Supplementary Information

Synthesis and biological evaluation of novel N^9 -heterobivalent β -carbolines as angiogenesis inhibitors

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Figure S3 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 4c



Figure S4 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 4d



Figure S5 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 4e



Figure S6 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 4f



Figure S7 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5a







Figure S9 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5c



Figure S10 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5d



Figure S11 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5e



Figure S12 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5f



Figure S13 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5g



Figure S14 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5h



Figure S15 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5i



Figure S16 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5j



Figure S17 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5k



Figure S18 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5l



Figure S19 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5m



Figure S20 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5n



Figure S21 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 50



Figure S22 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5p



Figure S23 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5q



Figure S24 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5r



Figure S25 the 1 H NMR spectrum and 13 C NMR spectrum of compound 5s







Figure S27 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5u



Figure S28 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5v



Figure S29 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5w



Figure S30 the ¹H NMR spectrum and ¹³C NMR spectrum of compound 5x