Penta- and Hexacyclic Steroids

Susana M. M. Lopes, Joana R. C. Santos and Teresa M. V. D. Pinho e Melo*

University of Coimbra, Coimbra Chemistry Centre and Department of Chemistry,

3004-535 Coimbra, Portugal

**tmelo@ci.uc.pt*

Electronic Supplementary Information

Table of contents

¹ H NMR spectra of known oximes 3 and 4	S2
¹ H NMR, ¹³ C NMR and two-dimensional spectra of new compounds.....	S3-S15

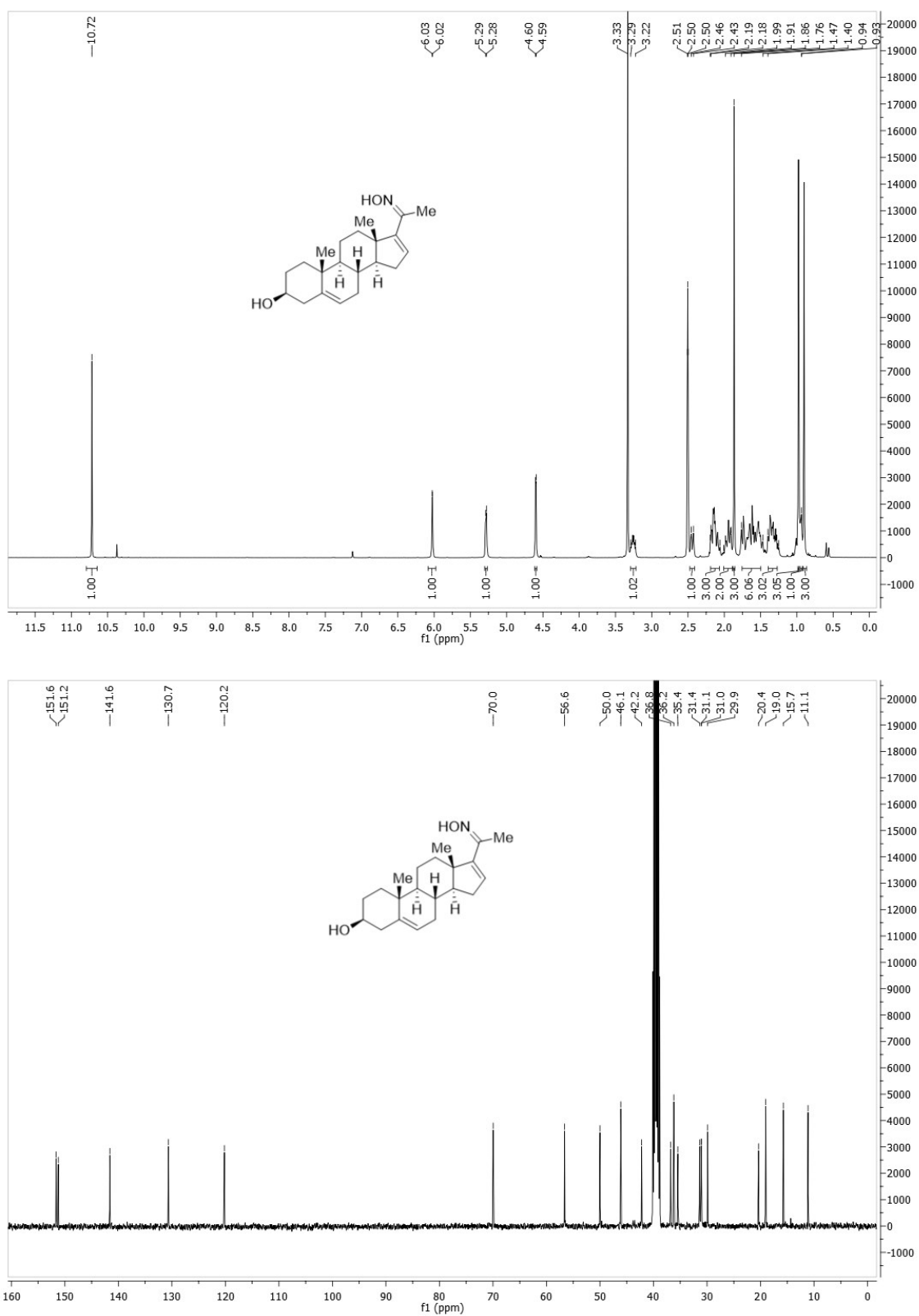


Figure S1. ^1H and ^{13}C NMR spectra of oxime 3 ($\text{DMSO}-d_6$).

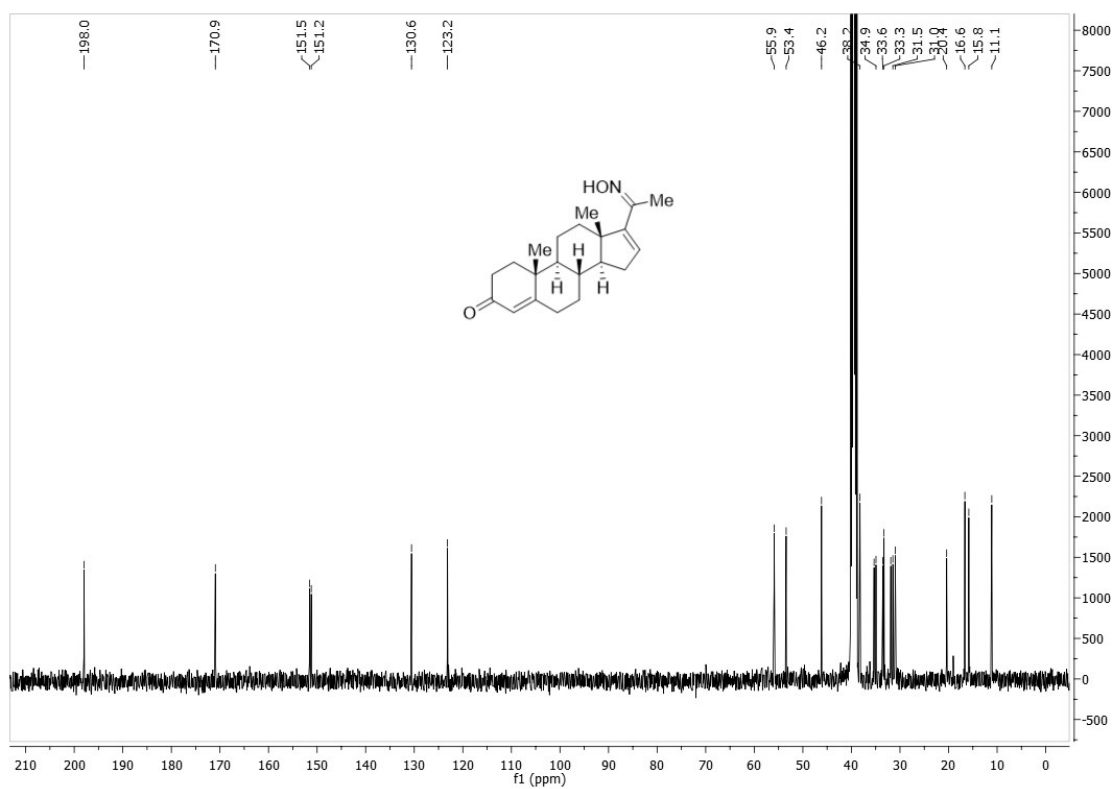
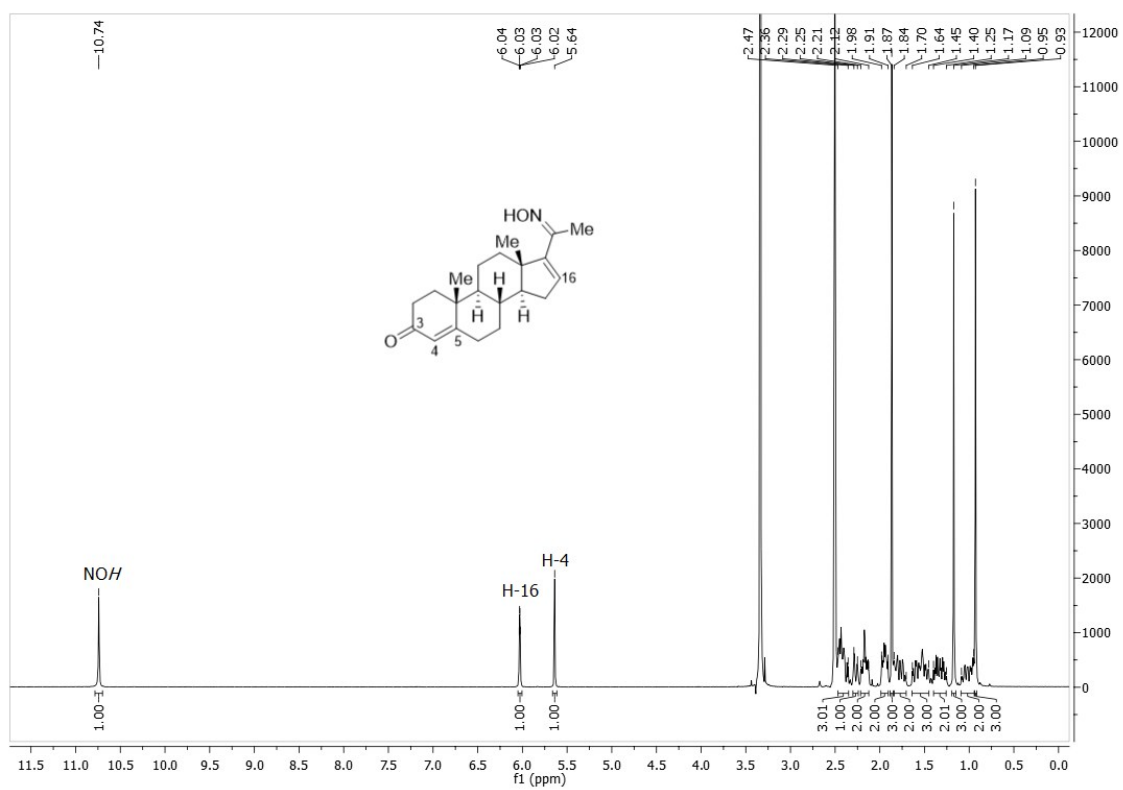


Figure S2. ¹H and ¹³C NMR spectra of oxime 4 (DMSO-*d*₆).

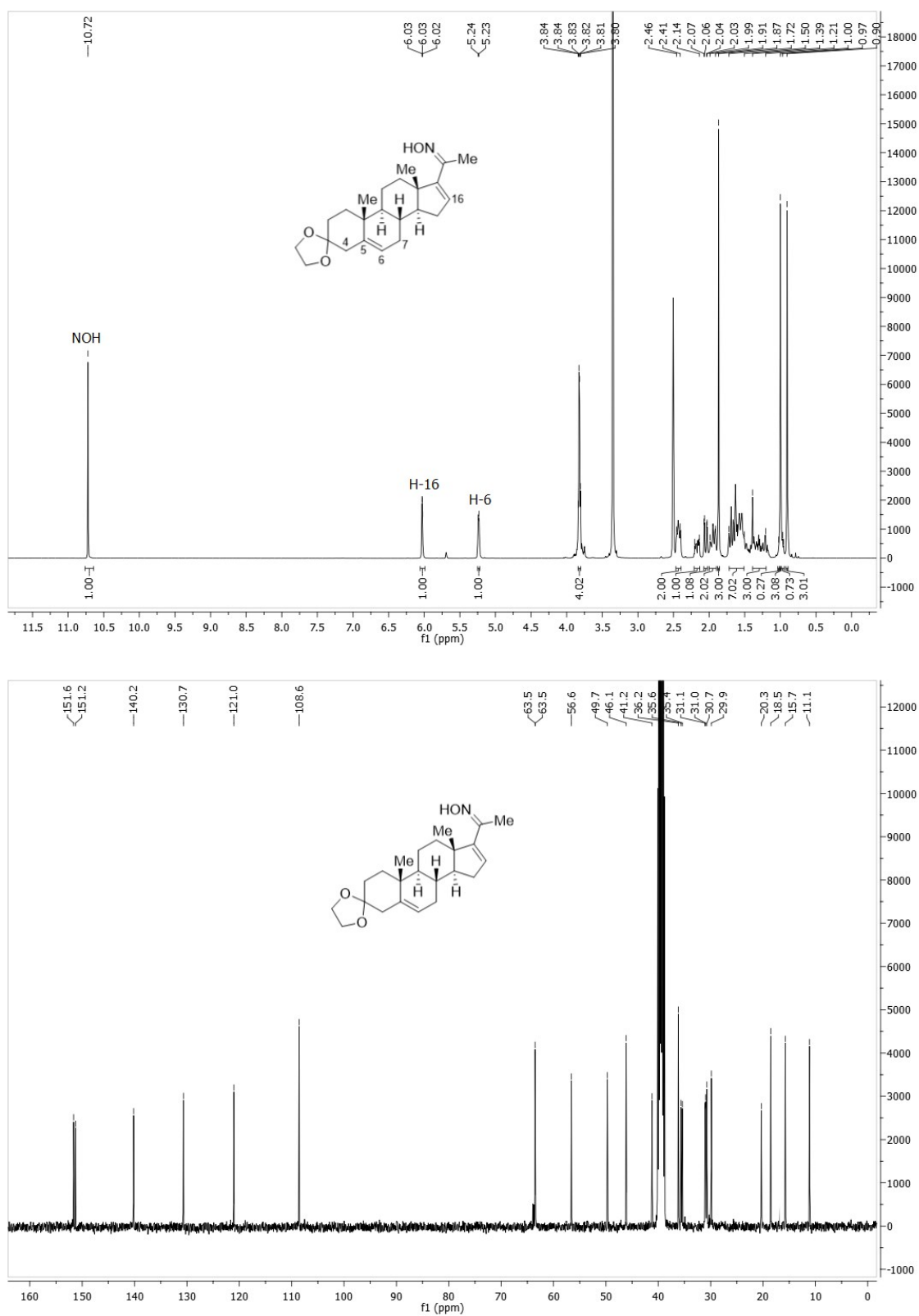


Figure S3. ¹H NMR and ¹³C NMR spectra of oxime **5** (DMSO-*d*₆).

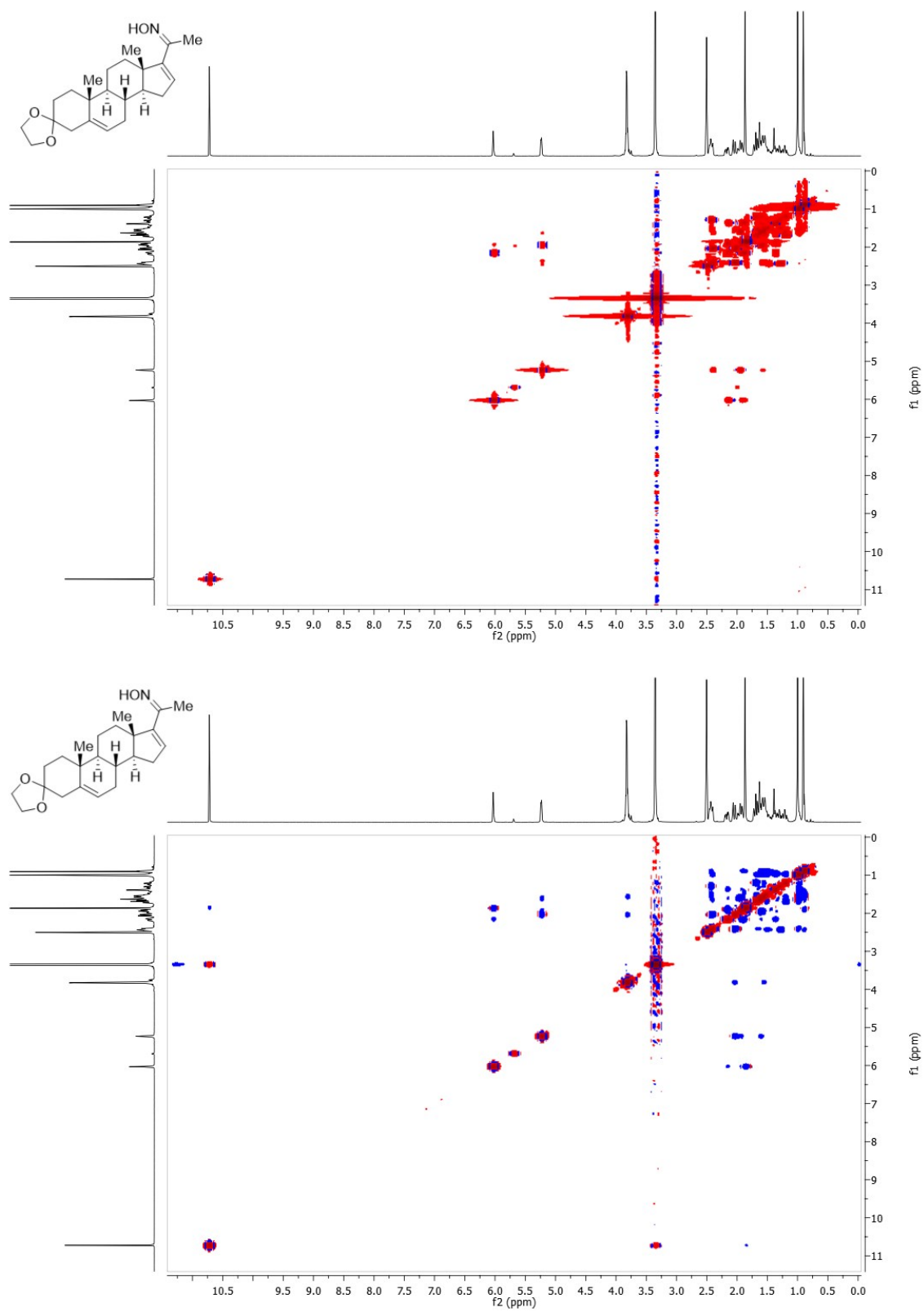


Figure S4. COSY and NOESY spectra of oxime **5** ($\text{DMSO}-d_6$).

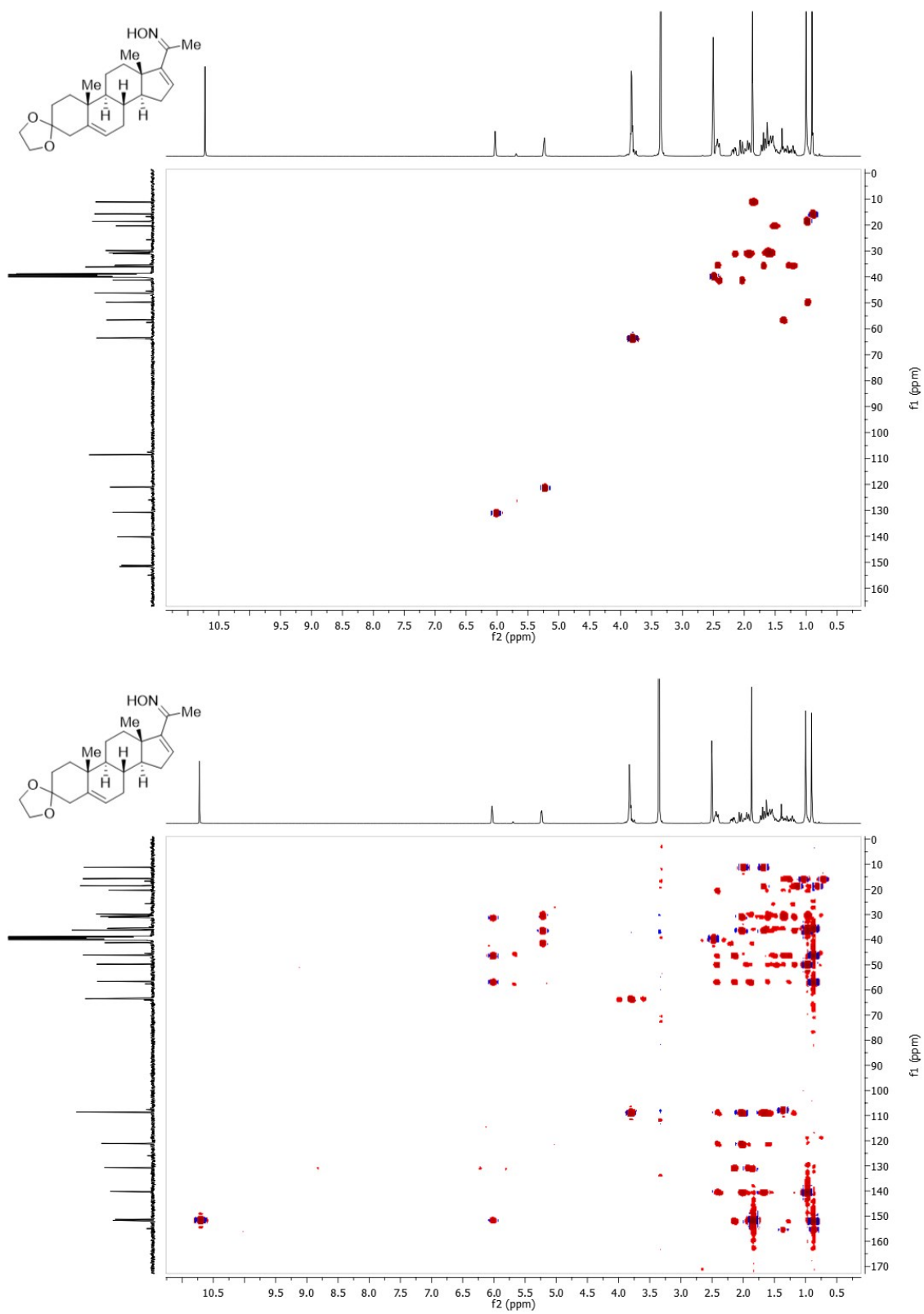


Figure S5. HSQC and HMBC spectra of oxime 5 (DMSO-*d*₆).

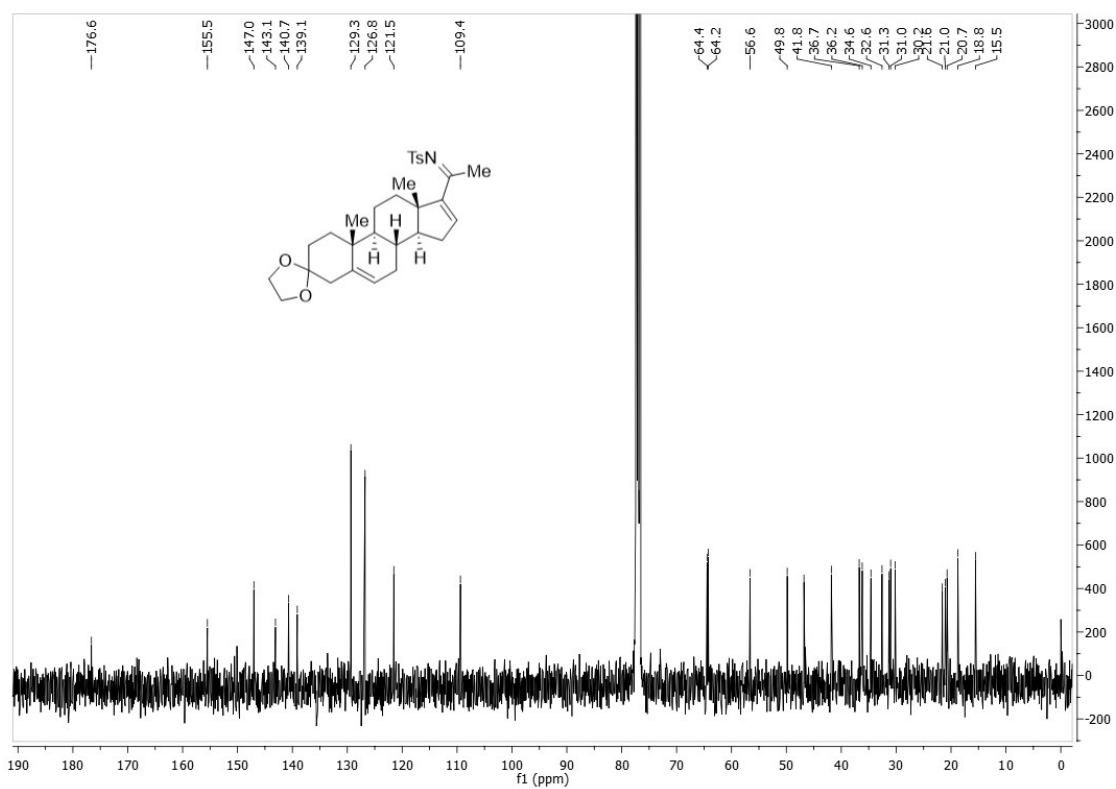
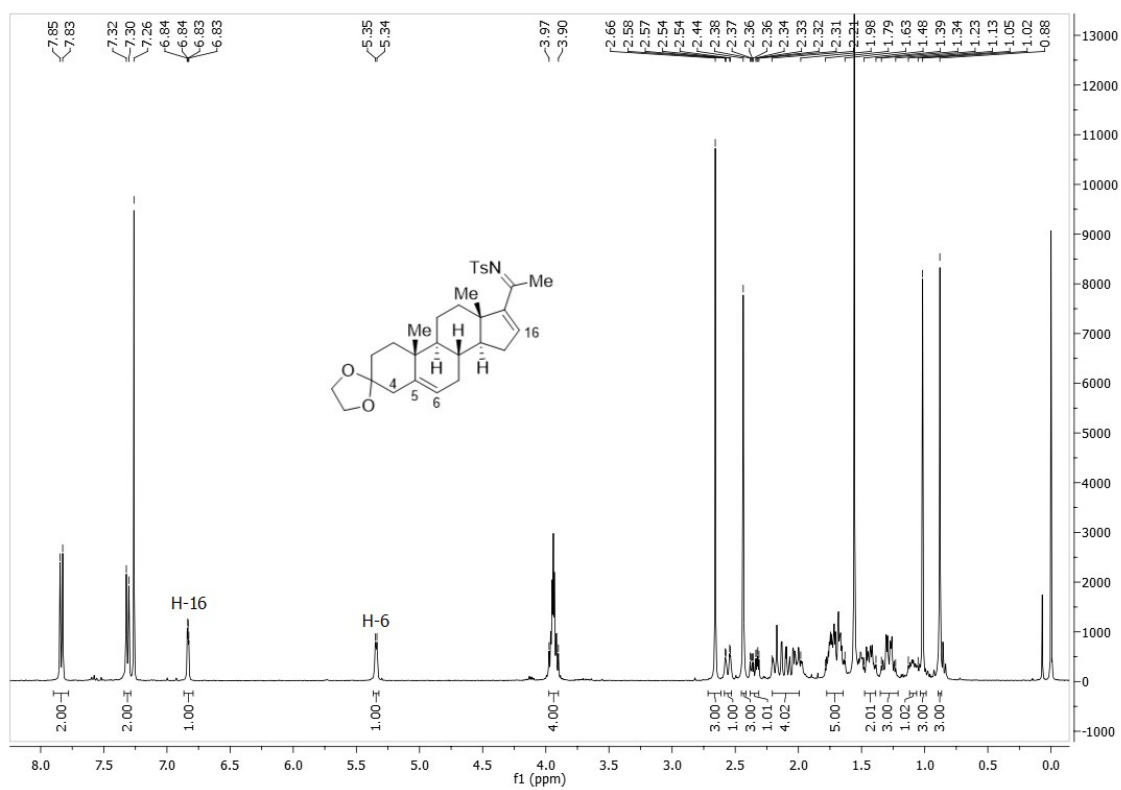


Figure S6. ¹H NMR and ¹³C NMR spectra of 1-azadiene 6 (CDCl₃).

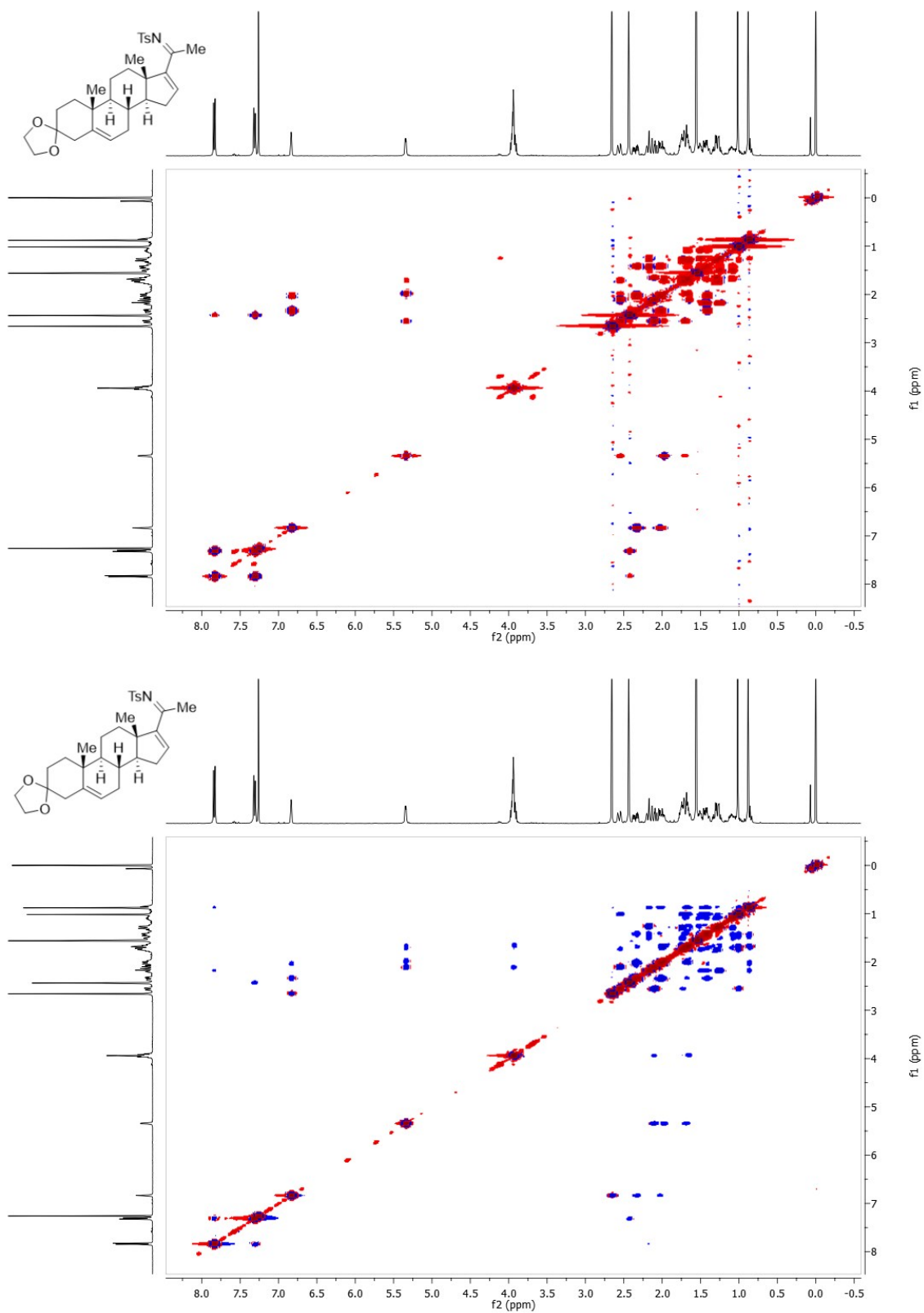


Figure S7. COSY and NOESY spectra of 1-azadiene 6 (CDCl₃).

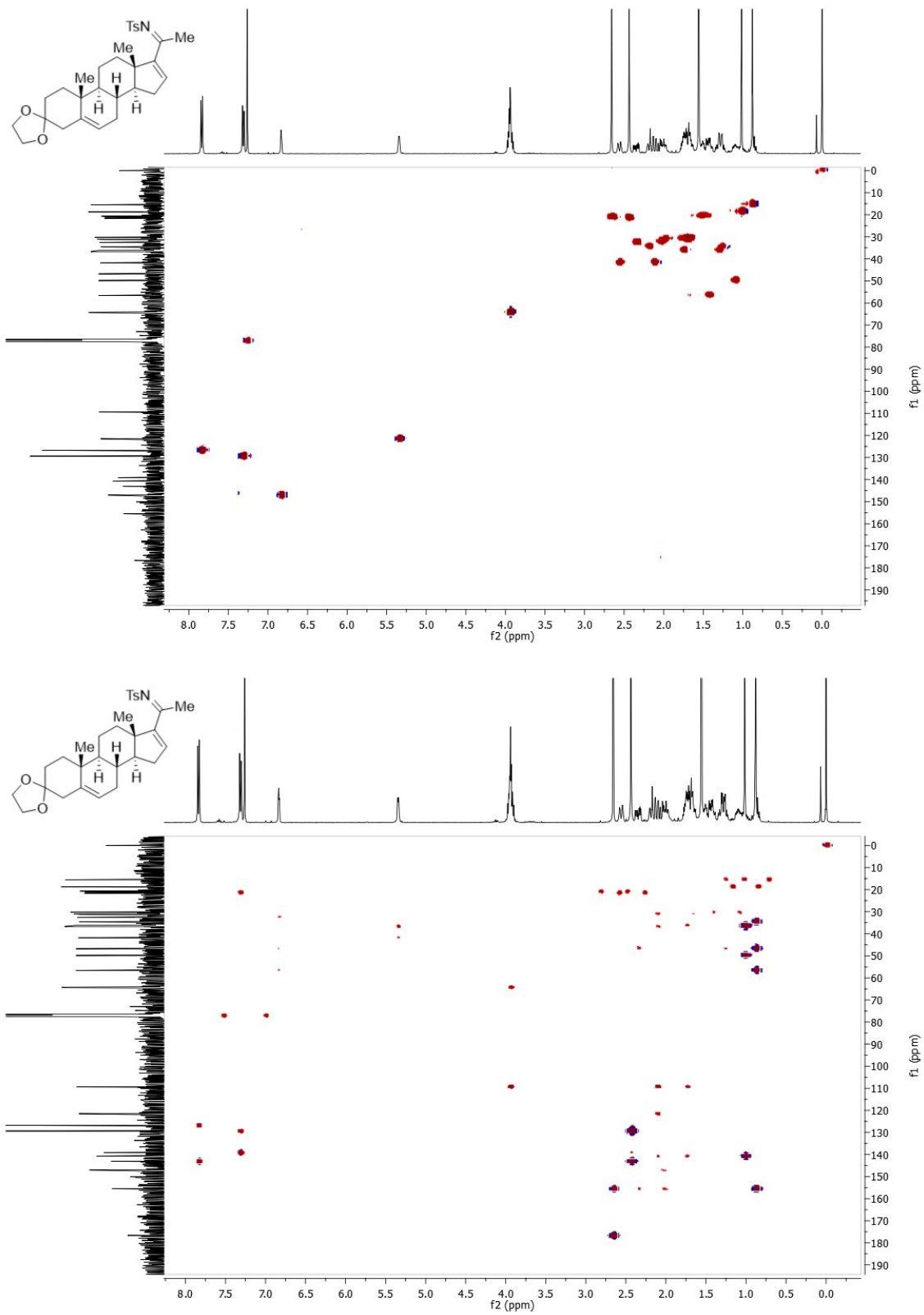


Figure S8. HSQC and HMBC spectra of 1-azadiene 6 (CDCl_3).

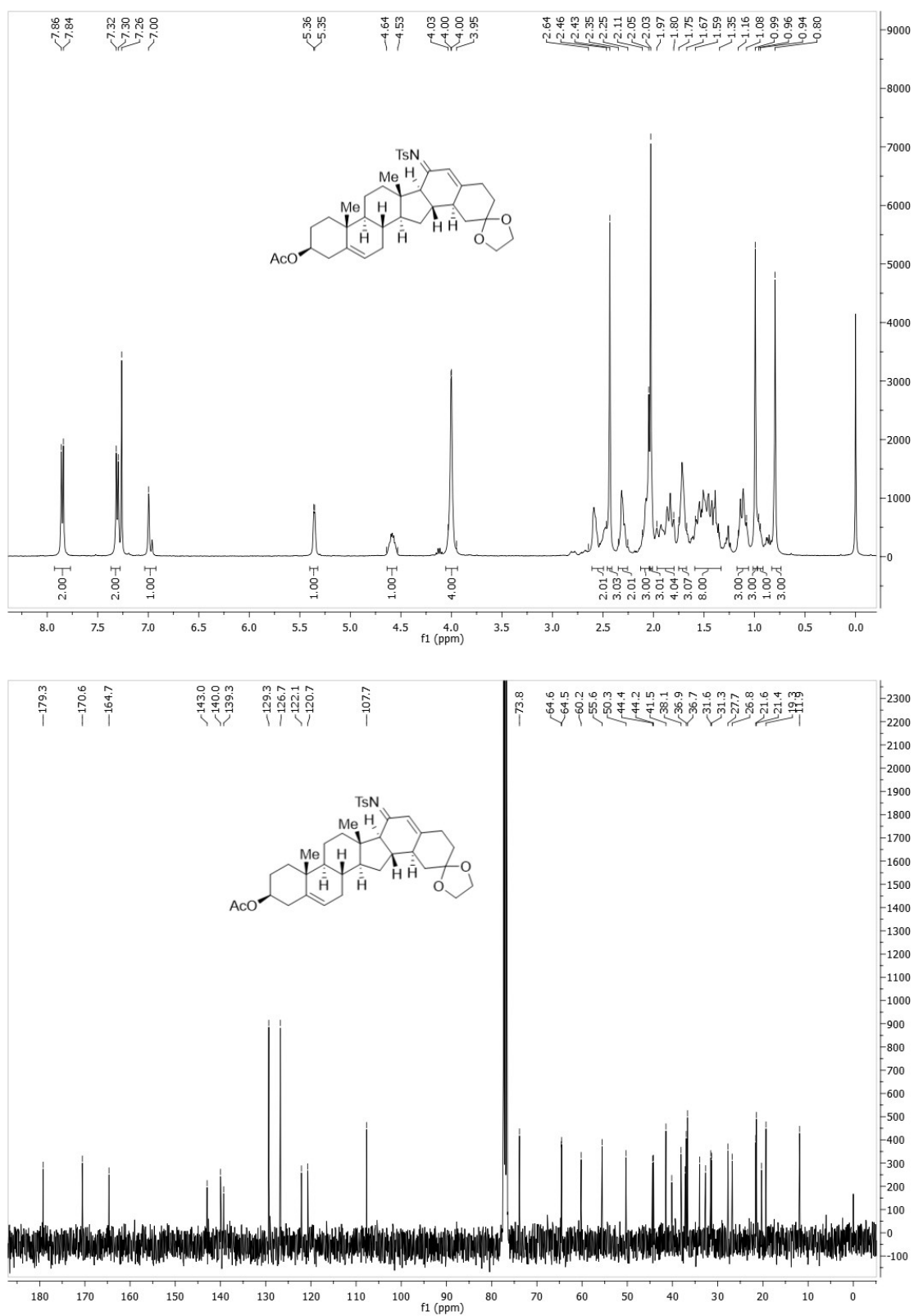


Figure S9. ^1H NMR and ^{13}C NMR spectra of hexacyclic steroid **8** (CDCl_3).

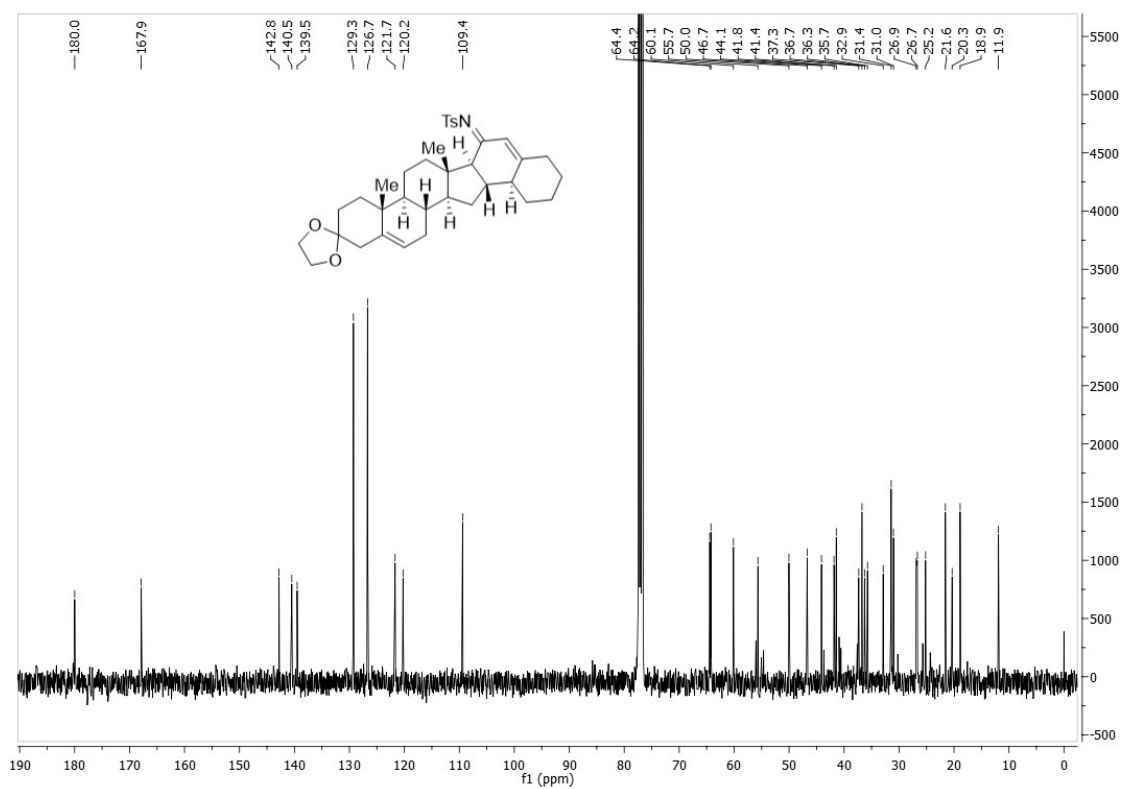
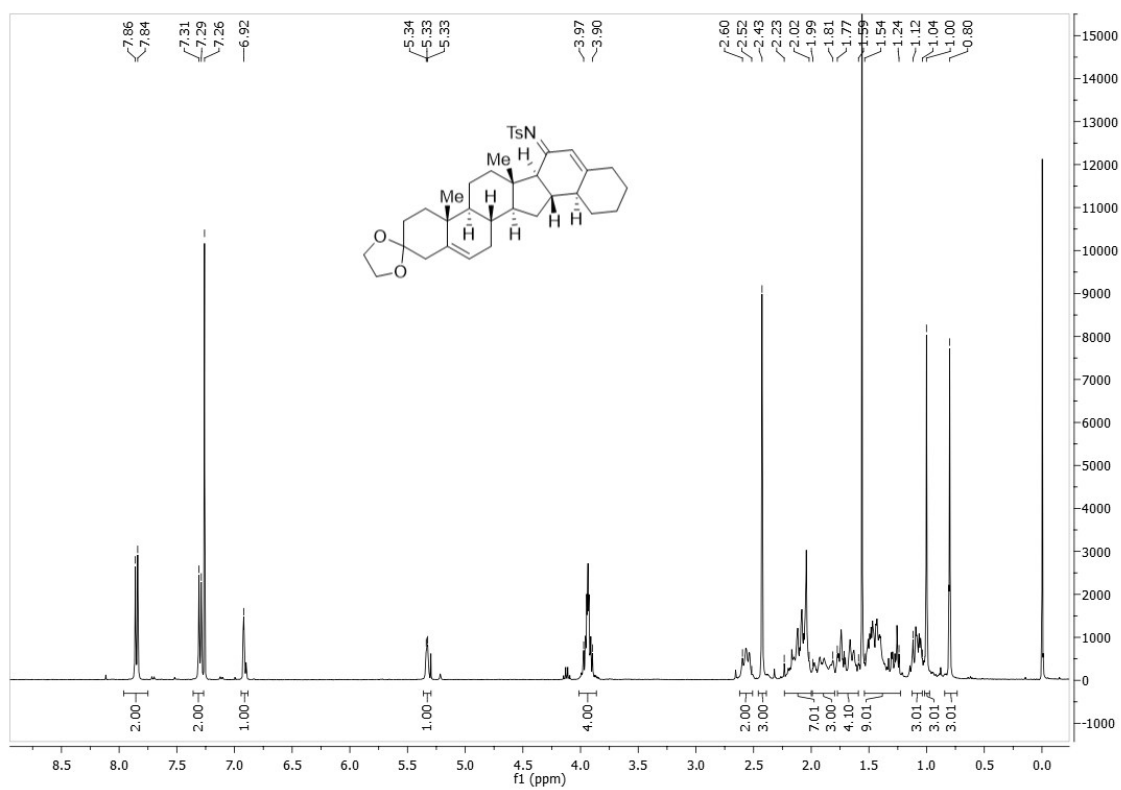


Figure S10. ¹H NMR and ¹³C NMR spectra of hexacyclic steroid **18** (CDCl₃).

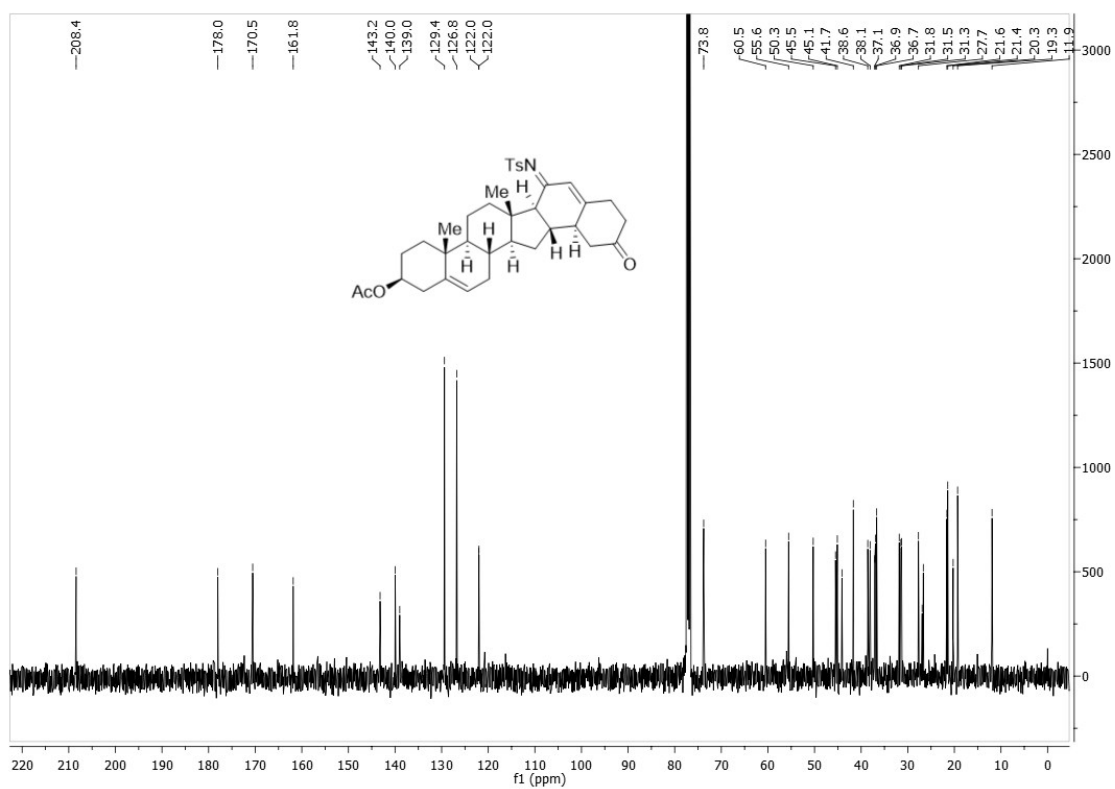
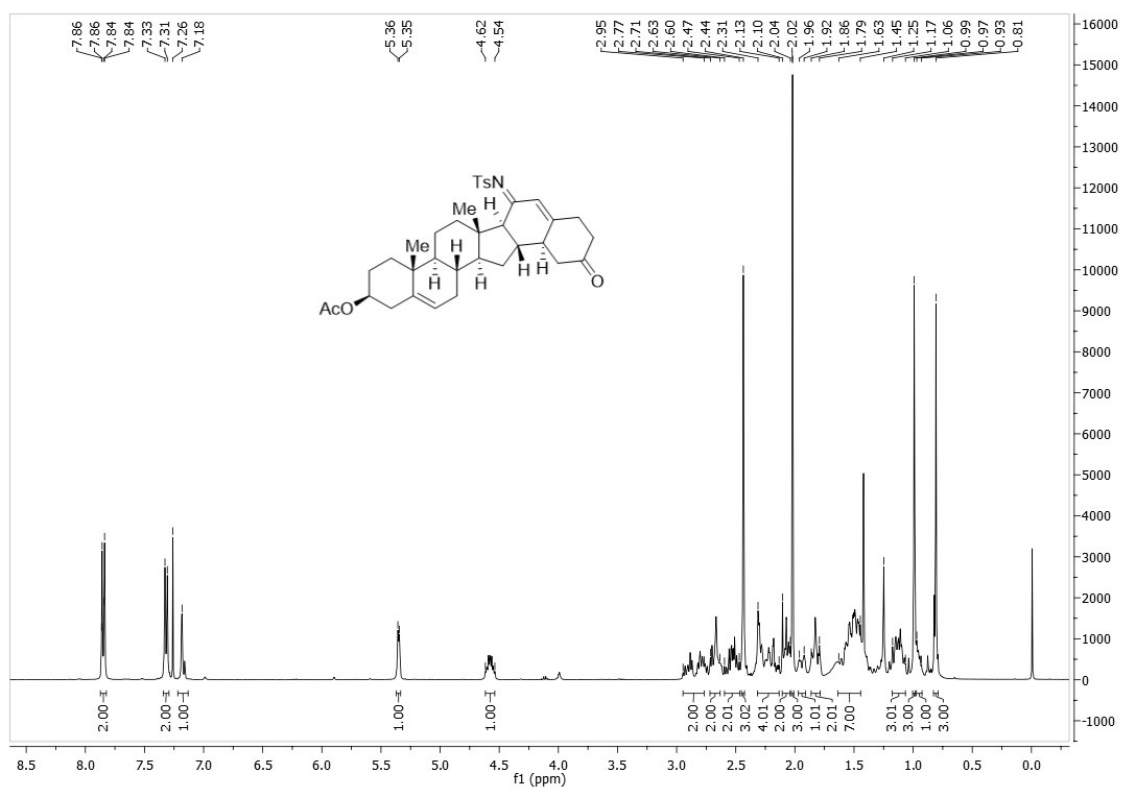


Figure S11. ¹H NMR and ¹³C NMR spectra of hexacyclic steroid **9** (CDCl₃).

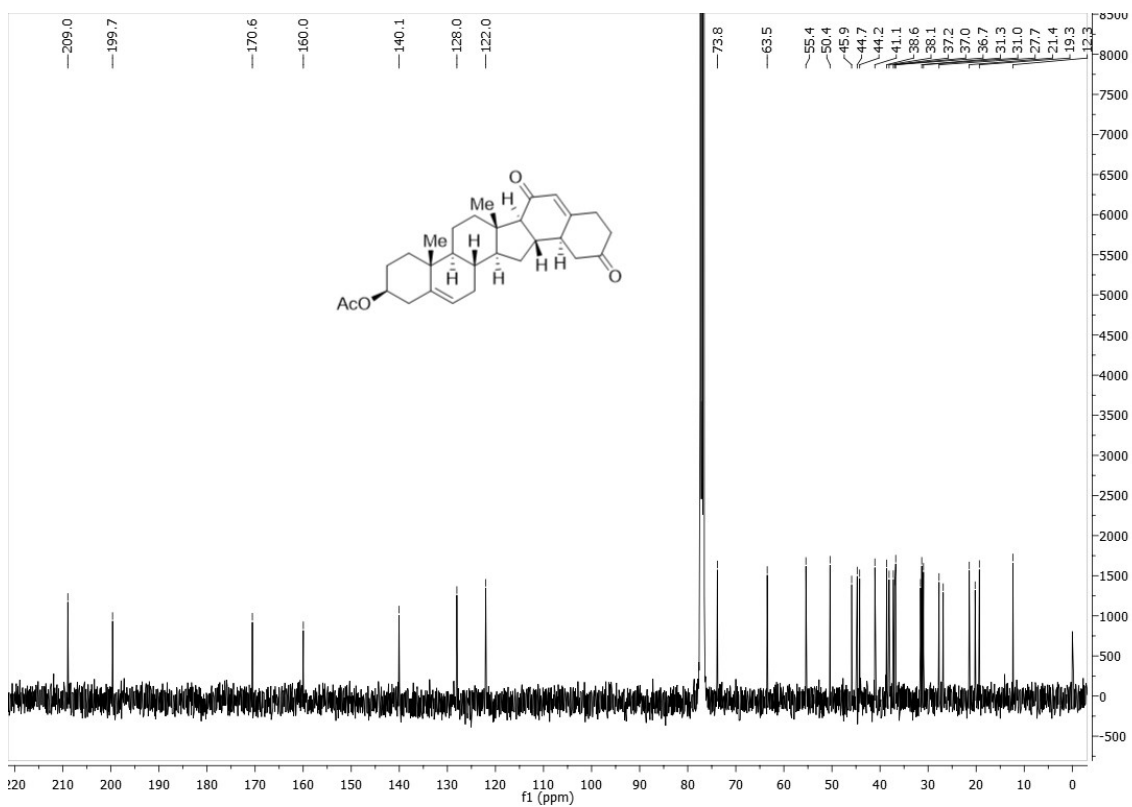
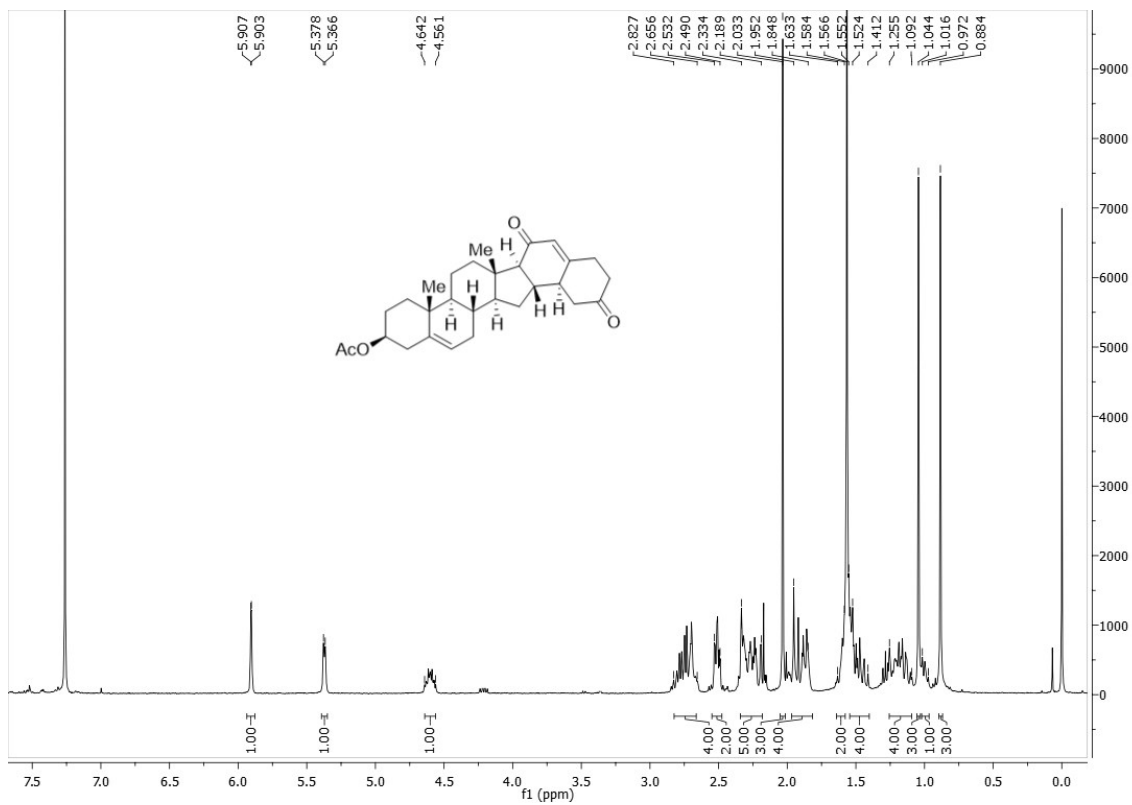


Figure S12. ¹H NMR and ¹³C NMR spectra of hexacyclic steroid **10** (CDCl₃).

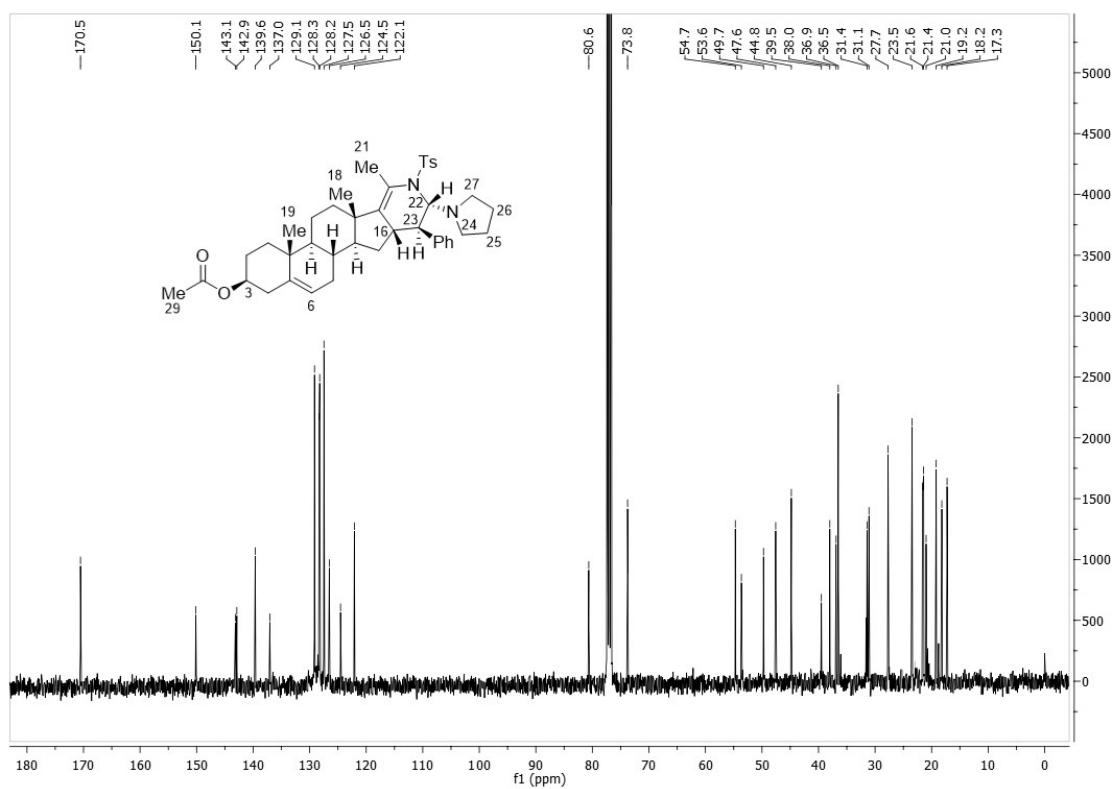
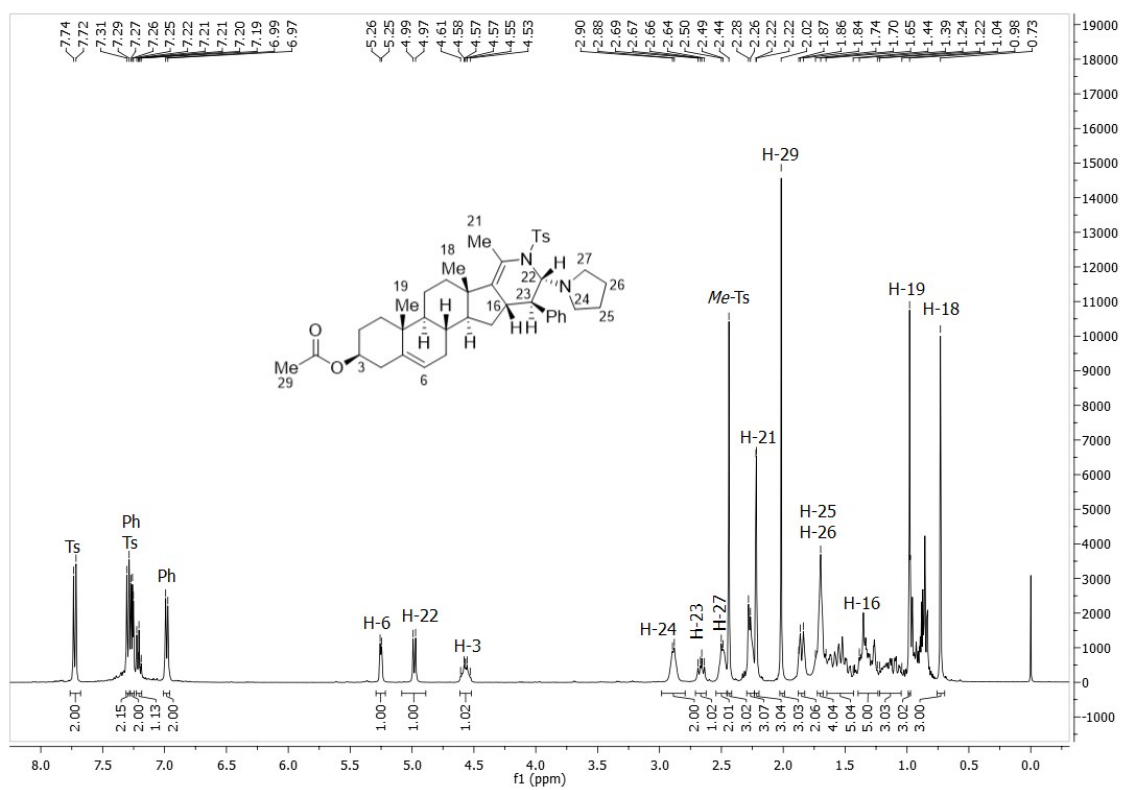


Figure S13. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **12** (CDCl₃).

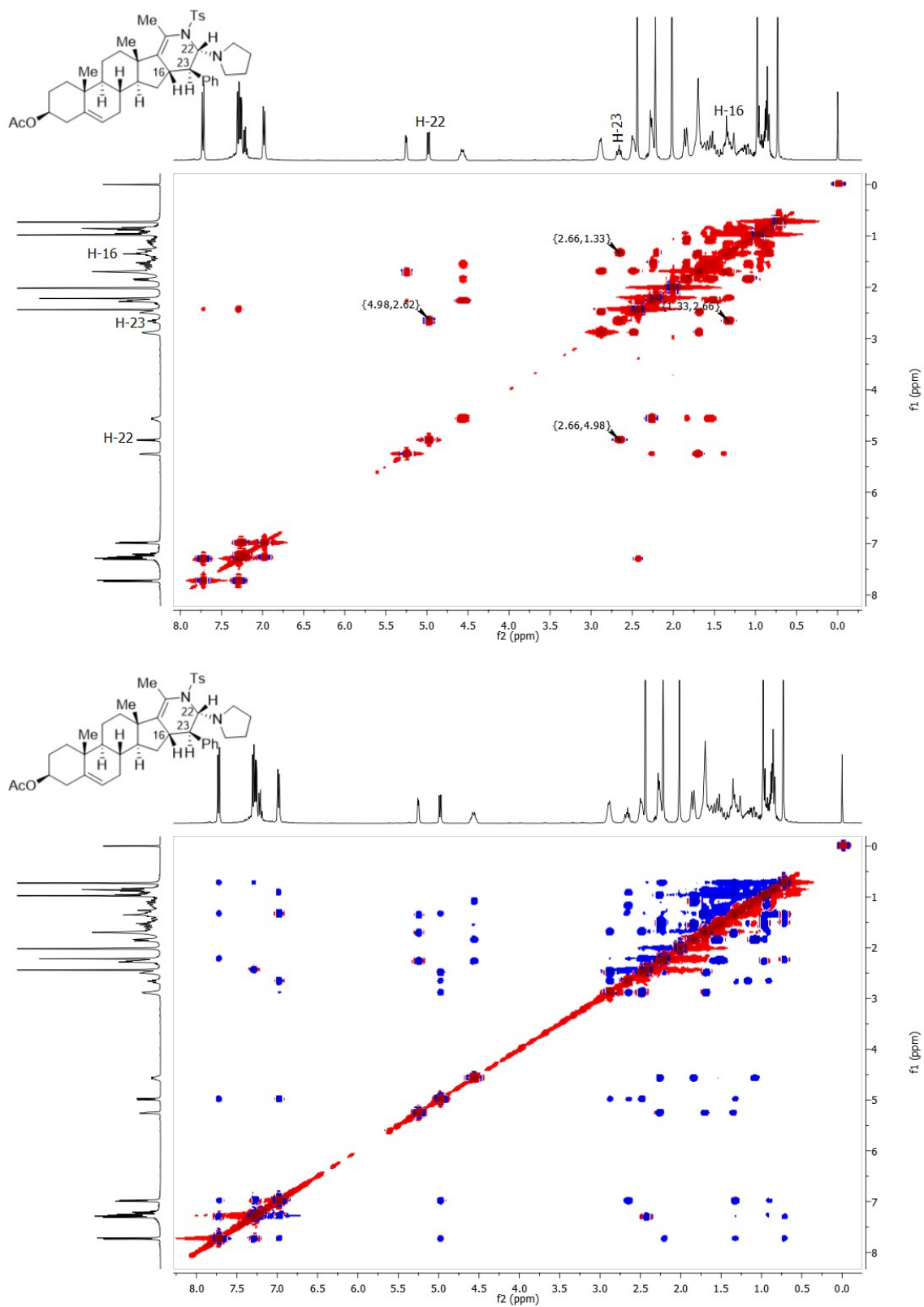


Figure S14. COSY and NOESY spectra of pentacyclic steroid 12 (CDCl₃).

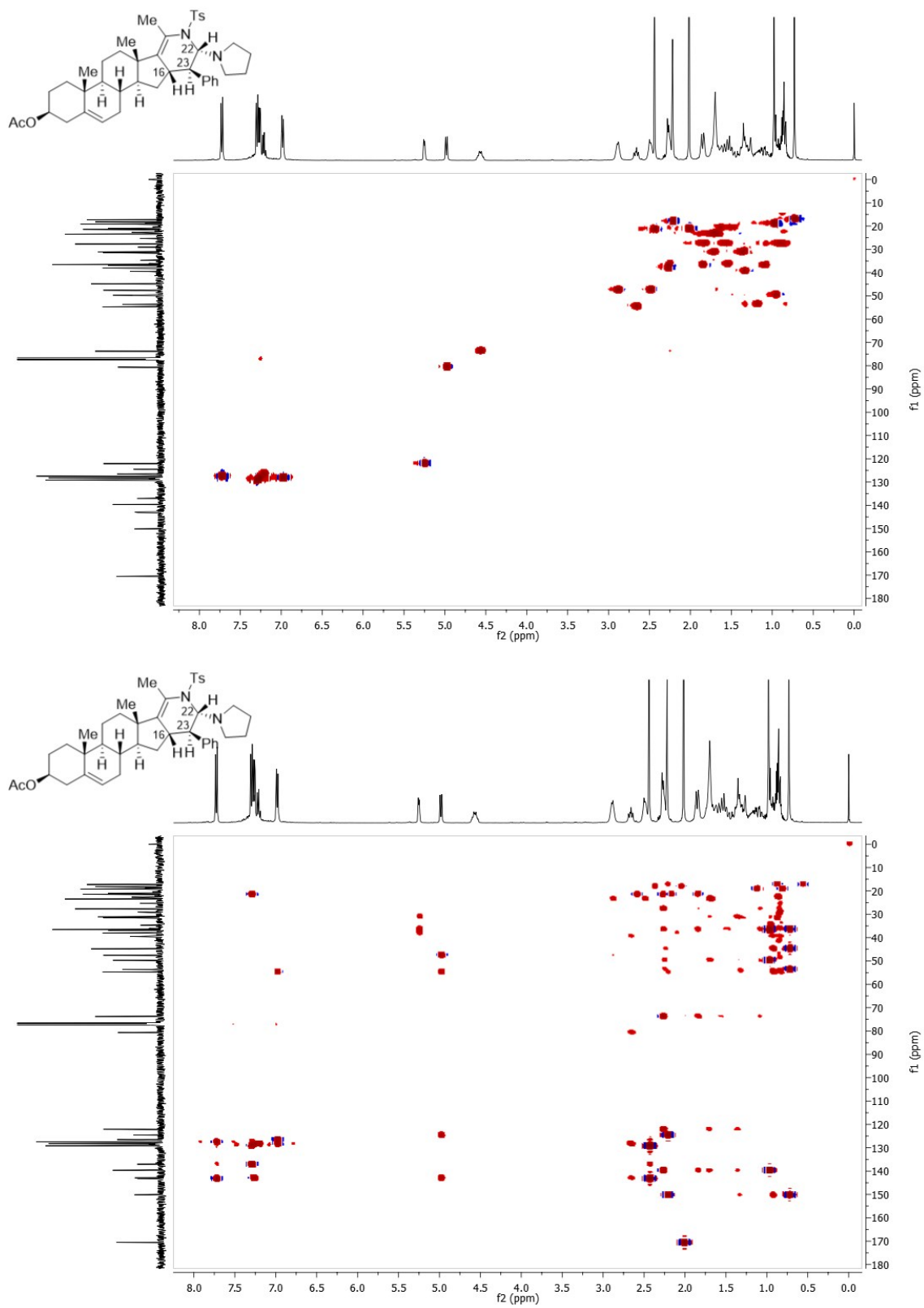


Figure S15. HSQC and HMBC spectra of pentacyclic steroid 12 (CDCl₃).

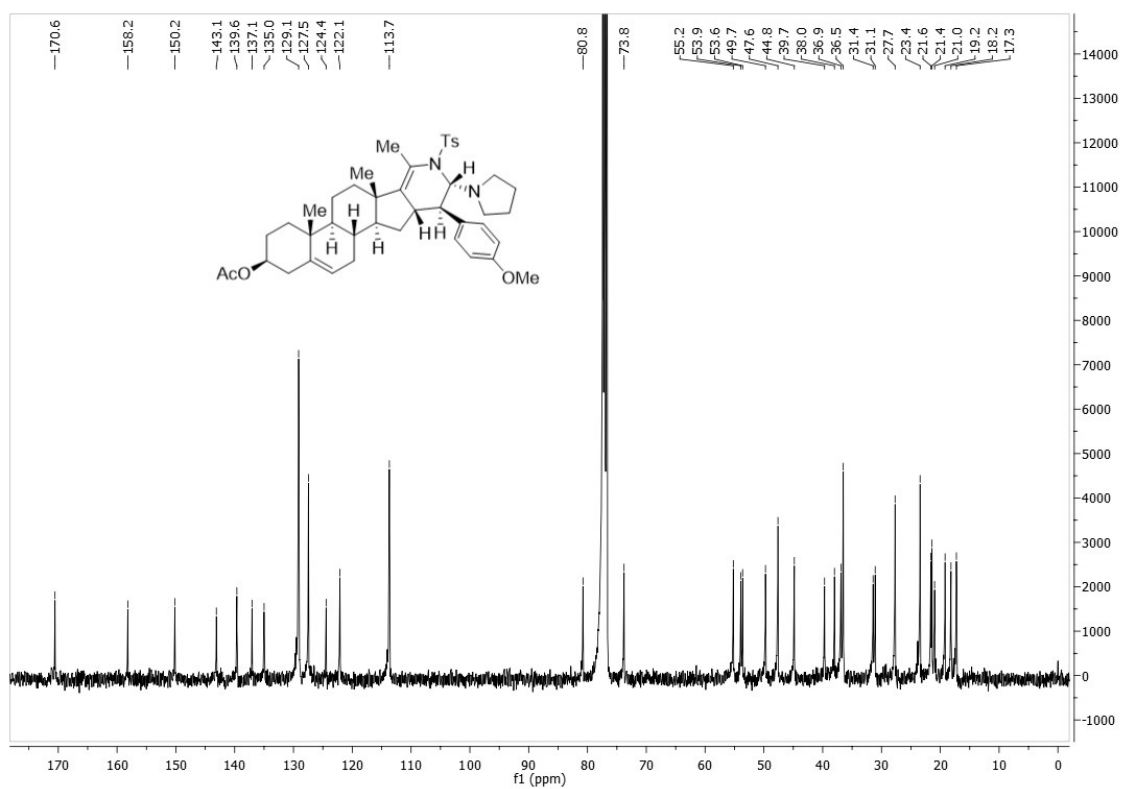
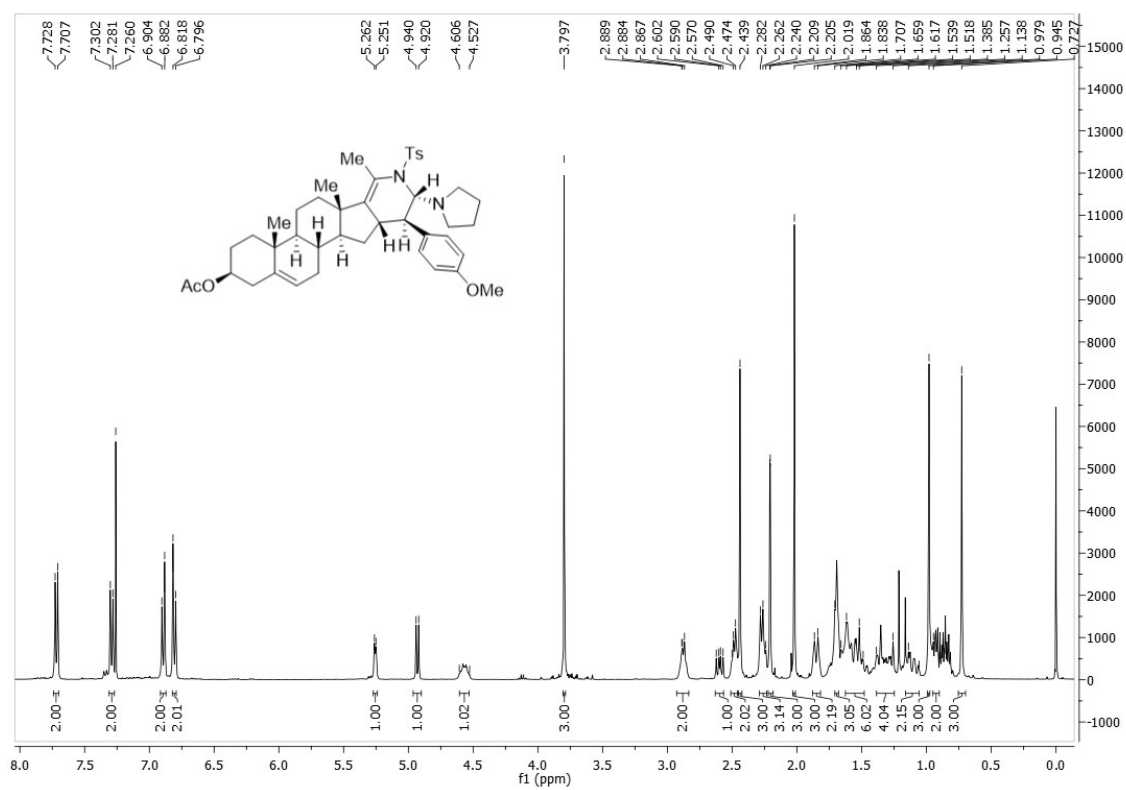


Figure S16. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid 13 (CDCl₃).

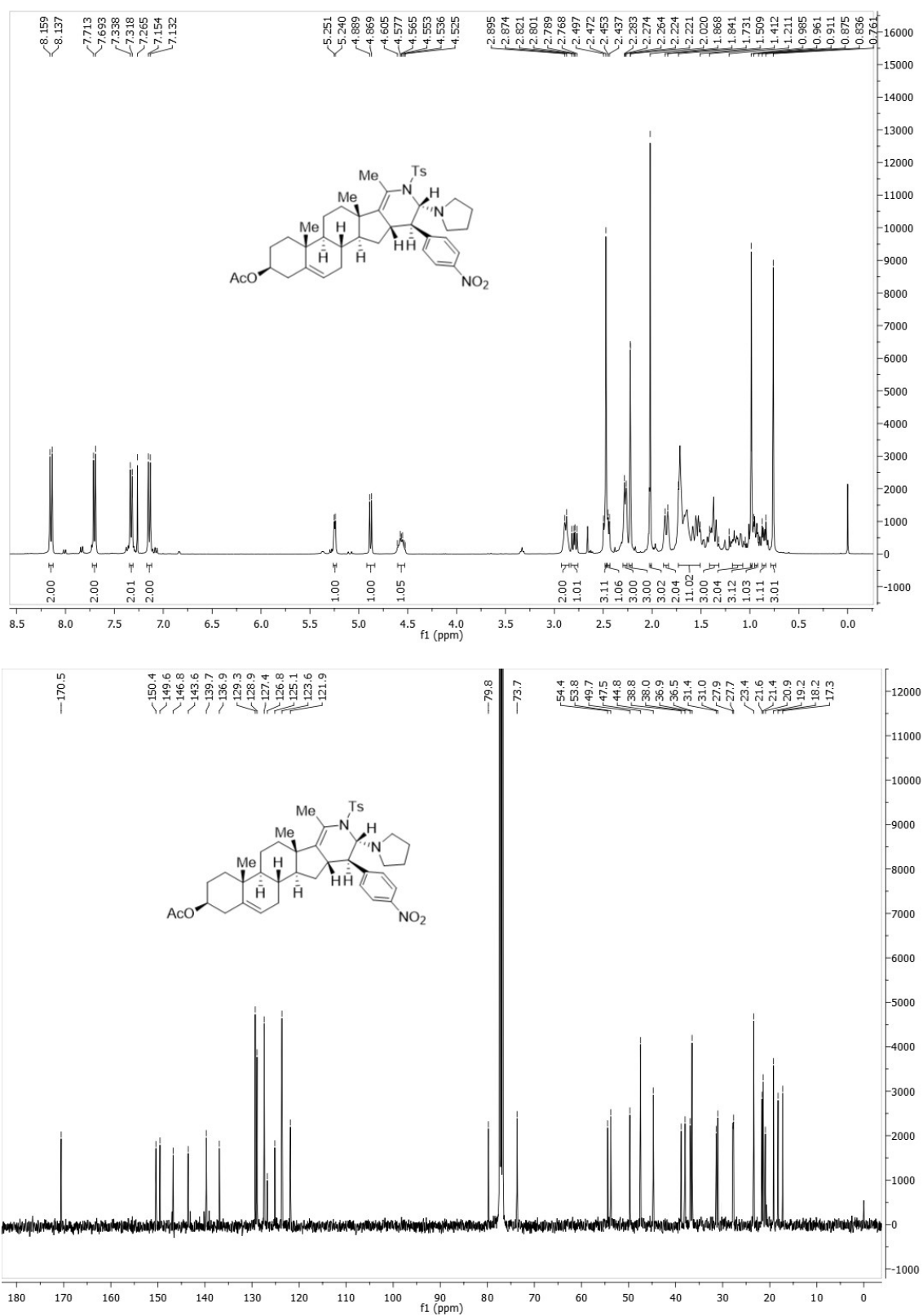


Figure S17. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **14** (CDCl₃).

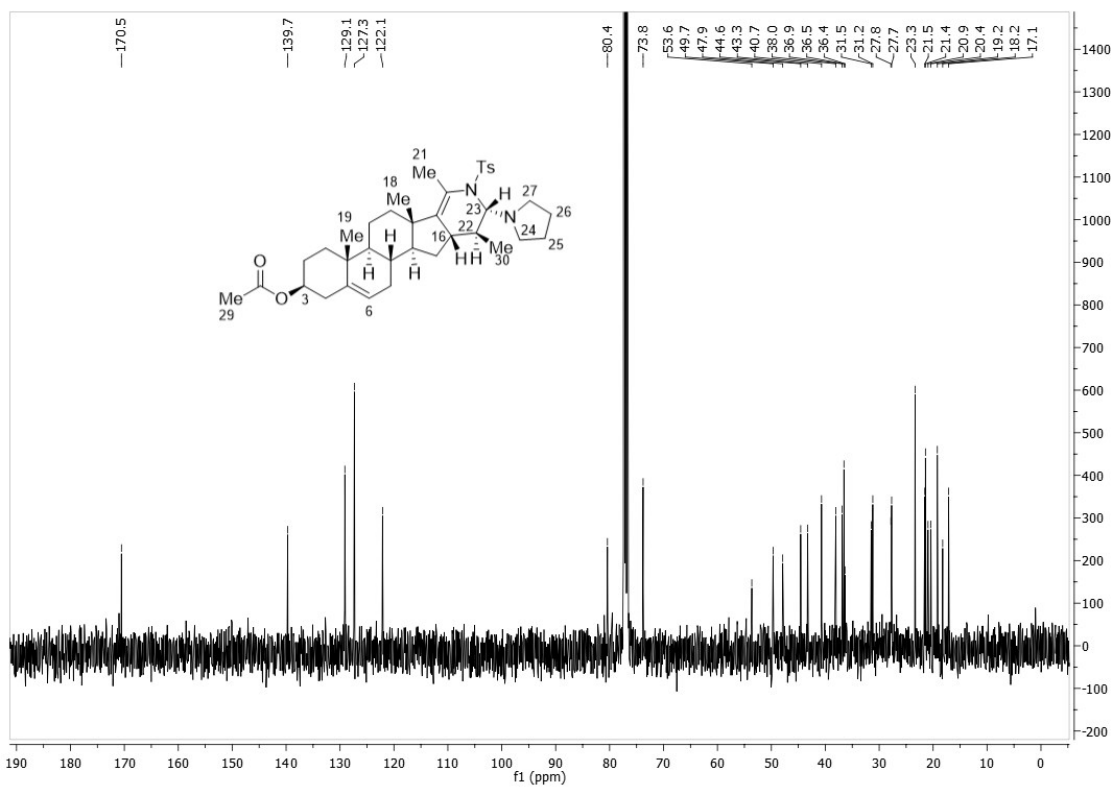
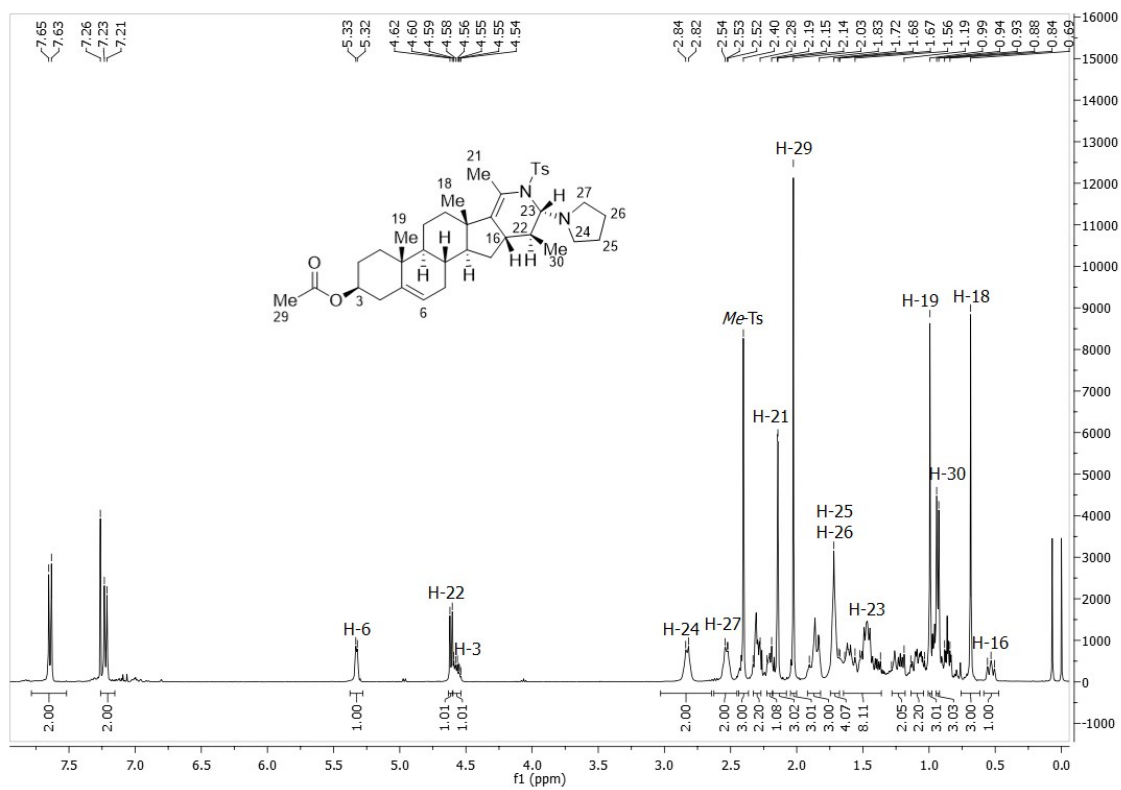


Figure S18. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **15** (CDCl₃).

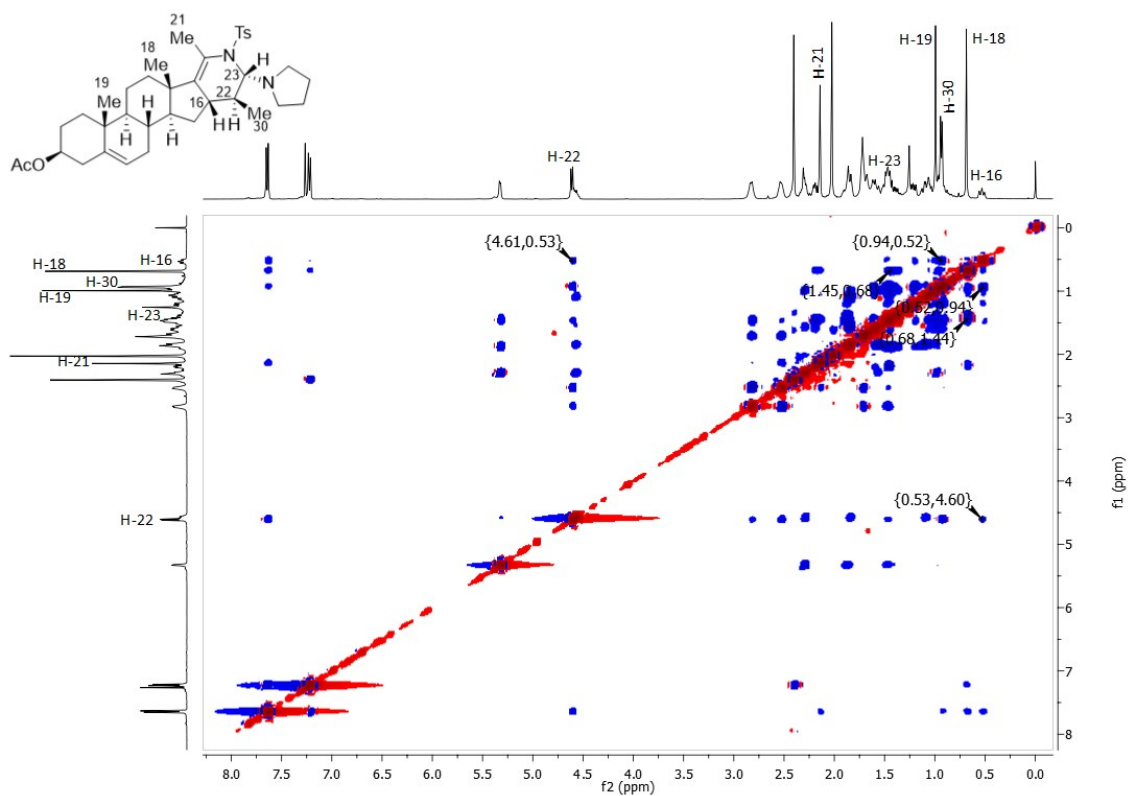
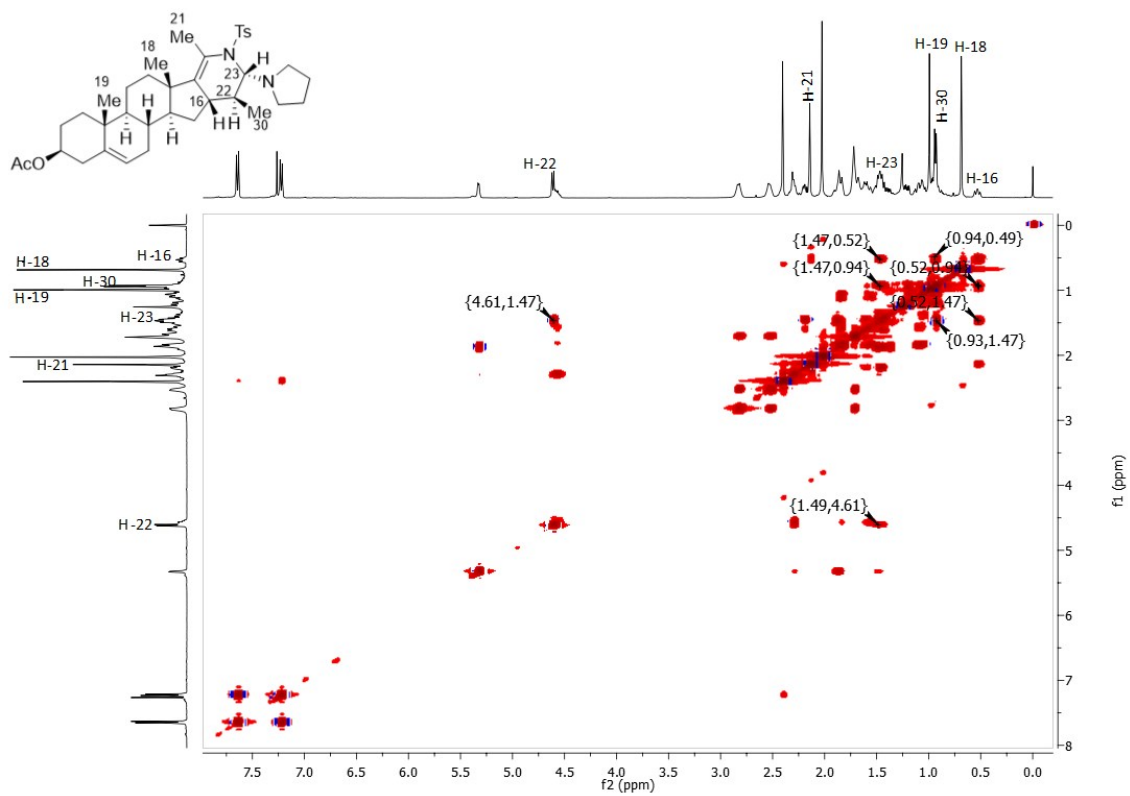


Figure S19. COSY and NOESY spectra of pentacyclic steroid **15** (CDCl₃).

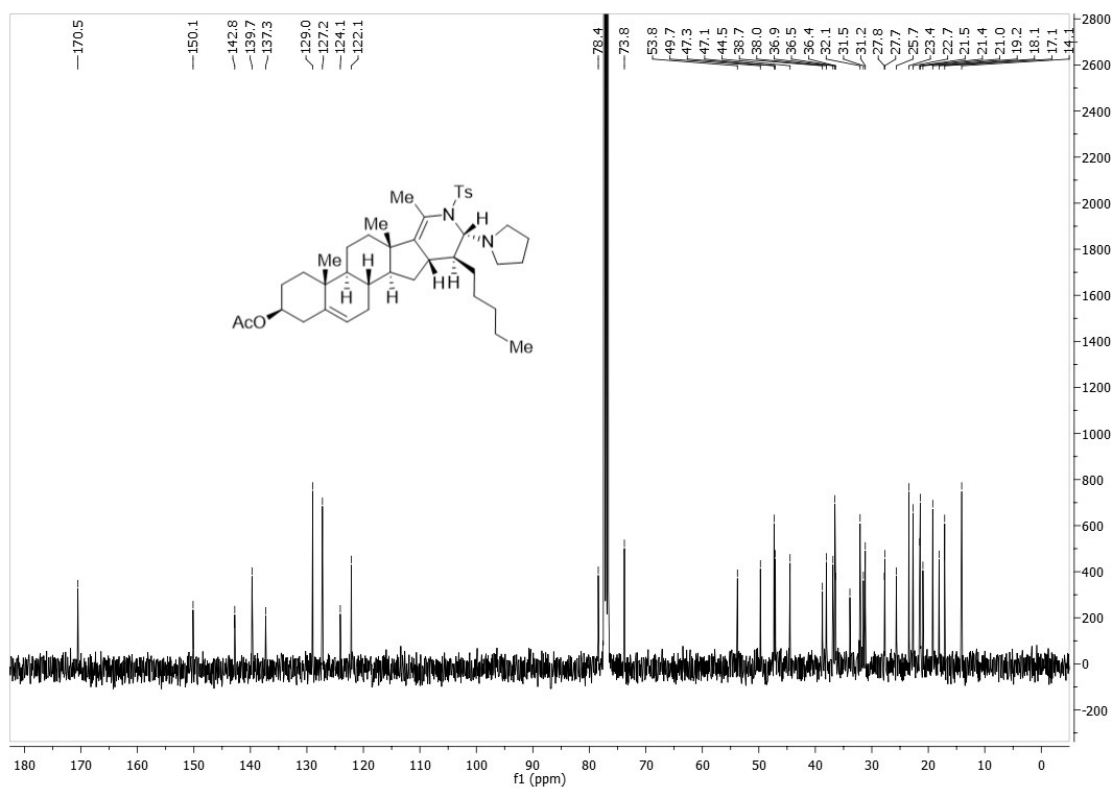
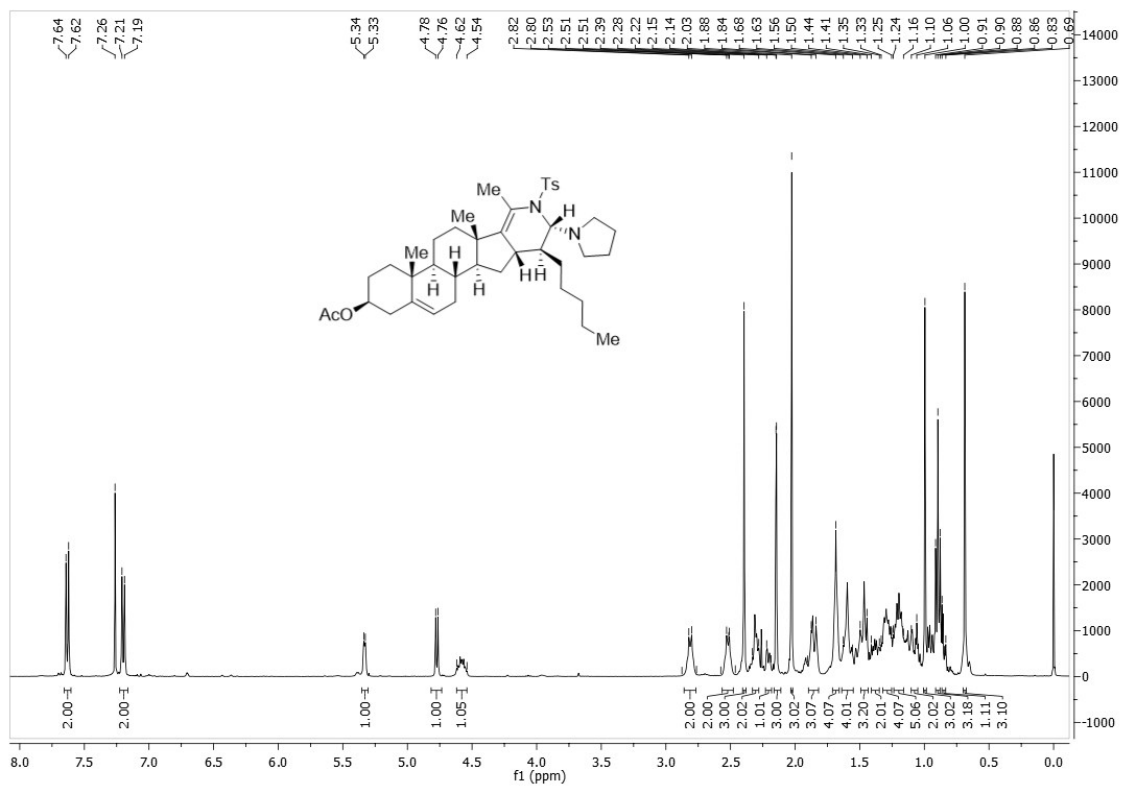


Figure S21. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid 17 (CDCl₃).

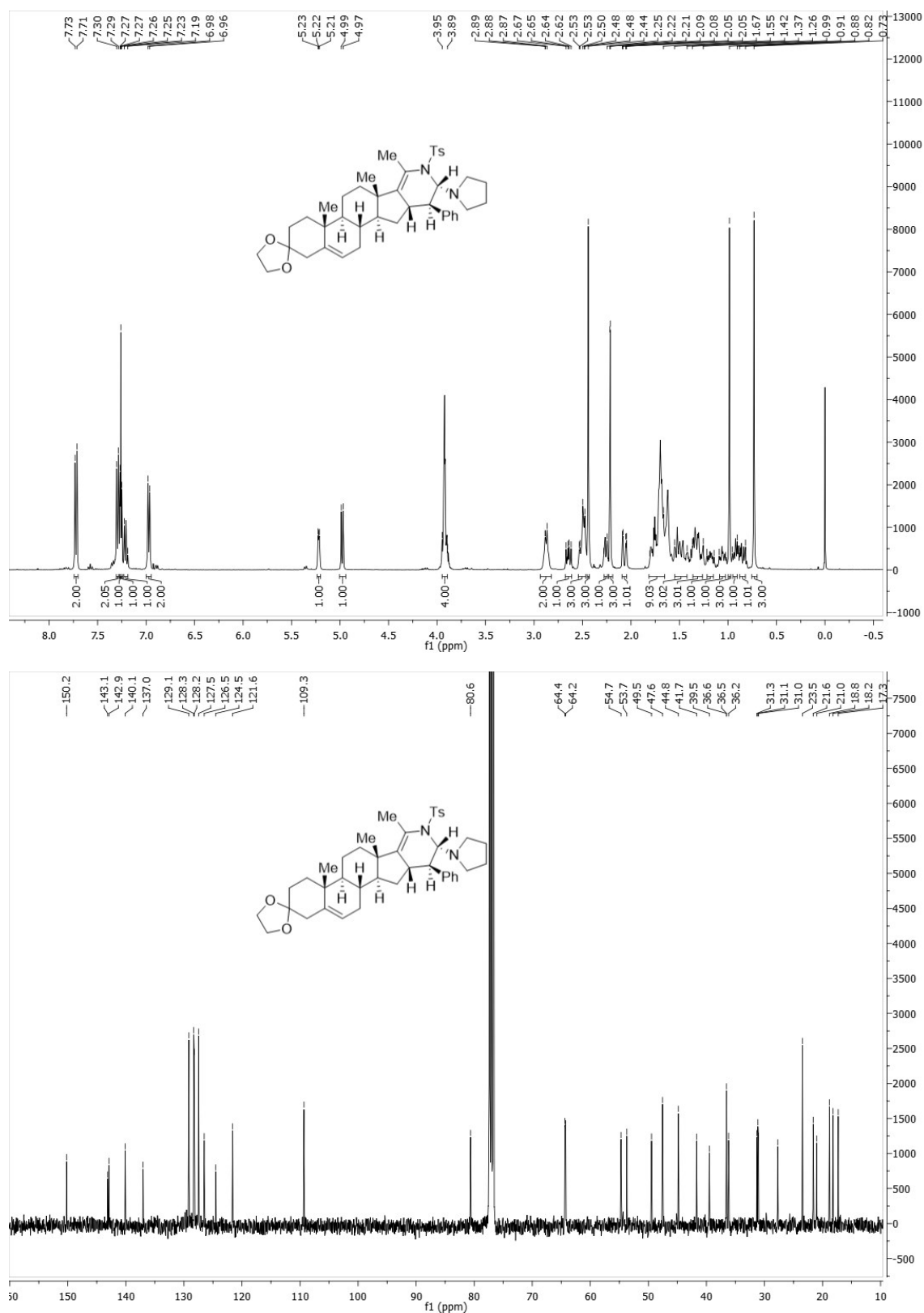


Figure S22. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **19** (CDCl₃).

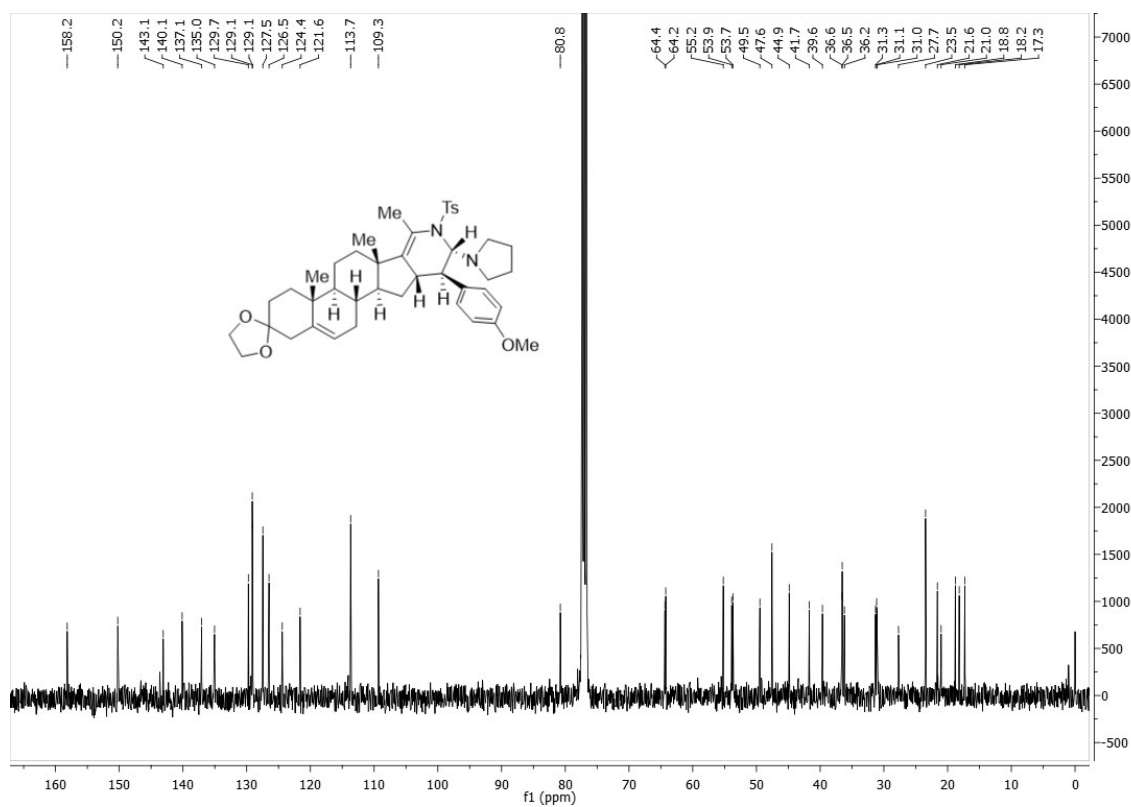
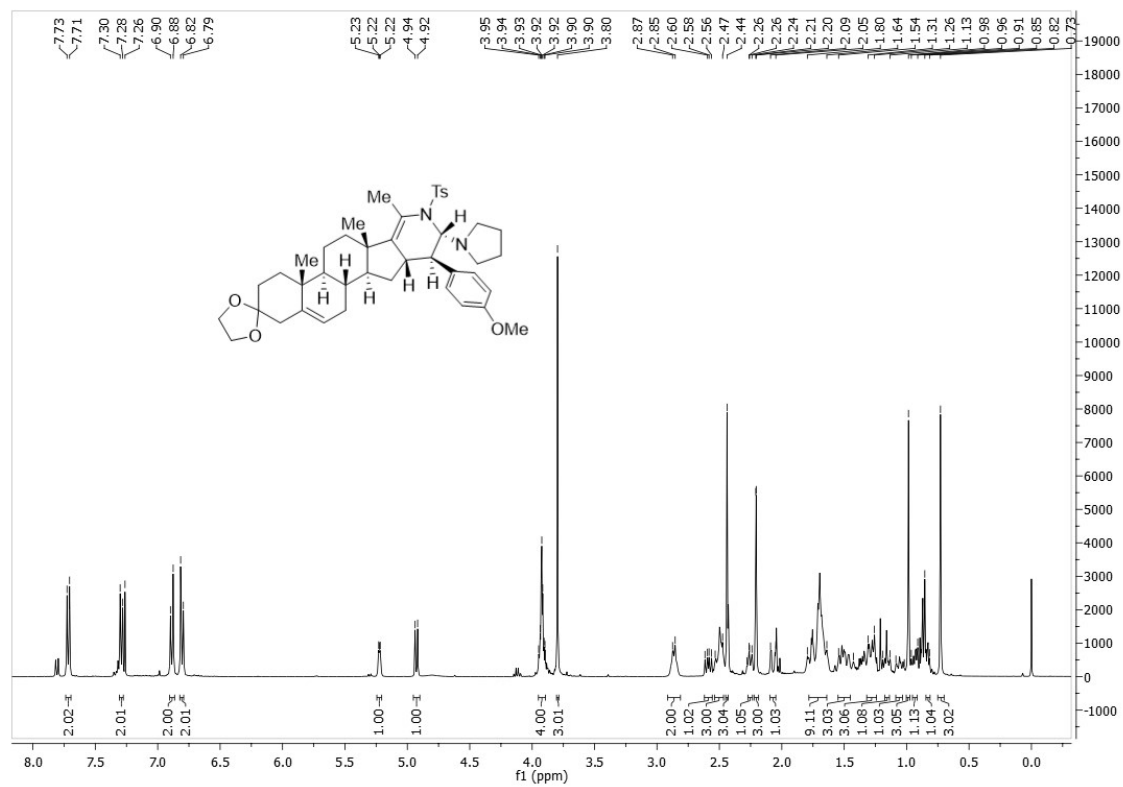


Figure S23. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **20** (CDCl₃).

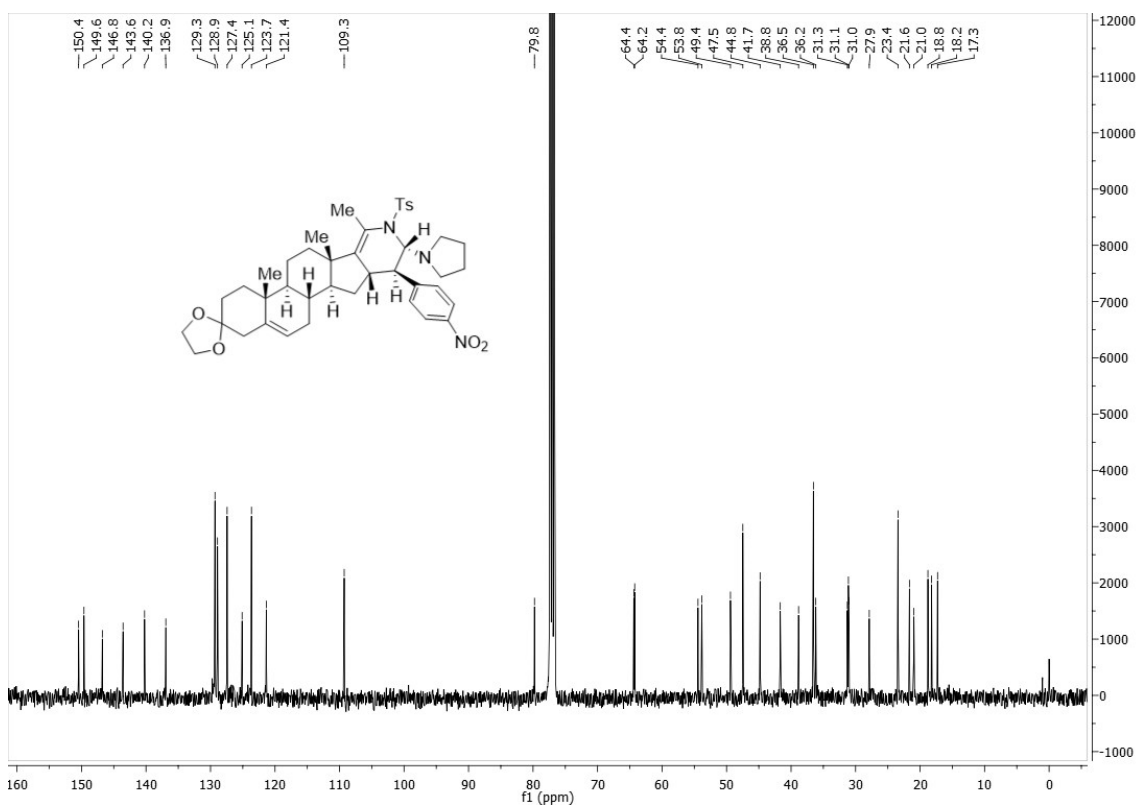
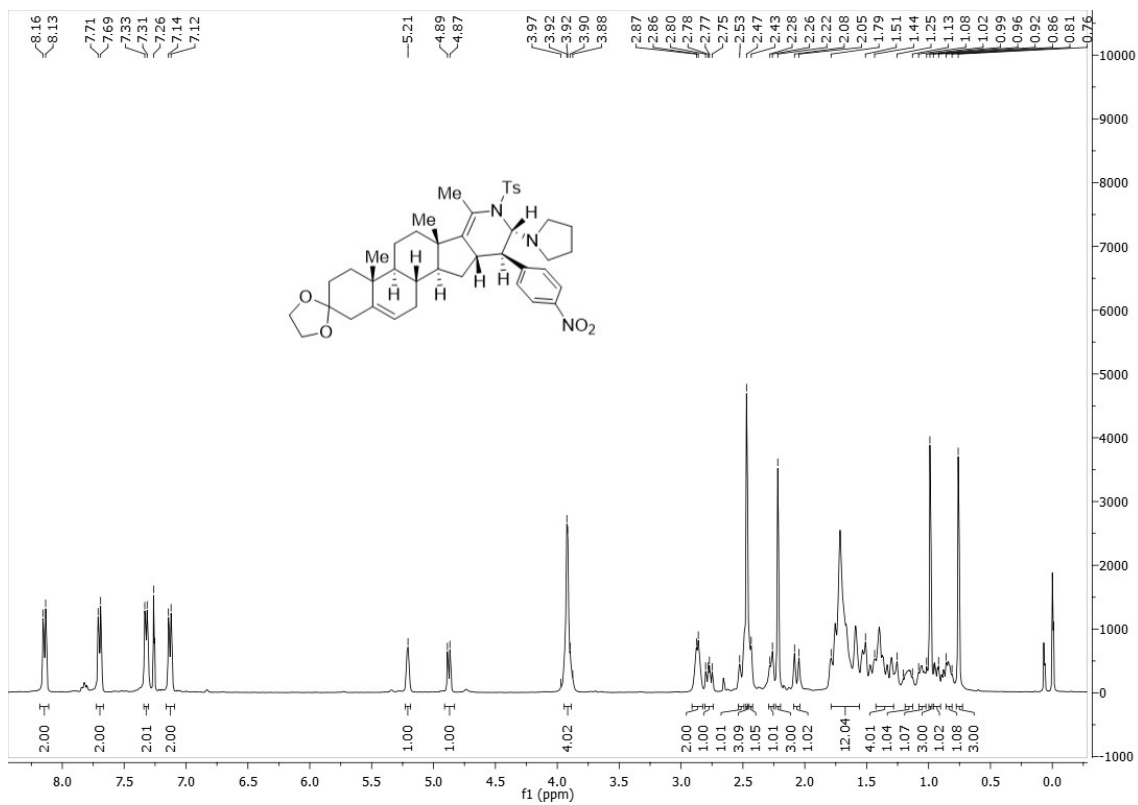


Figure S24. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **21** (CDCl₃).

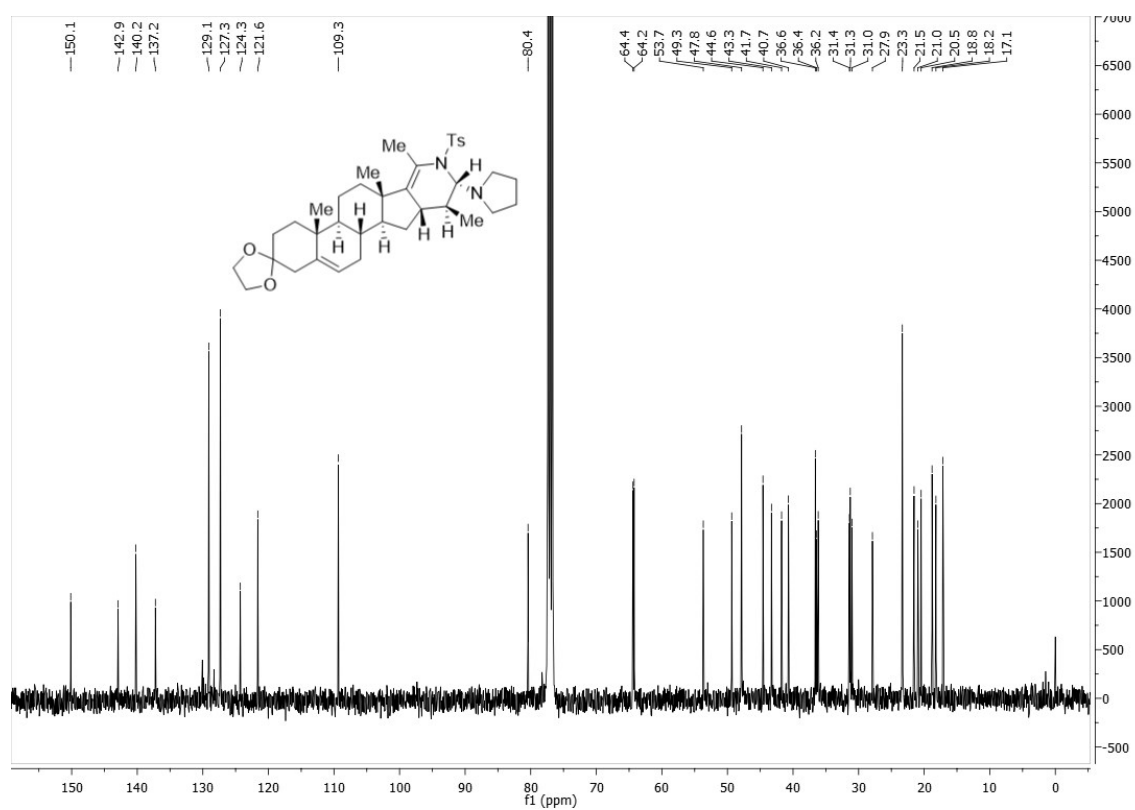
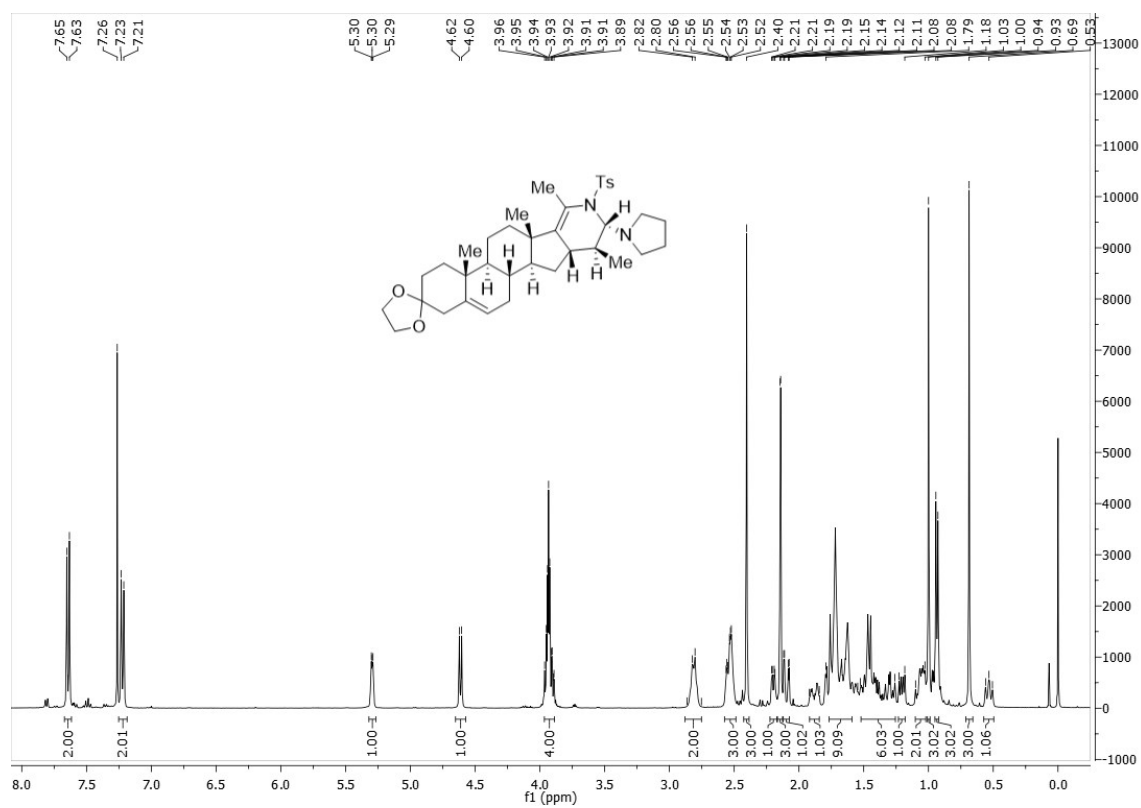


Figure S25. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **22** (CDCl₃).

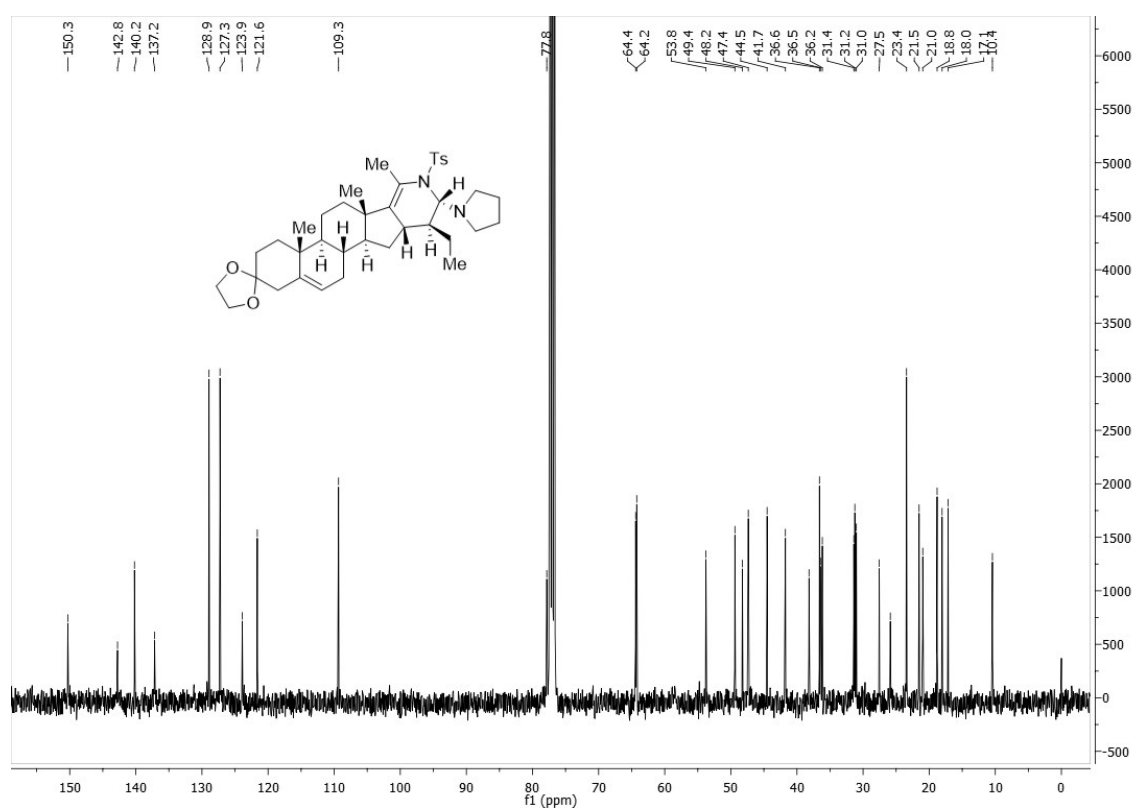
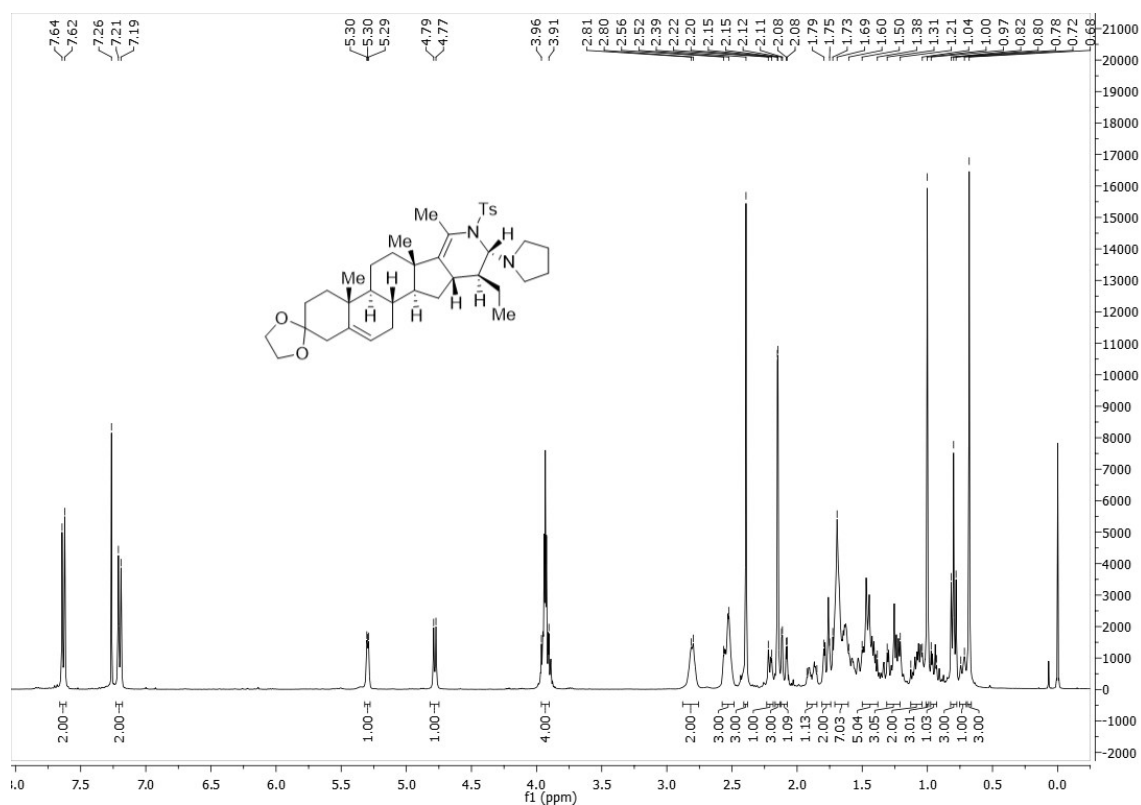


Figure S26. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **23** (CDCl₃).

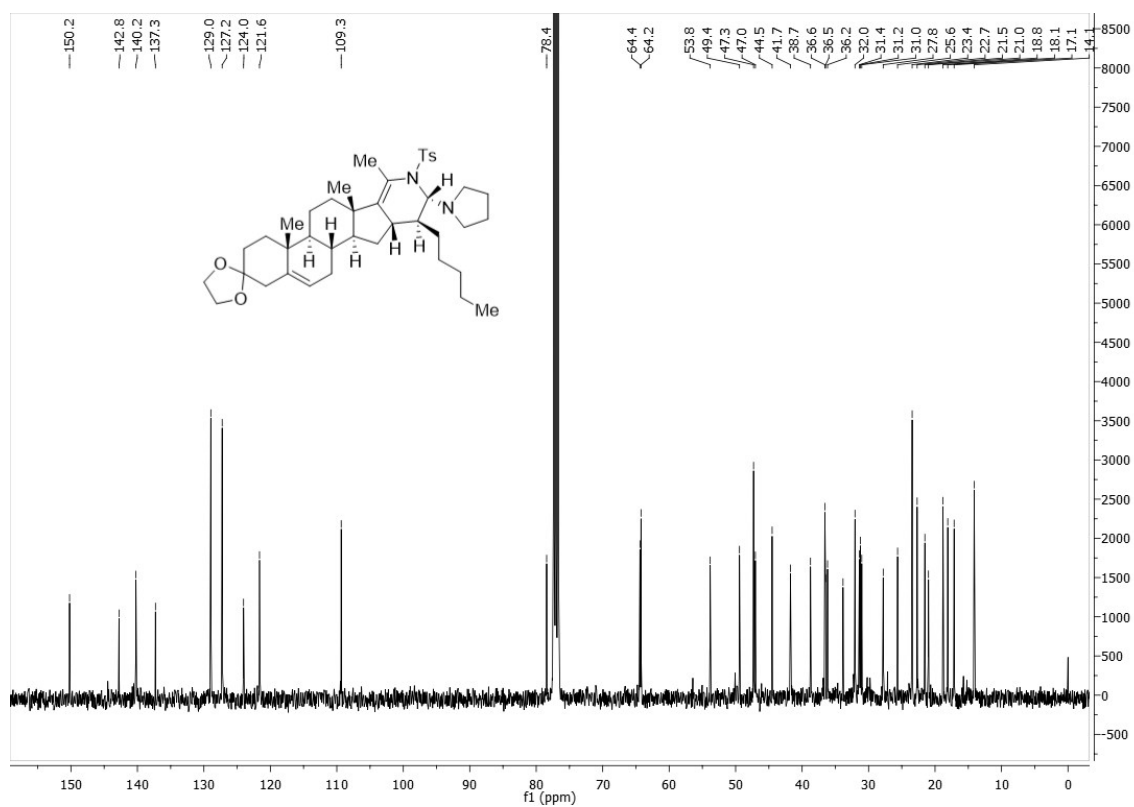
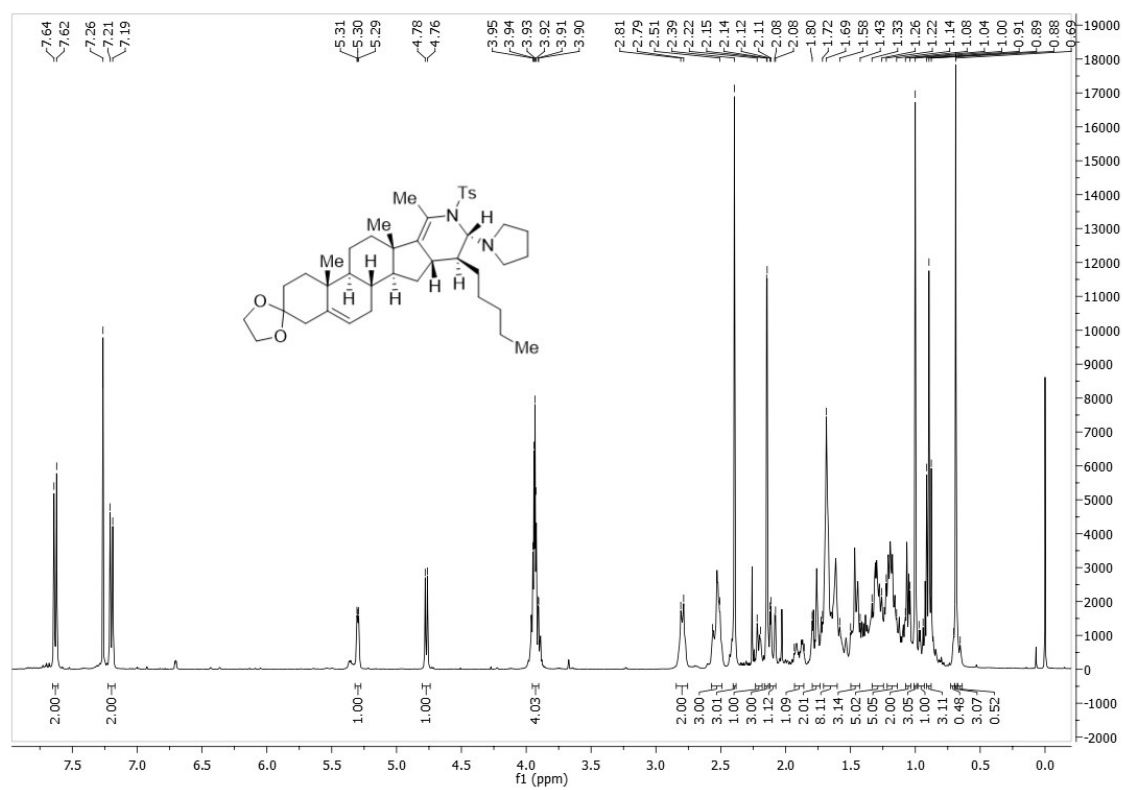


Figure S27. ¹H NMR and ¹³C NMR spectra of pentacyclic steroid **24** (CDCl₃).