



Supplementary Material

New arylethanolimidazole derivatives as HO-1 inhibitors with cytotoxicity against MCF-7 breast cancer cells

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Table S1. Elemental analysis data for compounds **2a–c**, **5a–f**, and **6a,b**.

Compd	Formula	Mw	Calcd			Found		
			C	H	N	C	H	N
2a	C ₁₁ H ₁₁ BrN ₂	251.12	52.61	4.42	11.16	52.69	4.48	11.19
2b	C ₁₈ H ₁₇ BrN ₂ O ₂	357.24	60.52	4.80	7.84	60.48	4.86	7.80
2c	C ₁₇ H ₁₆ N ₂	248.32	82.22	6.49	11.28	82.25	6.54	11.33
5a	C ₁₈ H ₁₇ BrN ₂ O ₂	373.24	57.92	4.59	7.51	57.95	4.62	7.55
5b	C ₁₈ H ₁₇ BrN ₂ O ₂	373.24	57.92	4.59	7.51	57.89	4.64	7.53
5c	C ₁₈ H ₁₇ BrN ₂ O ₂	373.24	57.92	4.59	7.51	57.96	4.64	7.56
5d	C ₁₈ H ₁₇ BrN ₂ O ₂	373.24	57.92	4.59	7.51	57.94	4.63	7.49
5e	C ₁₈ H ₁₇ BrN ₂ O ₂	373.24	57.92	4.59	7.51	57.96	4.57	7.53
5f	C ₁₈ H ₁₇ BrN ₂ O ₂	373.24	57.92	4.59	7.51	57.94	4.61	7.48
6a	C ₁₈ H ₁₆ BrClN ₂ O	391.69	55.19	4.12	7.15	55.17	4.10	7.19
6b	C ₁₈ H ₁₅ BrCl ₂ N ₂ O	426.13	50.73	3.55	6.57	50.77	3.59	6.53

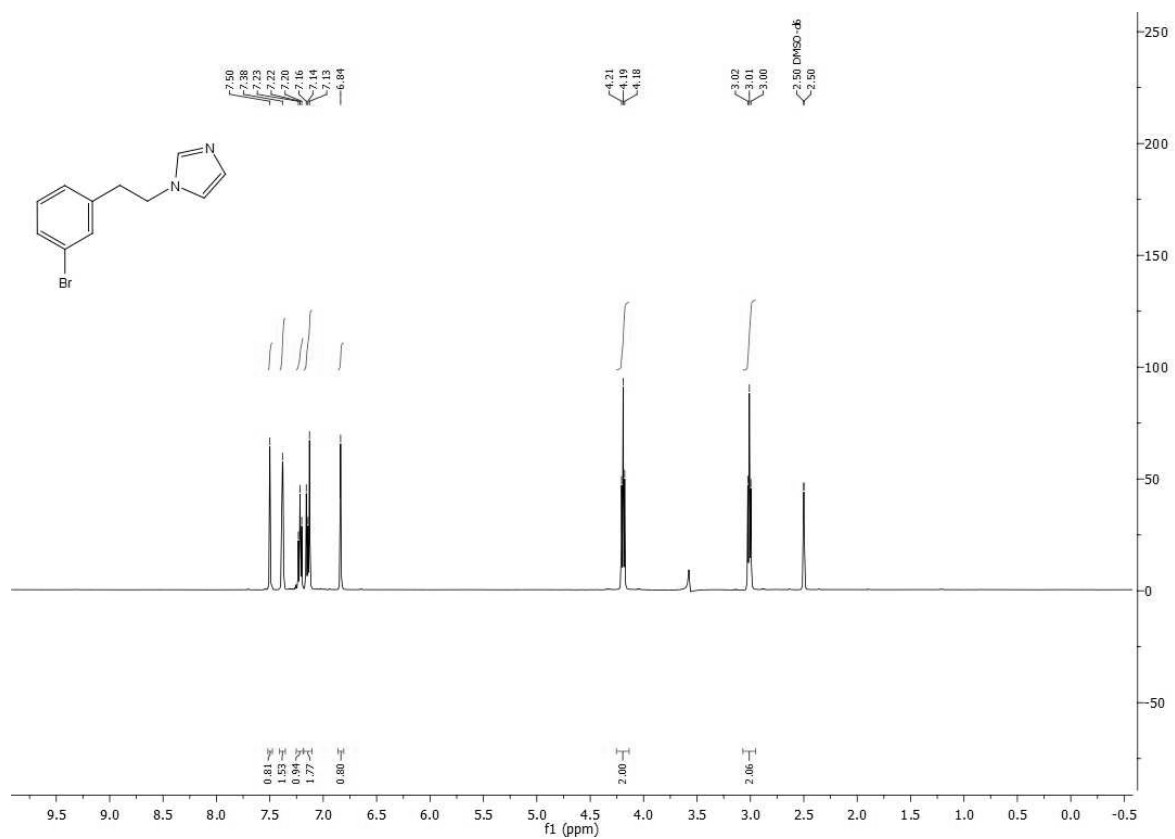


Figure S1. ^1H NMR of compound 2a.

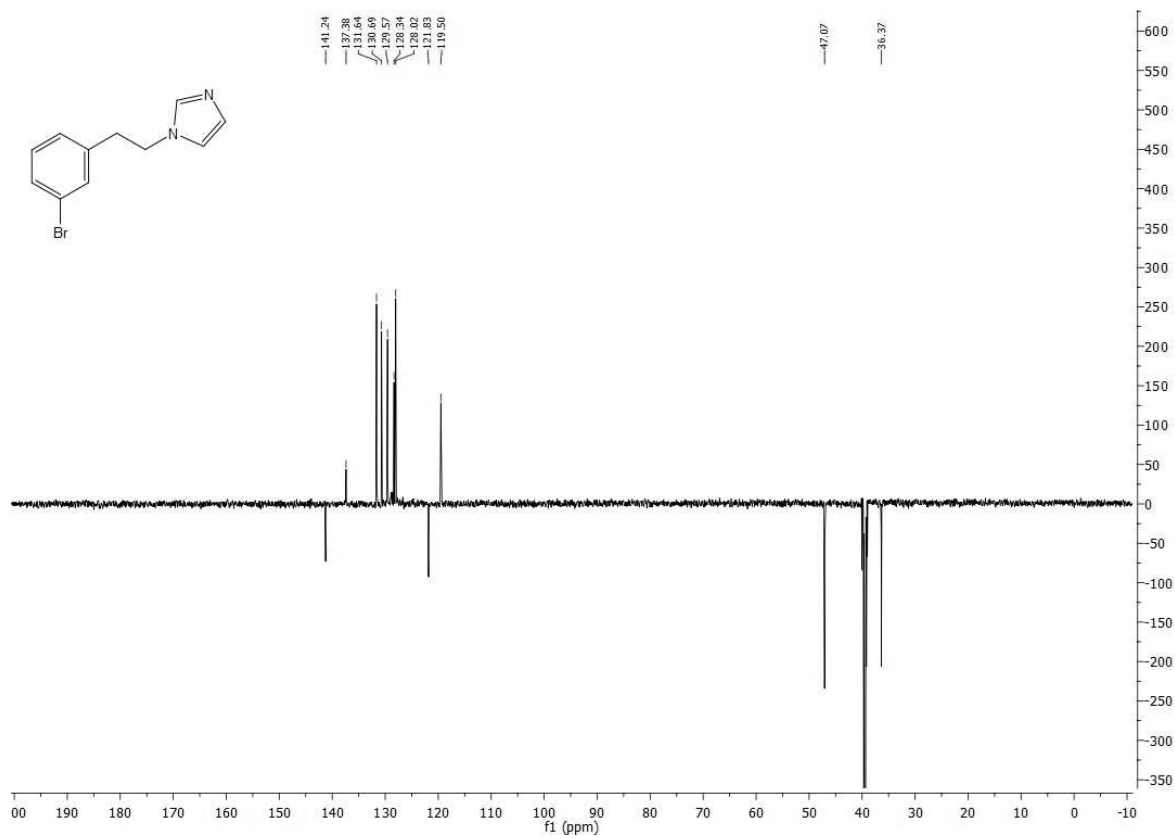
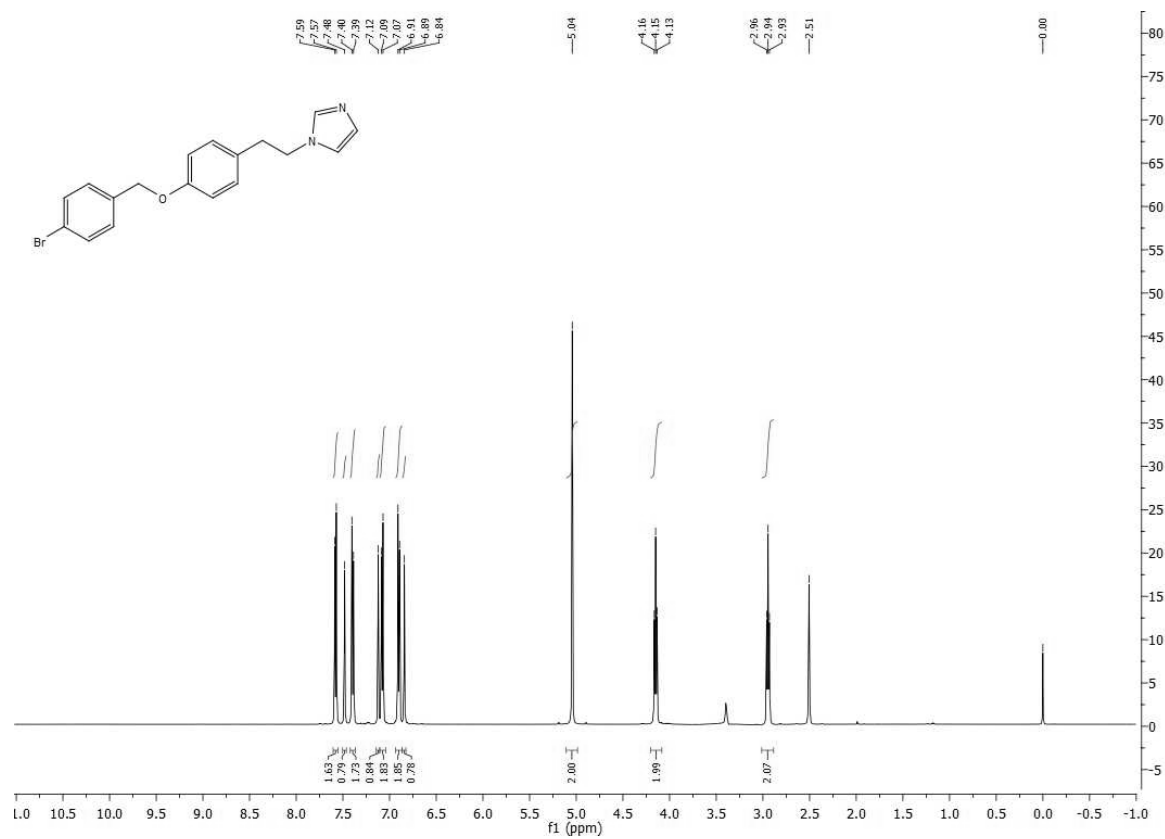
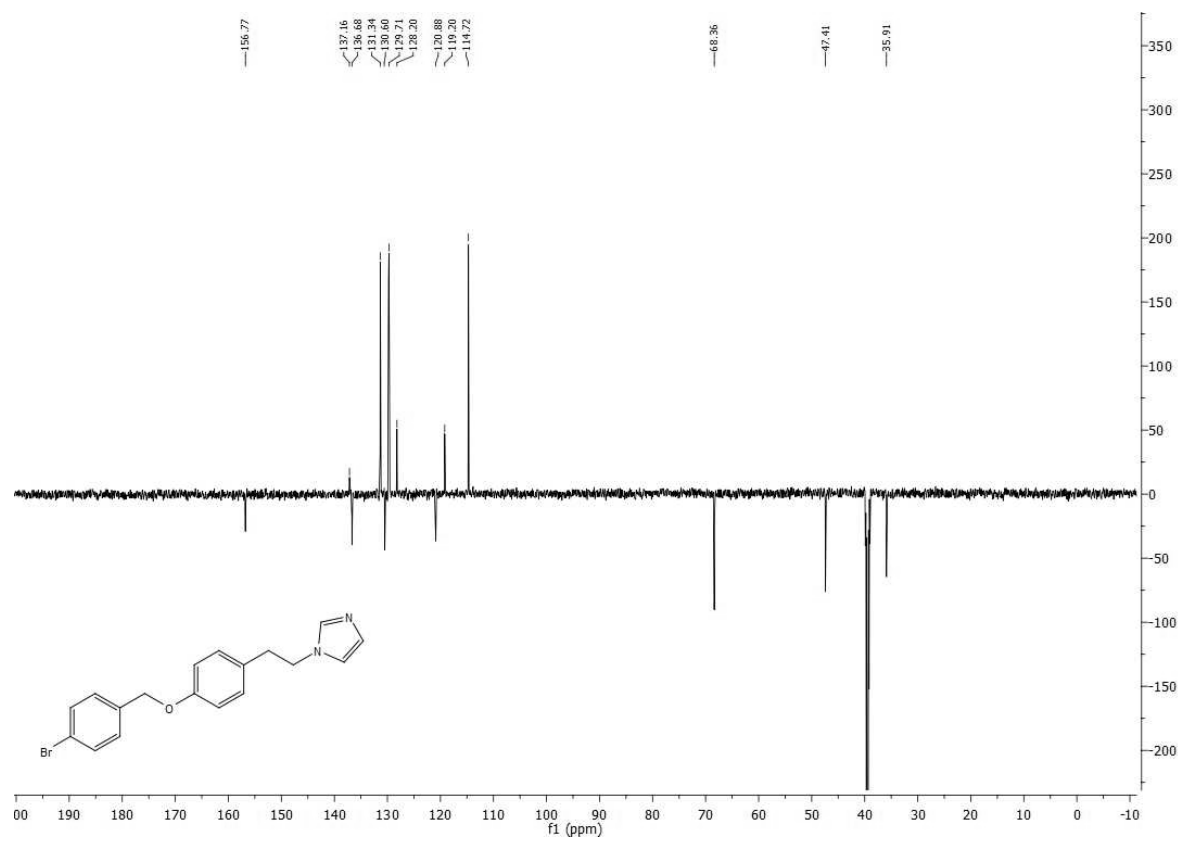
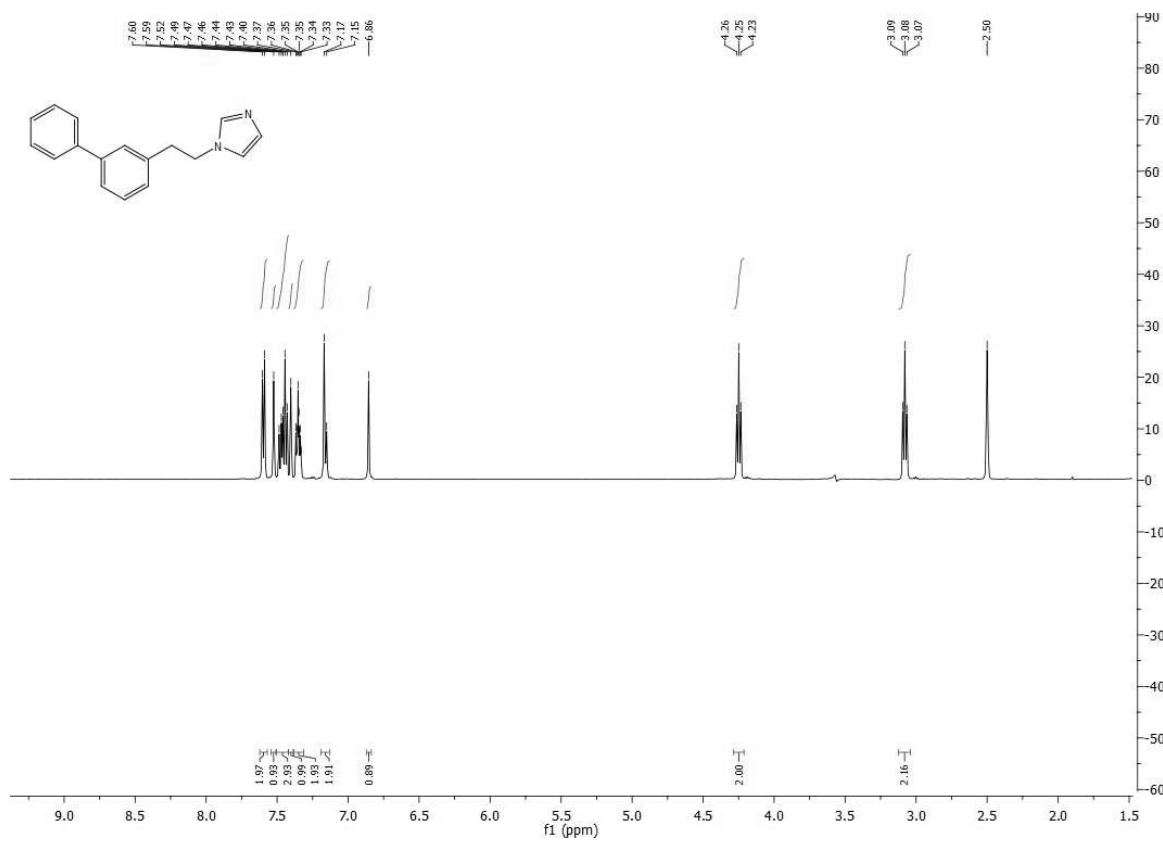
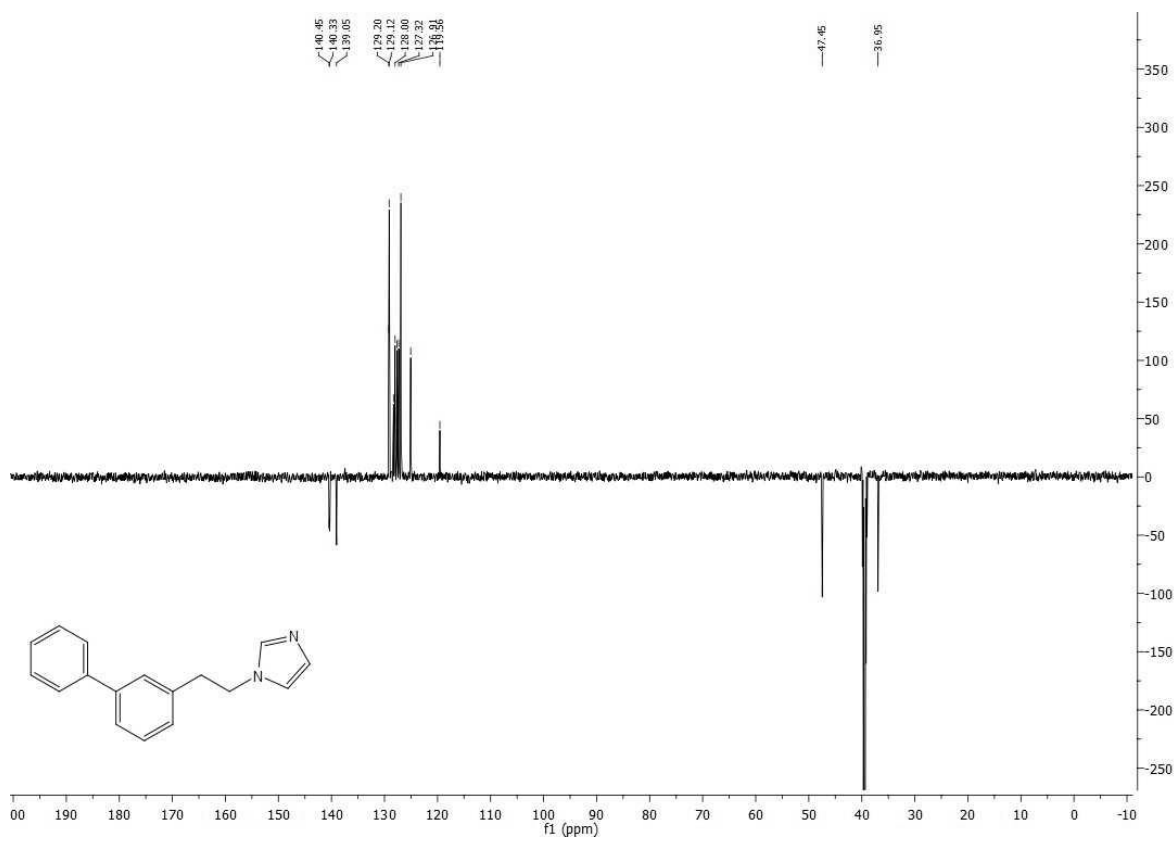
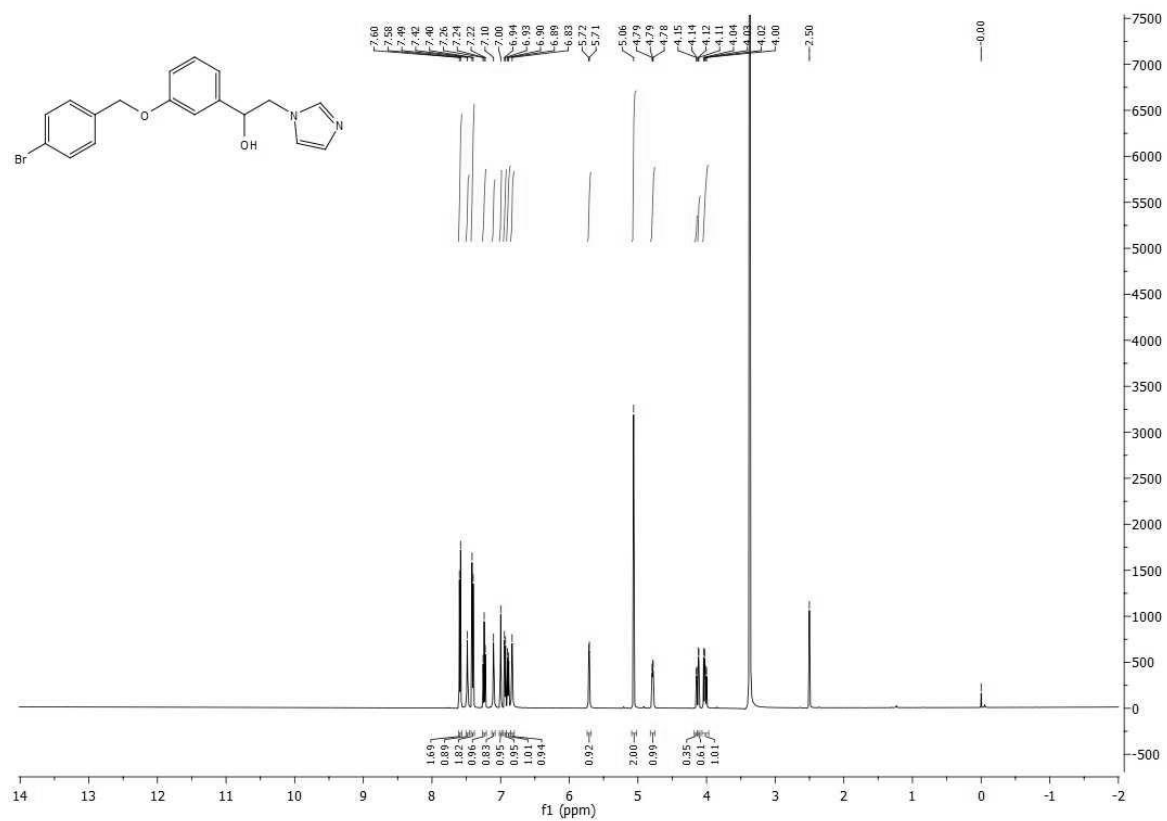
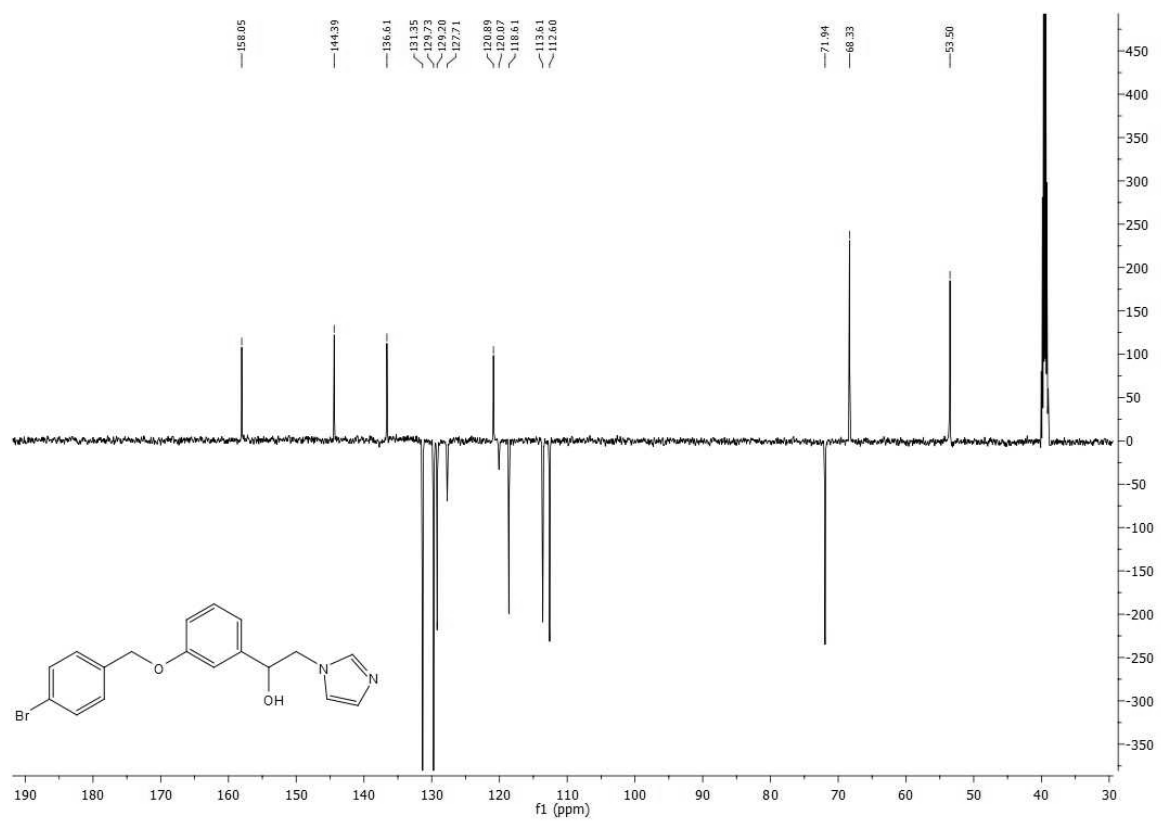
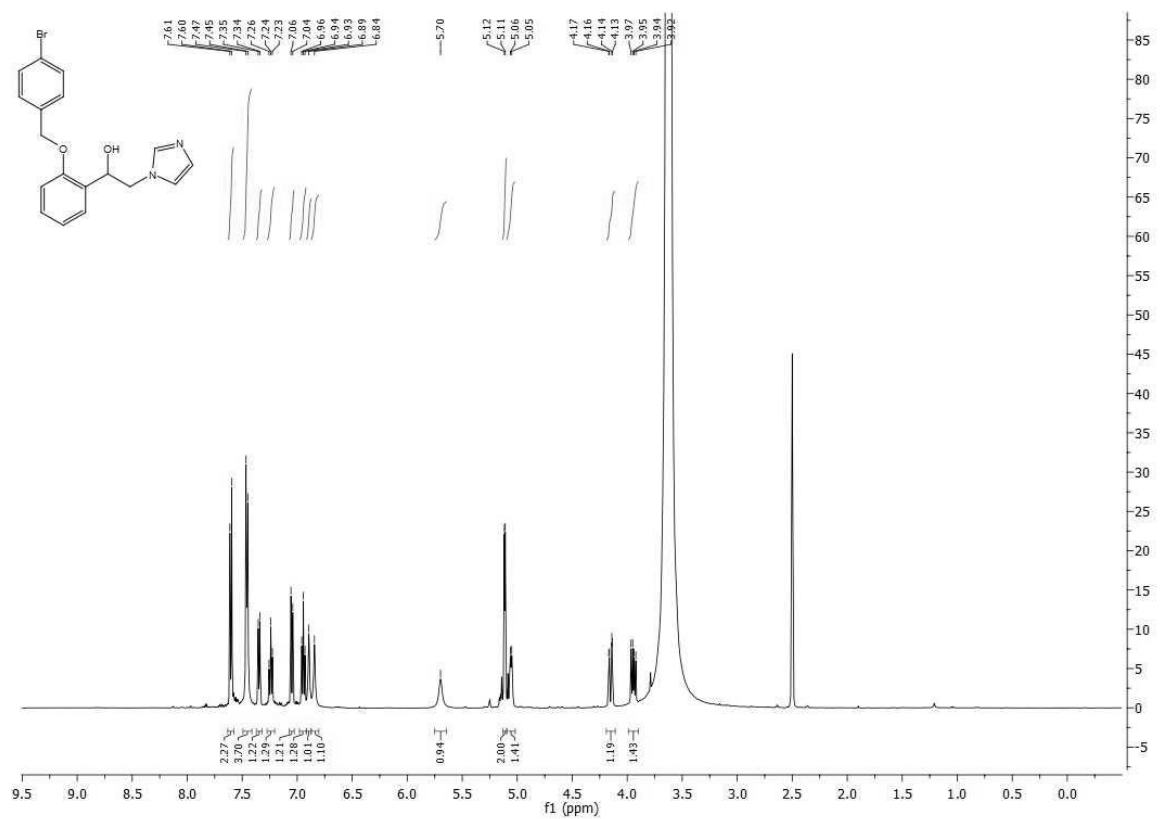
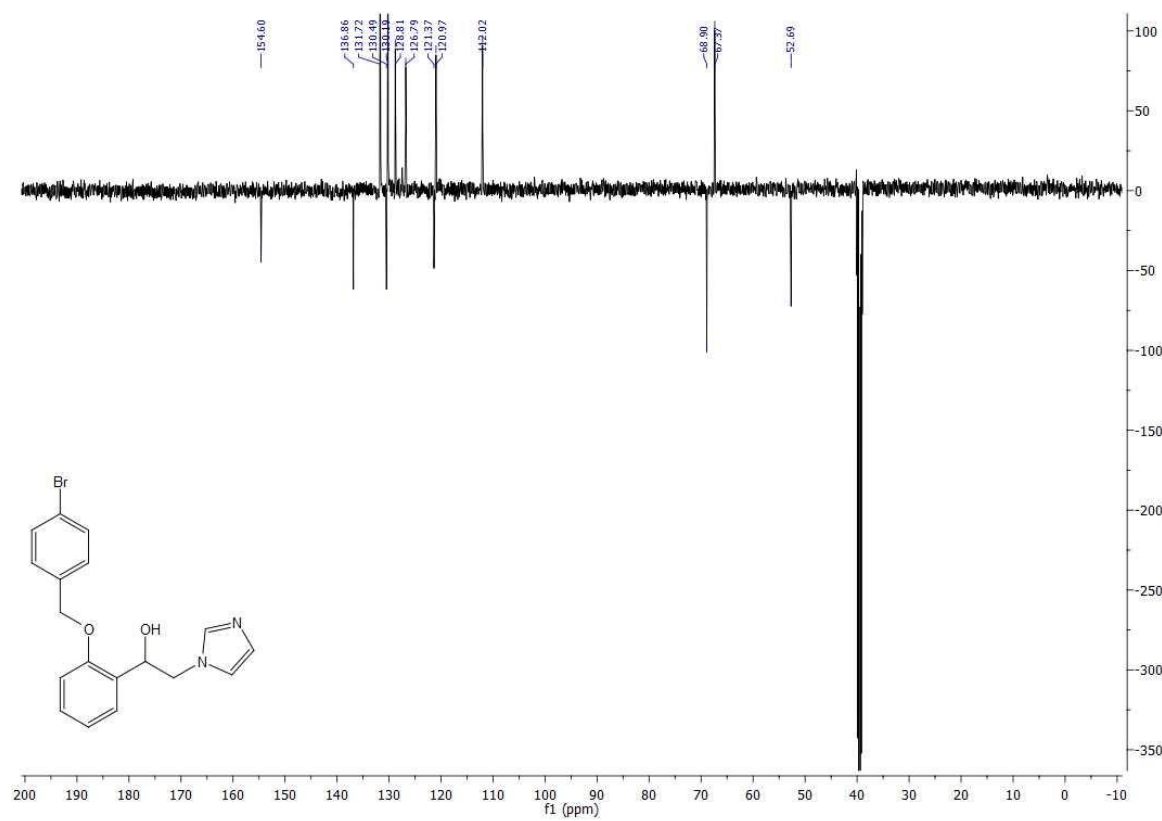


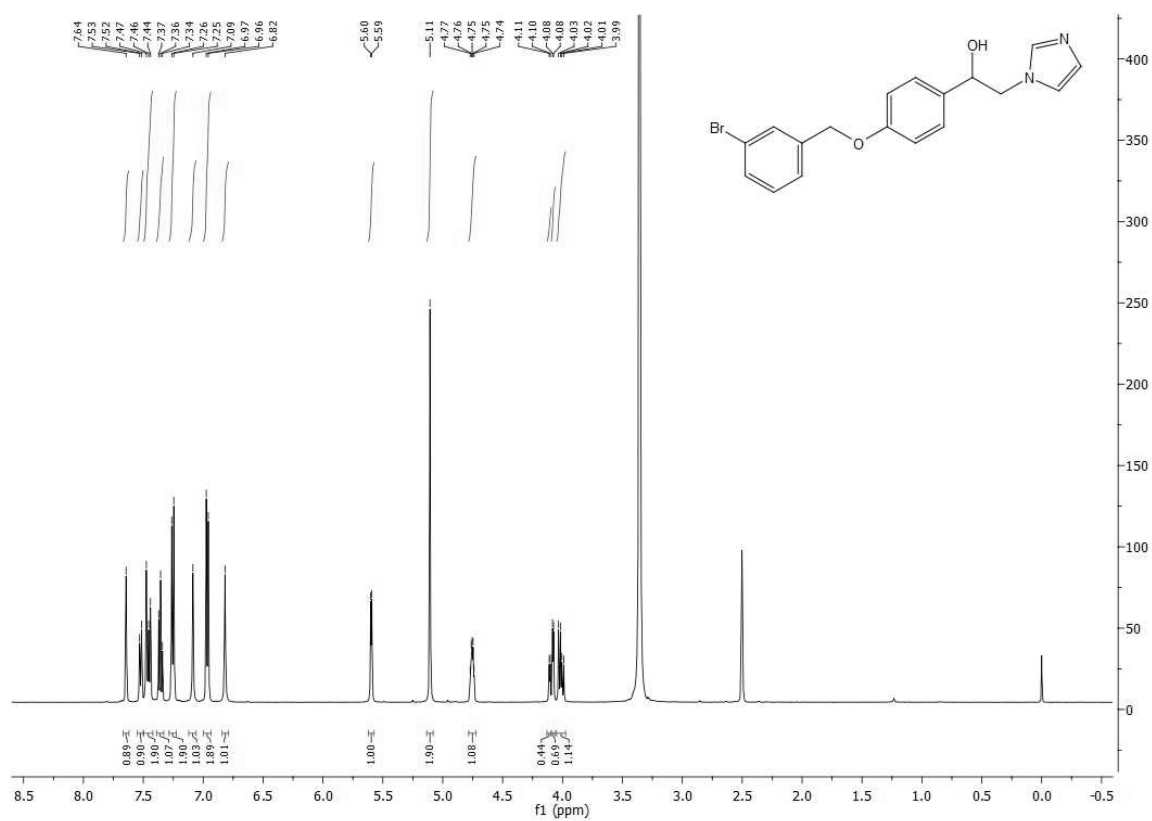
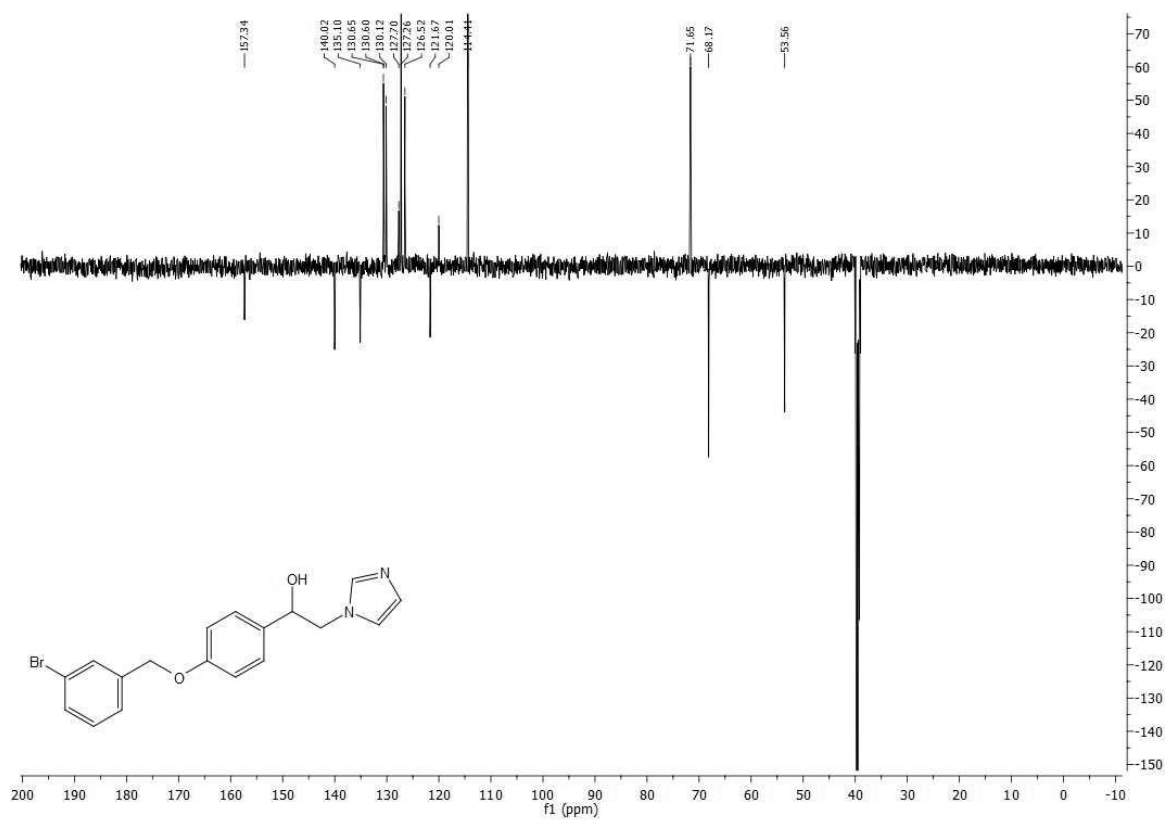
Figure S2. ^{13}C NMR of compound 2a.

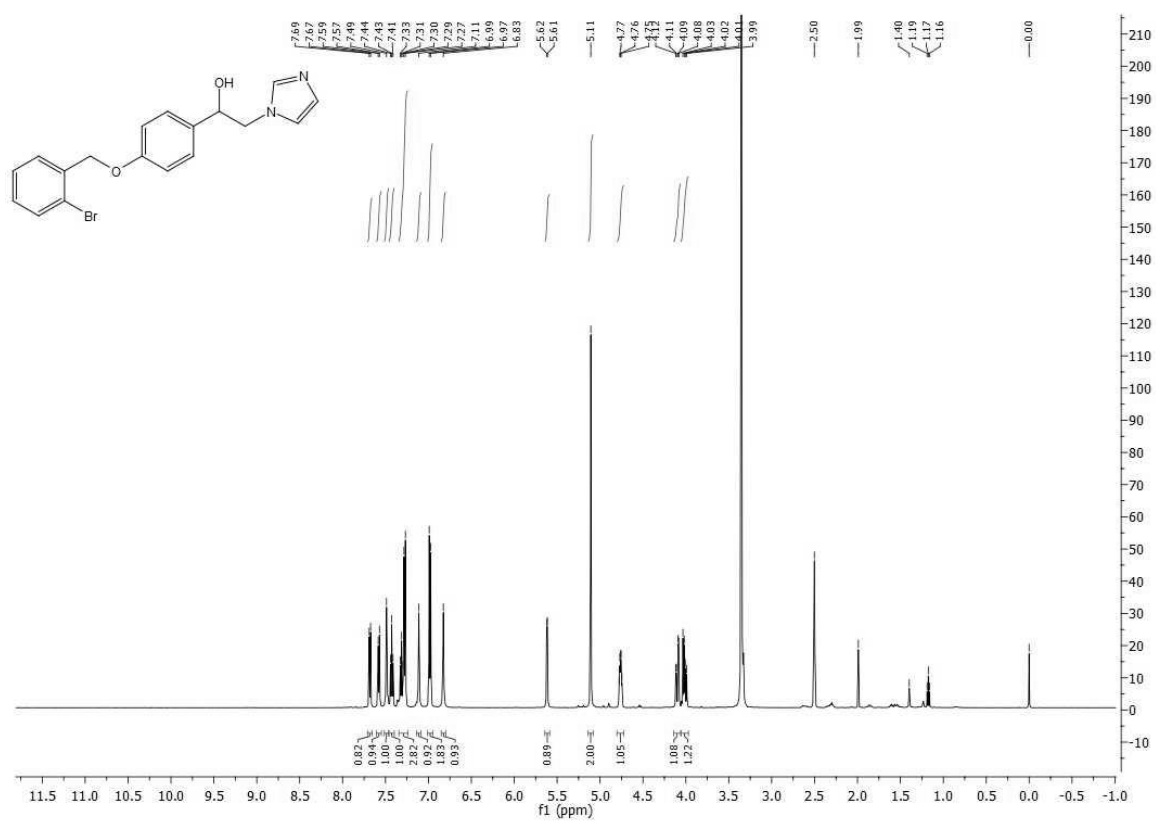
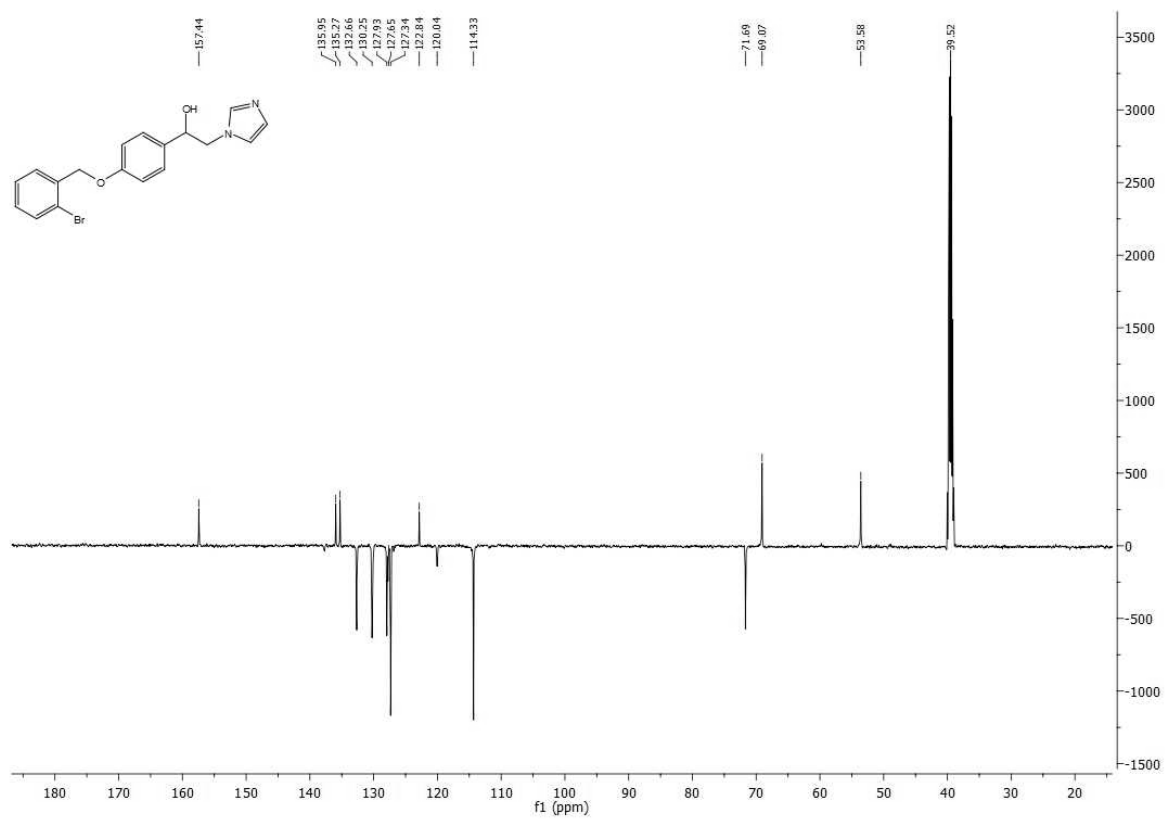
Figure S3. ¹H NMR of compound 2b.Figure S4. ¹³C NMR of compound 2b.

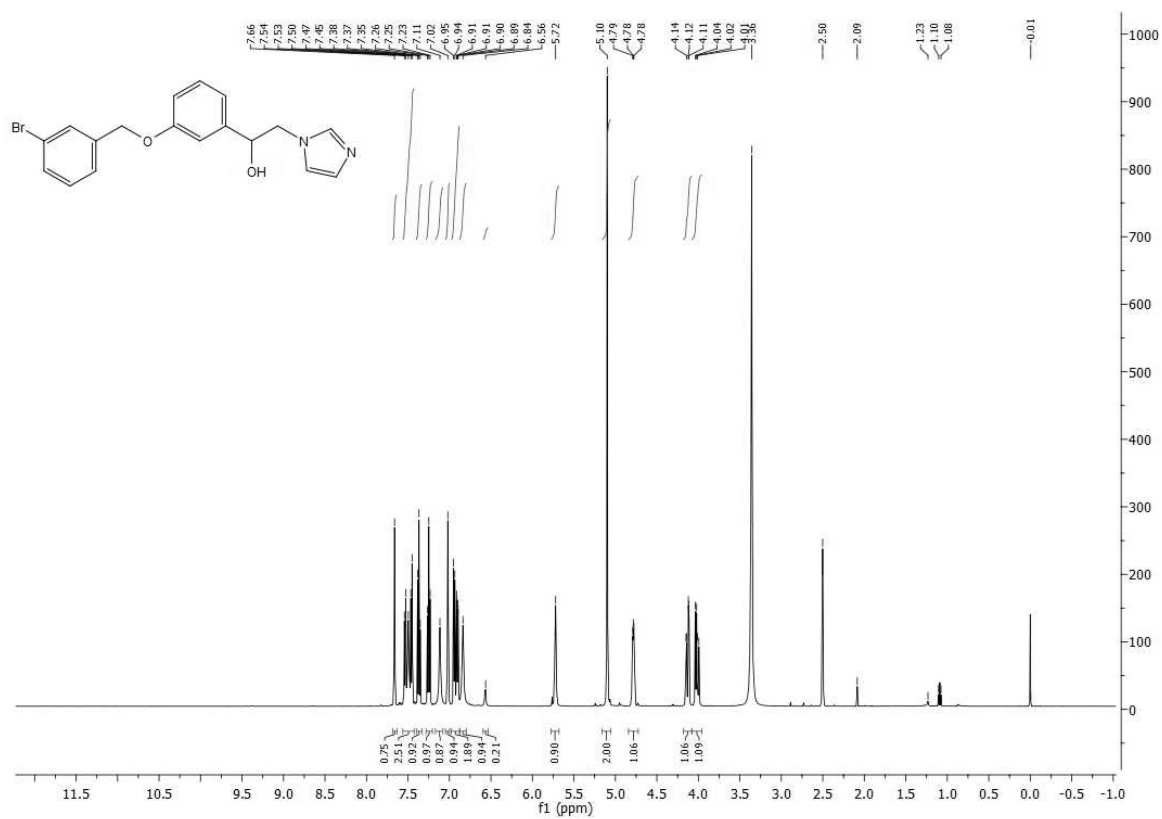
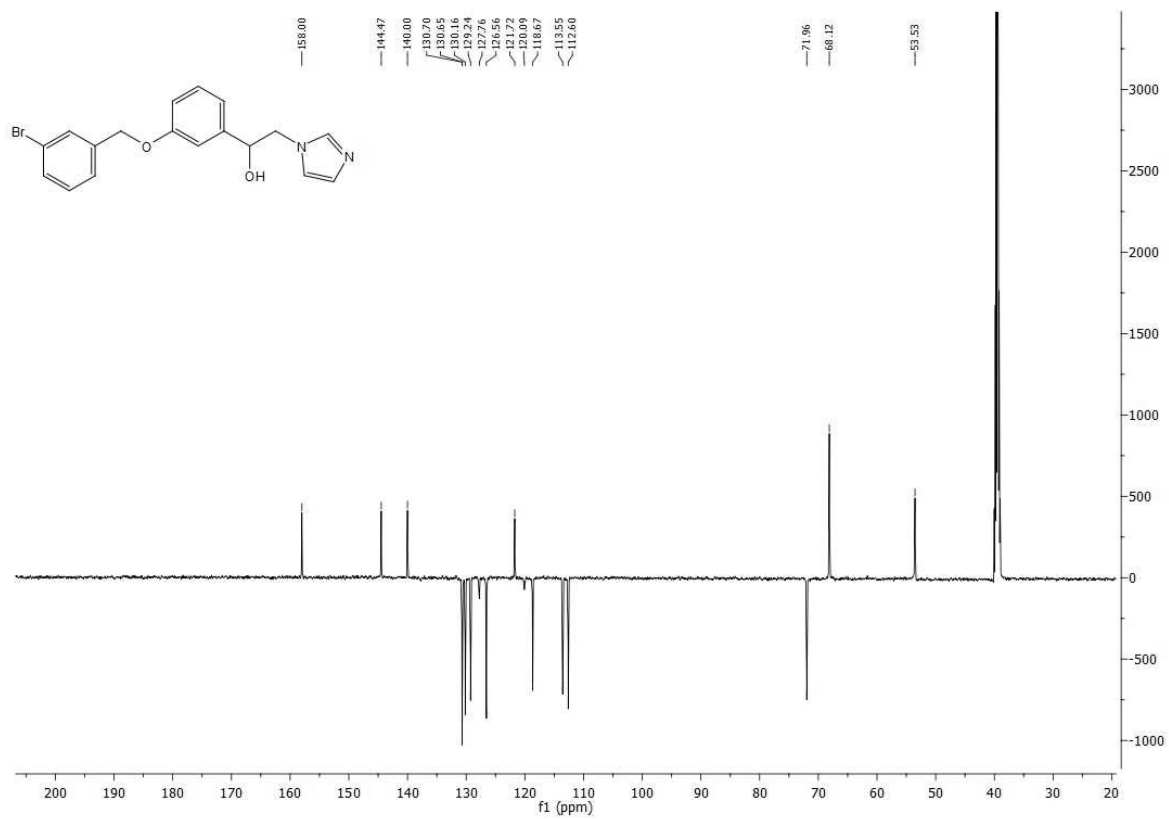
Figure S5. ¹H NMR of compound 2c.Figure S6. ¹³C NMR of compound 2c.

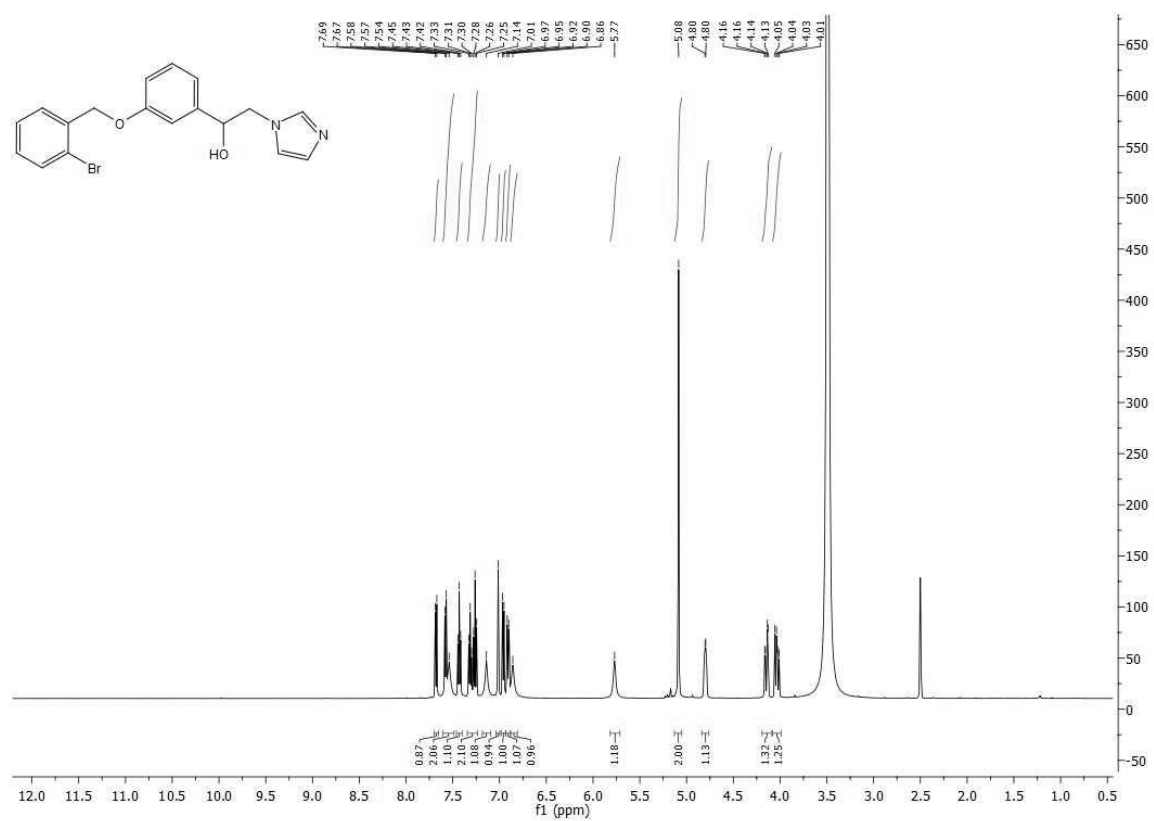
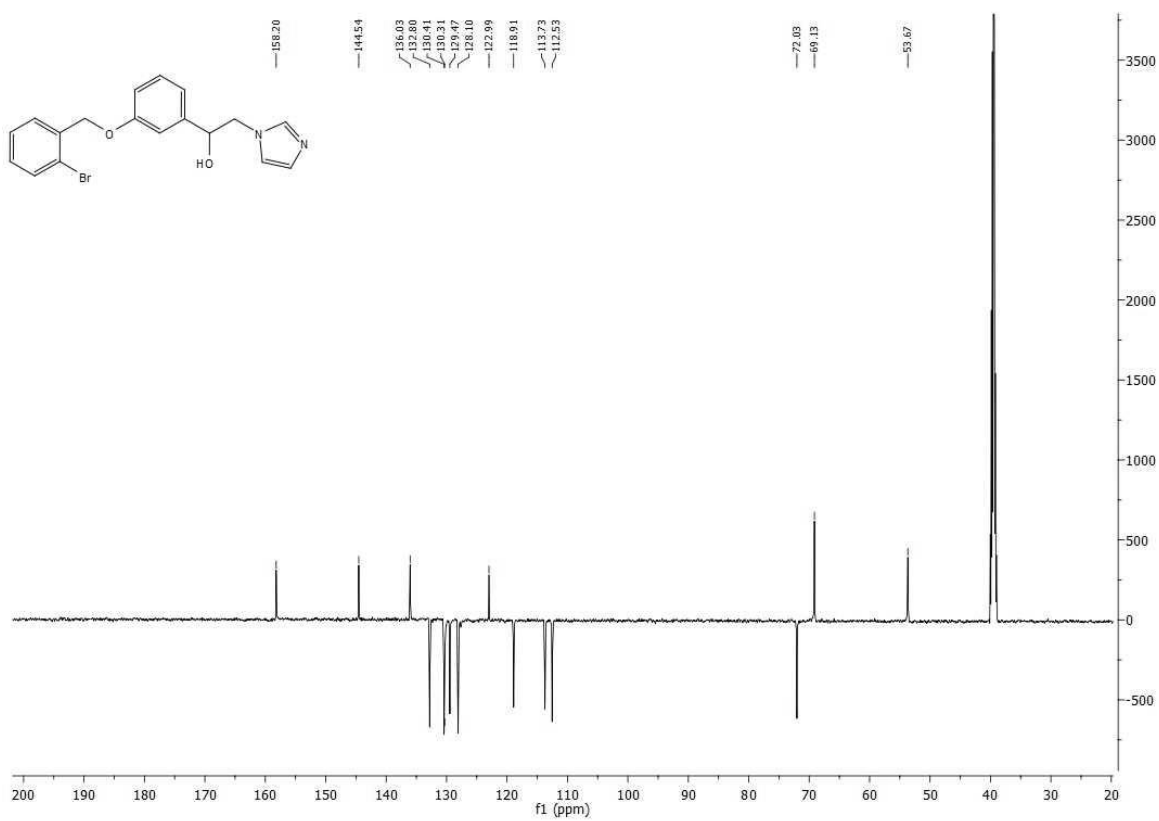
Figure S7. ¹H NMR of compound 5a.Figure S8. ¹³C NMR of compound 5a.

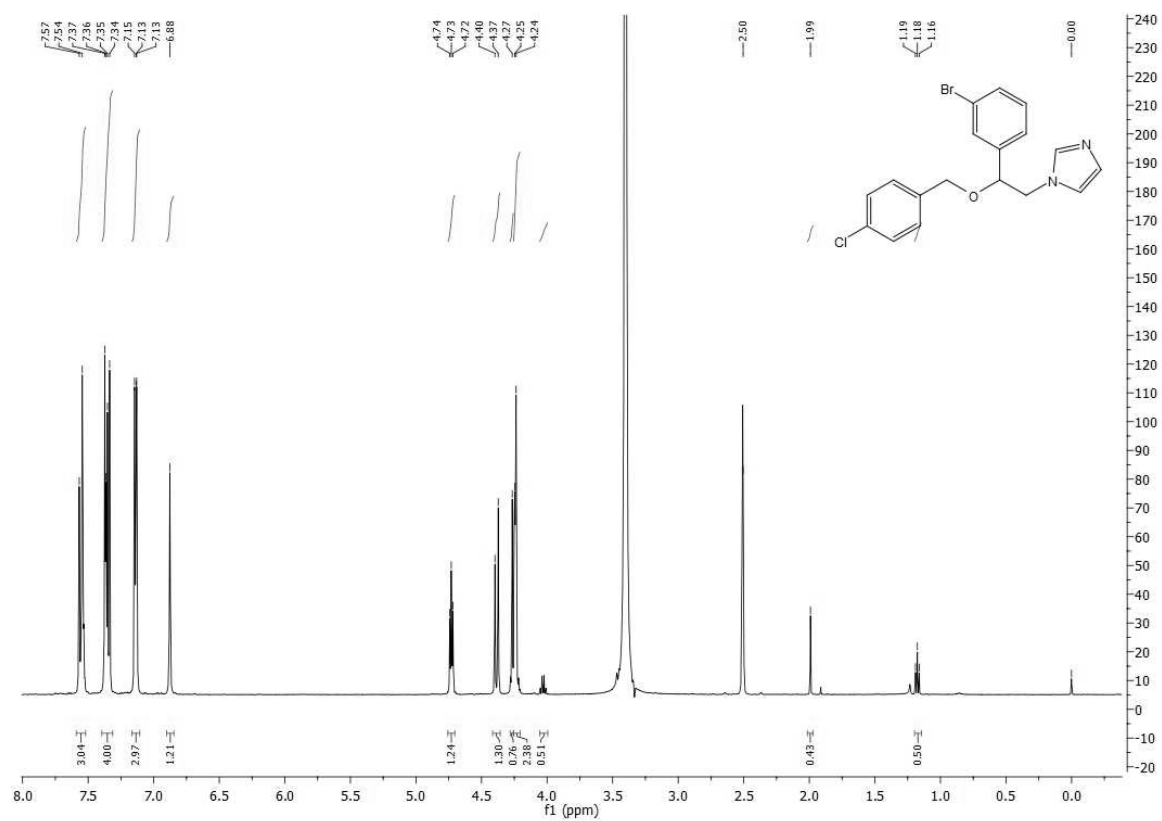
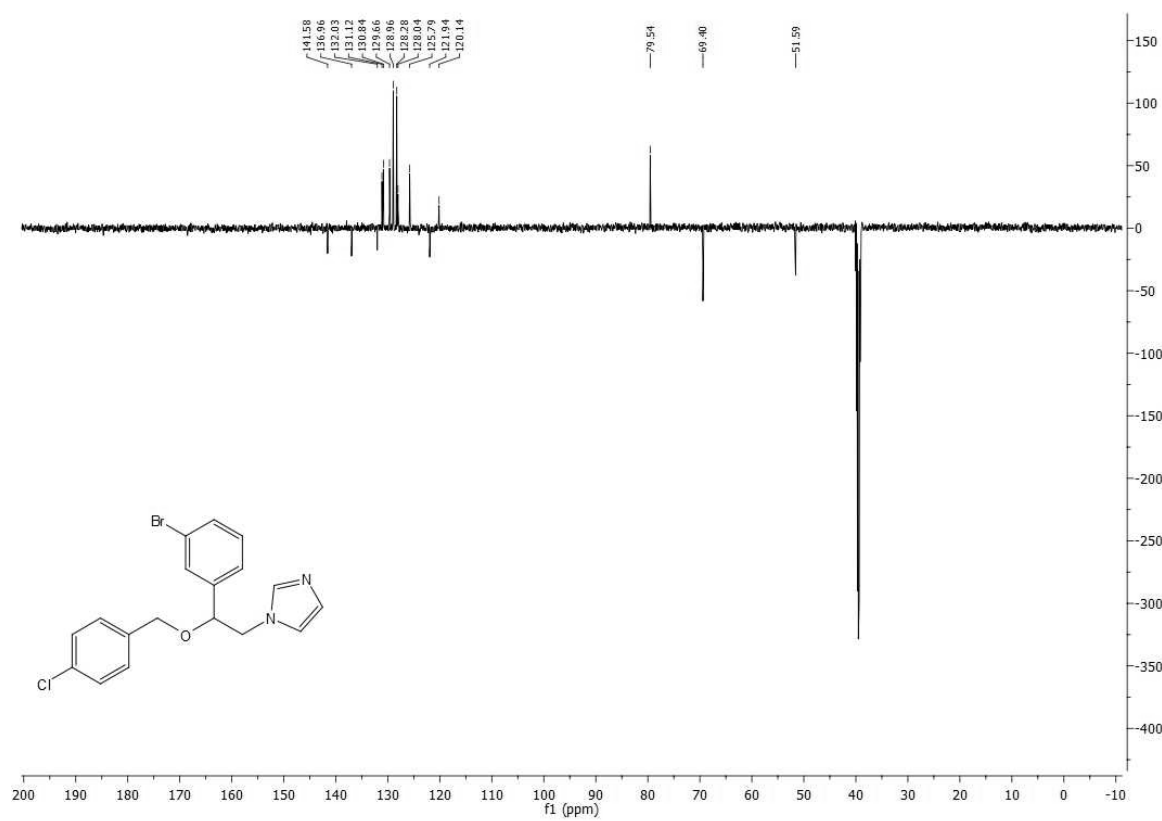
Figure S9. ¹H NMR of compound 5b.Figure S10. ¹³C NMR of compound 5b.

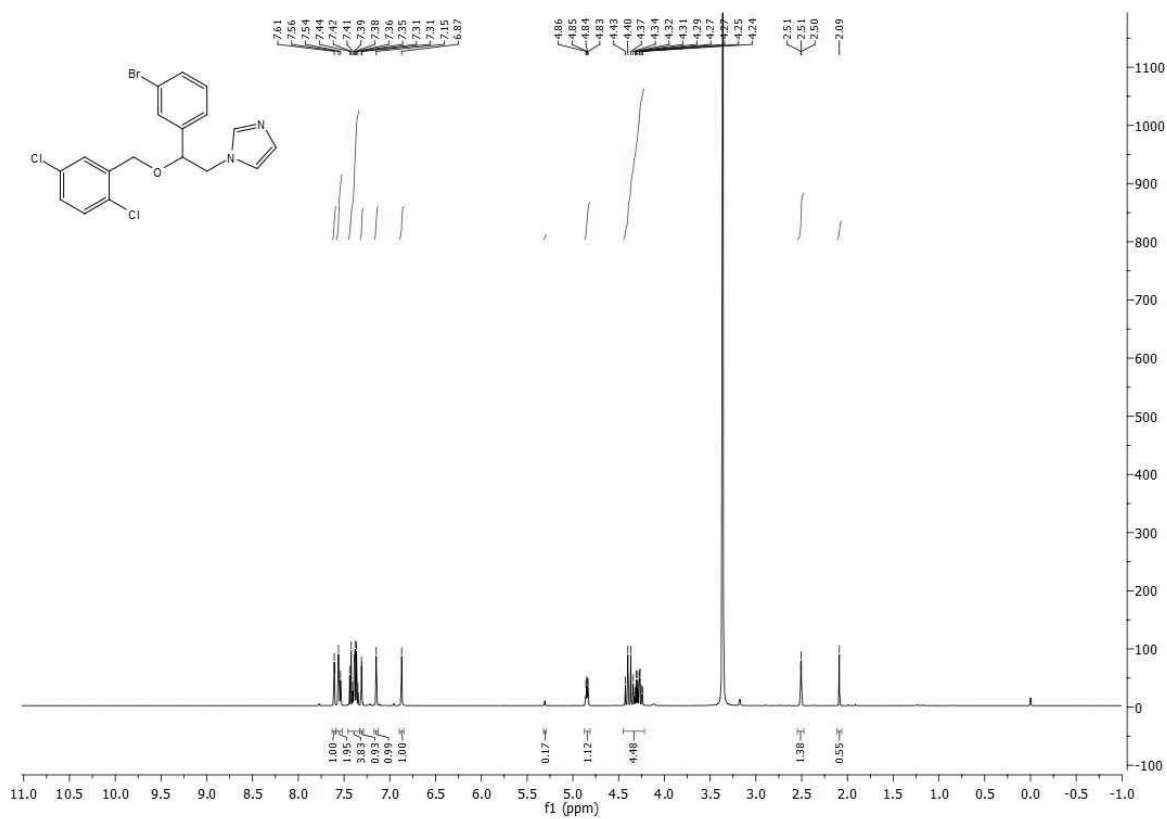
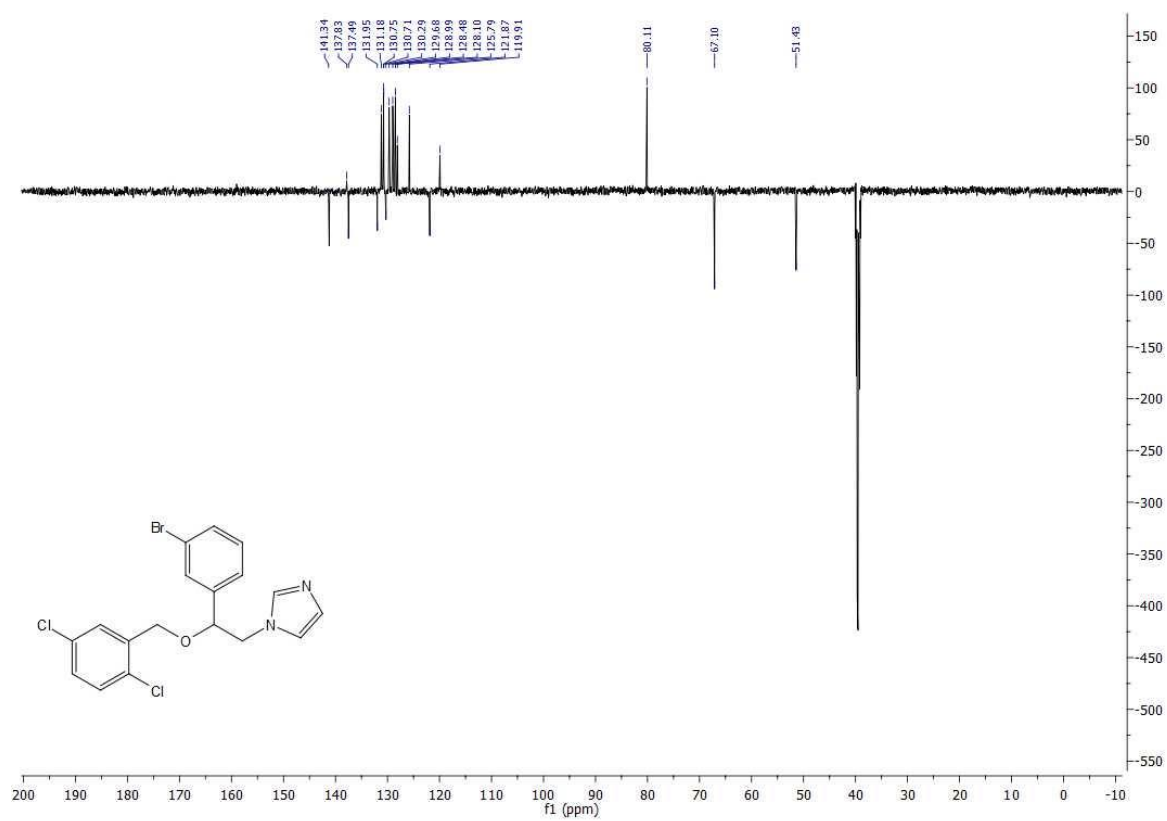
Figure S11. ¹H NMR of compound 5c.Figure S12. ¹³C NMR of compound 5c.

Figure S13. ^1H NMR of compound 5d.Figure S14. ^{13}C NMR of compound 5d.

Figure S15. ¹H NMR of compound 5e.Figure S16. ¹³C NMR of compound 5e.

Figure S17. ¹H NMR of compound 5f.Figure S18. ¹³C NMR of compound 5f.

Figure S19. ^1H NMR of compound 6a.Figure S20. ^{13}C NMR of compound 6a.

Figure S21. ¹H NMR of compound 6b.Figure S22. ¹³C NMR of compound 6b.

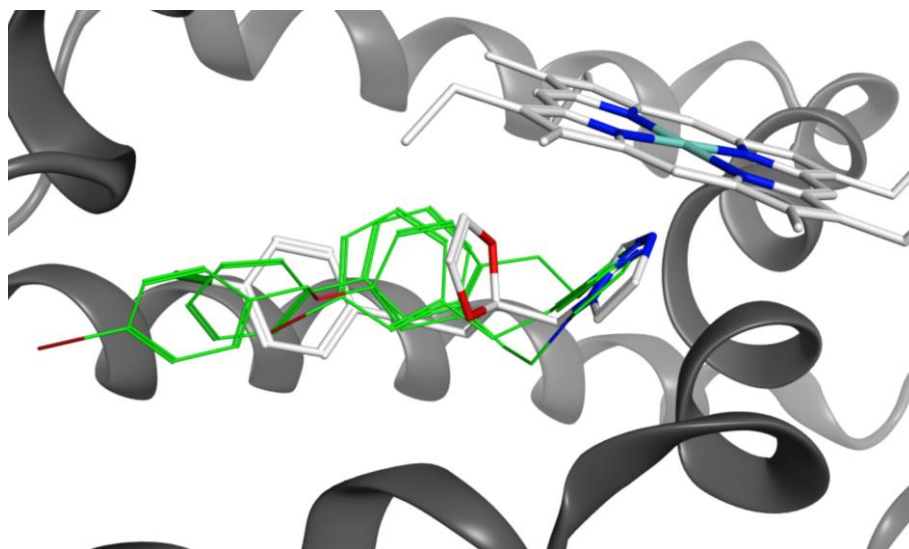


Figure S23. Binding poses of molecules **2a–c** (green) compared to the crystallized pose of QC-15 (white).

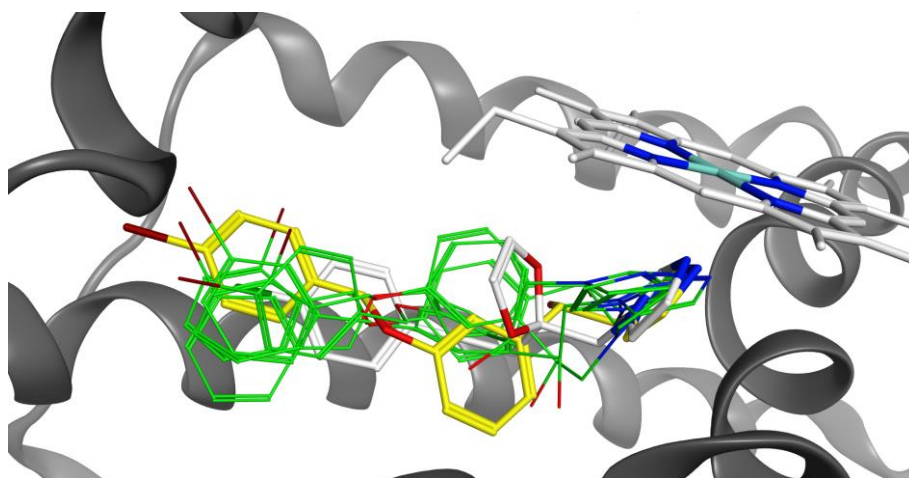


Figure S24. Binding poses of molecules **5b–f** (green) compared to the crystallized pose of QC-15 (white). In yellow the binding pose of the most potent compound **5a**.

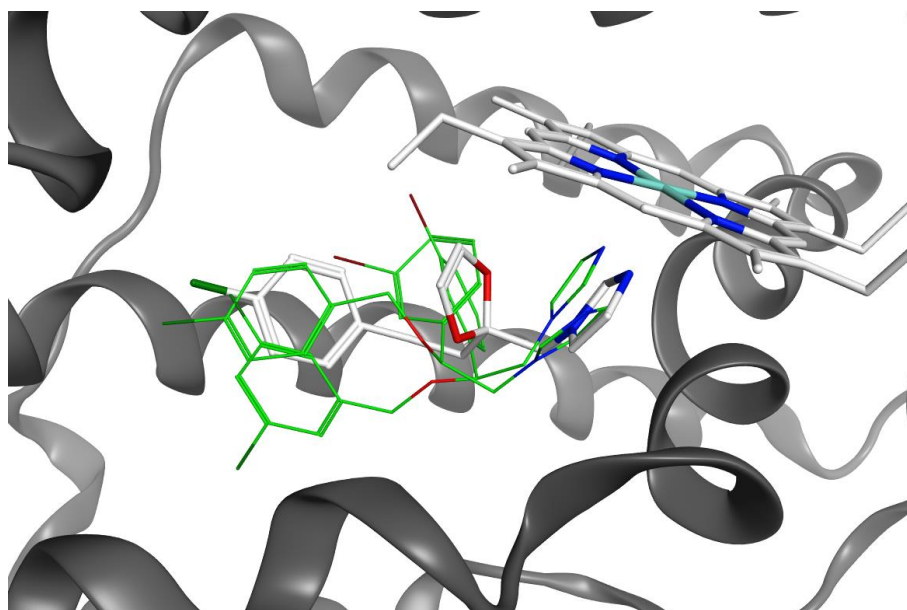


Figure S25. Binding poses of molecules **6a, b** (green) compared to the crystallized pose of QC-15 (white).

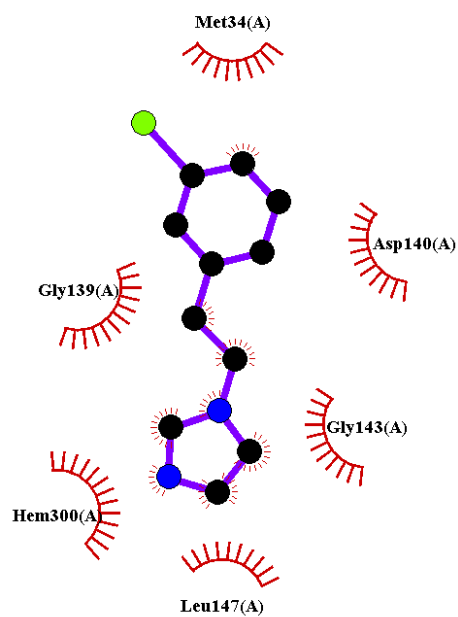


Figure S26. 2D representations of HO-1-molecule **2a** complex.

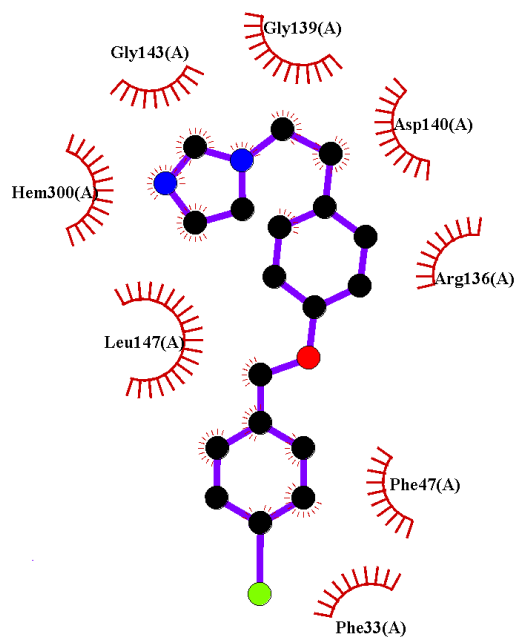


Figure S7. 2D representations of HO-1-molecule **2b** complex.

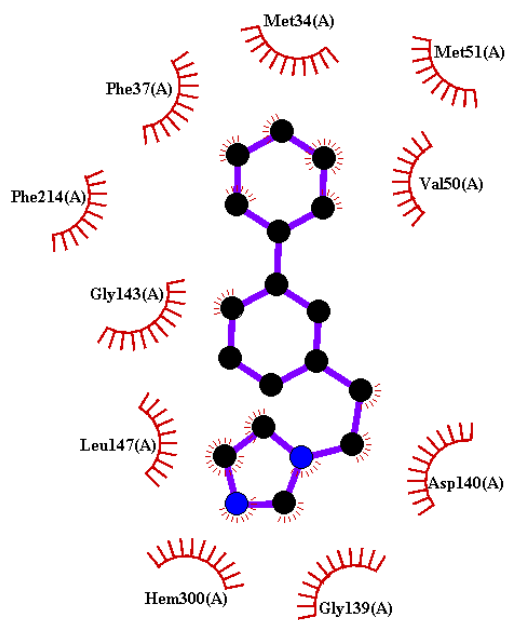


Figure S28. 2D representations of HO-1-molecule **2c** complex.

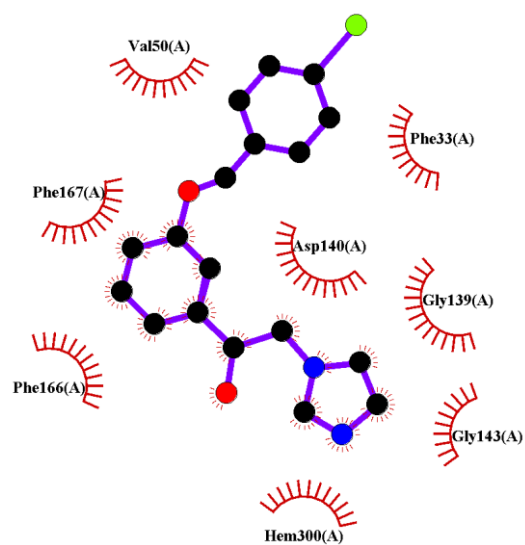


Figure S29. 2D representations of HO-1-molecule **5a** complex.

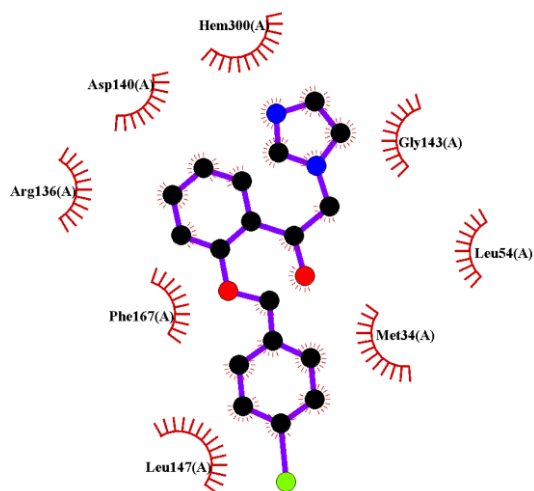


Figure S30. 2D representations of HO-1-molecule **5b** complex.

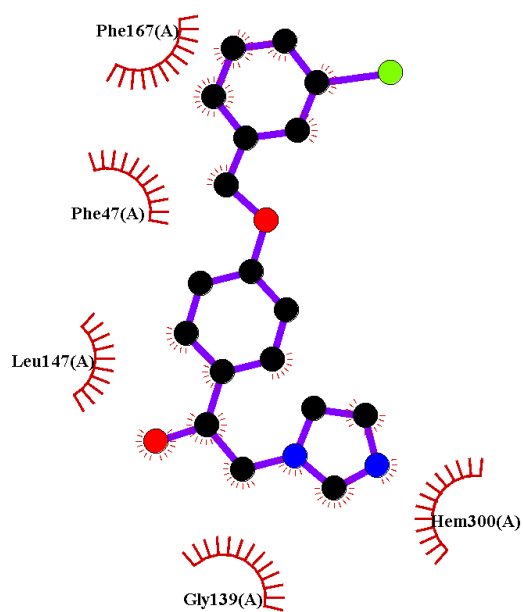


Figure S31. 2D representations of HO-1-molecule **5c** complex.

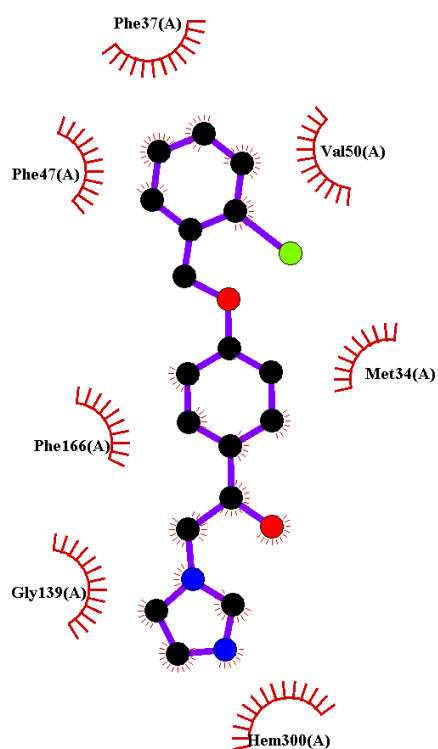


Figure S32. 2D representations of HO-1-molecule **5d** complex.

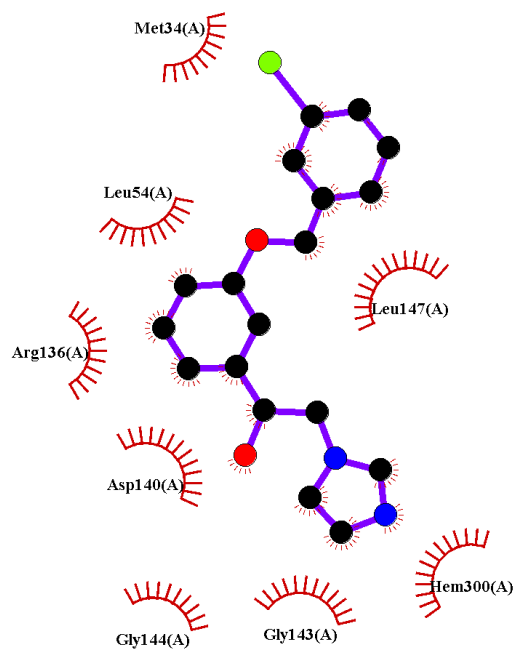


Figure S33. 2D representations of HO-1-molecule **5e** complex.

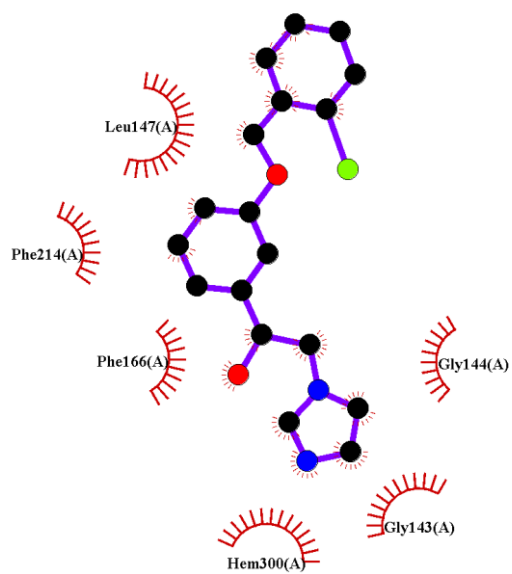


Figure S34. 2D representations of HO-1-molecule **5f** complex.

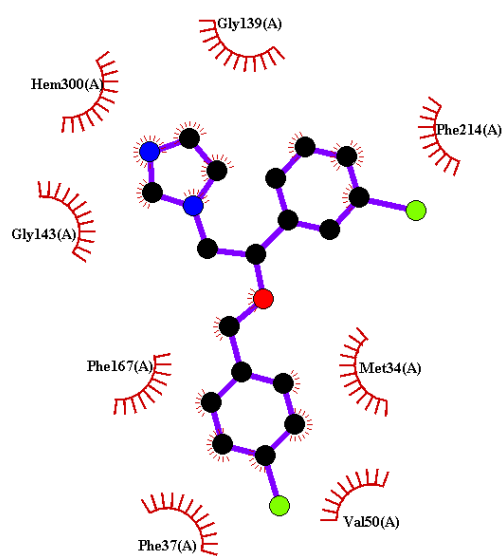


Figure S35. 2D representations of HO-1-molecule 6a complex.

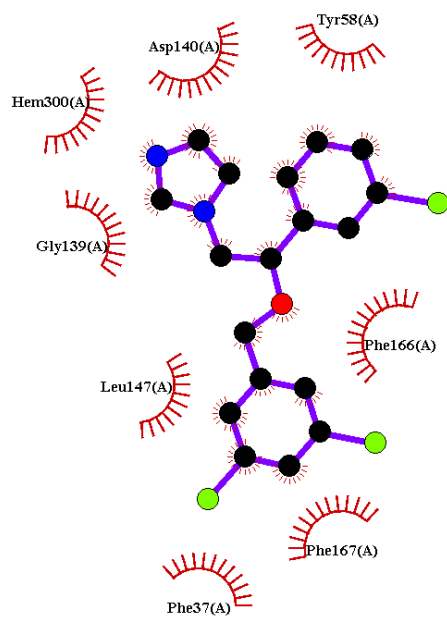


Figure S36. 2D representations of HO-1-molecule 6b complex.