

Supporting Information

Persulfate-Promoted Carbamoylation/Cyclization of Alkenes: Synthesis of Amide-containing Quinazolinones

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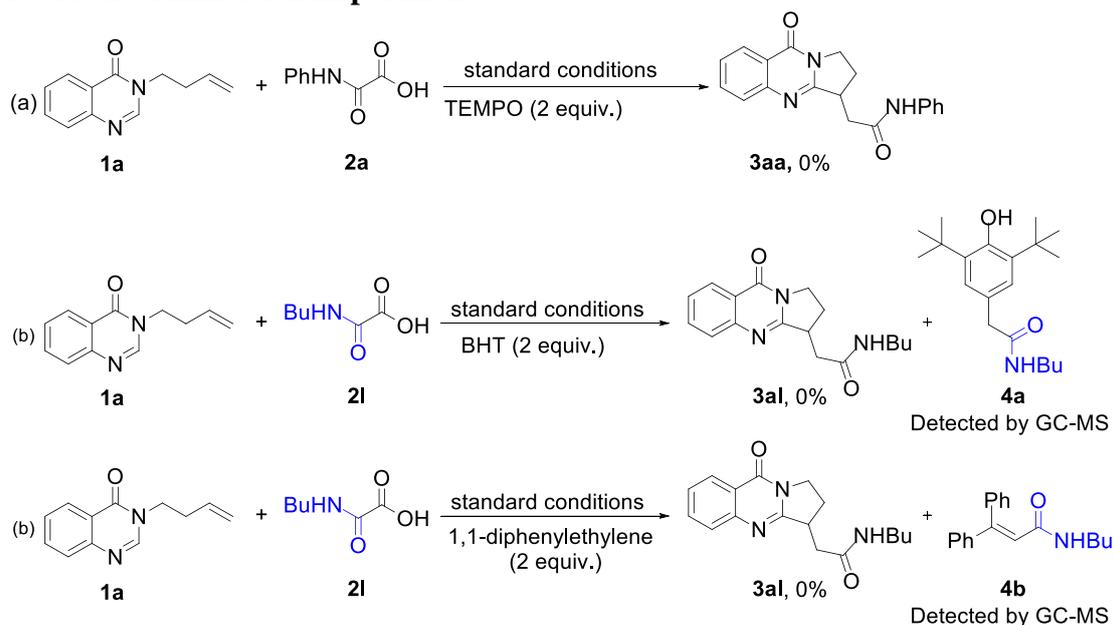
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1. Radical Inhibition Experiment



An oven-dried reaction vessel charged with a stir bar was added 3-(but-3-en-1-yl)quinazolin-4(3H)-one **1a** (0.3 mmol), 2-oxo-2-(phenylamino)acetic acid **2a** (0.6 mmol, 2 eq) and $(\text{NH}_4)_2\text{S}_2\text{O}_8$ (1.05 mmol, 3.5 eq) and 2 eq. of radical inhibitor (TEMPO, BHT or 1,1-diphenylethylene) in DMSO- H_2O solvent (3 mL, v/v 100:1). The reaction mixture was stirred at 100 °C under N_2 atmosphere for about 6 h, no desired product **3aa** and **3al** were obtained, and the radical adduct **4a** and **4b** were detected by GC-MS (for compound **4a**, MS: M^+ calcd for $\text{C}_{20}\text{H}_{33}\text{NO}_2$ 319.25., found 319.20). The MS spectra of compound **4a** are as following (Figure S1).

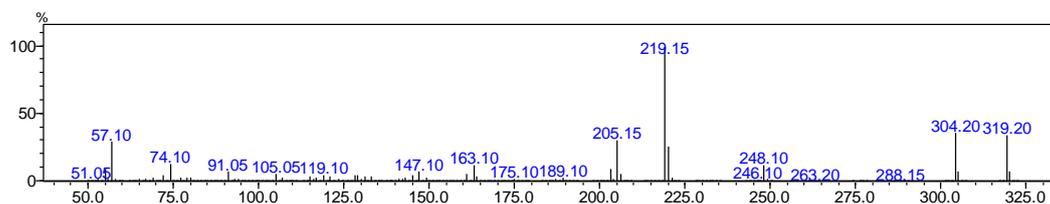


Figure S1. MS spectra of compound **4a**

For compound **4b**, MS: M^+ calcd for $\text{C}_{19}\text{H}_{21}\text{NO}_2$ 279.16, found 279.10, The MS spectra of compound **4b** are as following (Figure S2).

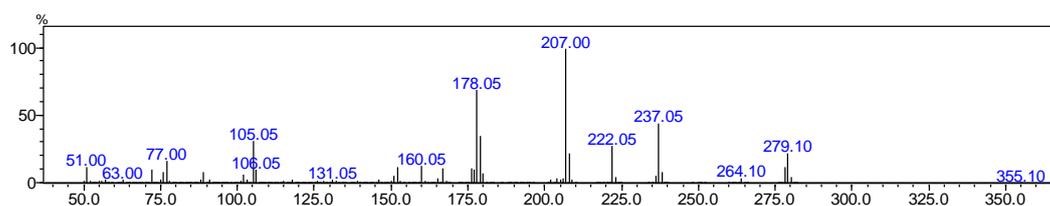


Figure S2. MS spectra of compound **4b**

2. ^1H and ^{13}C NMR spectra of products

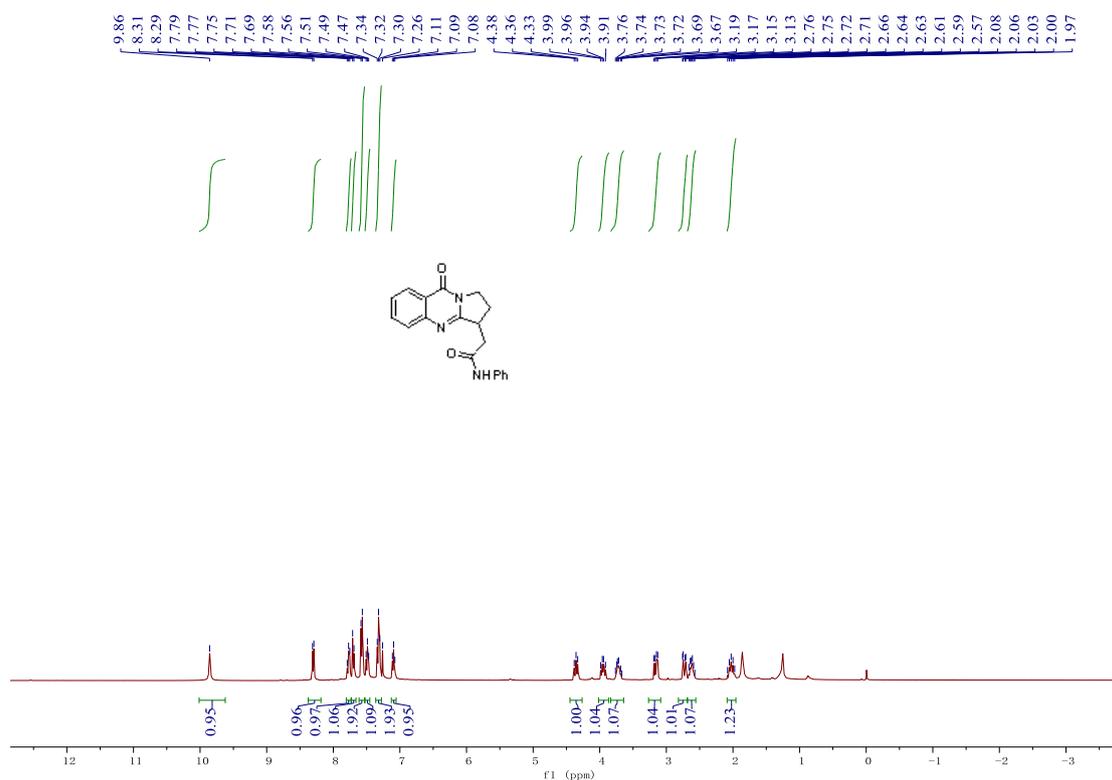


Figure S3 ^1H NMR spectra of 3aa

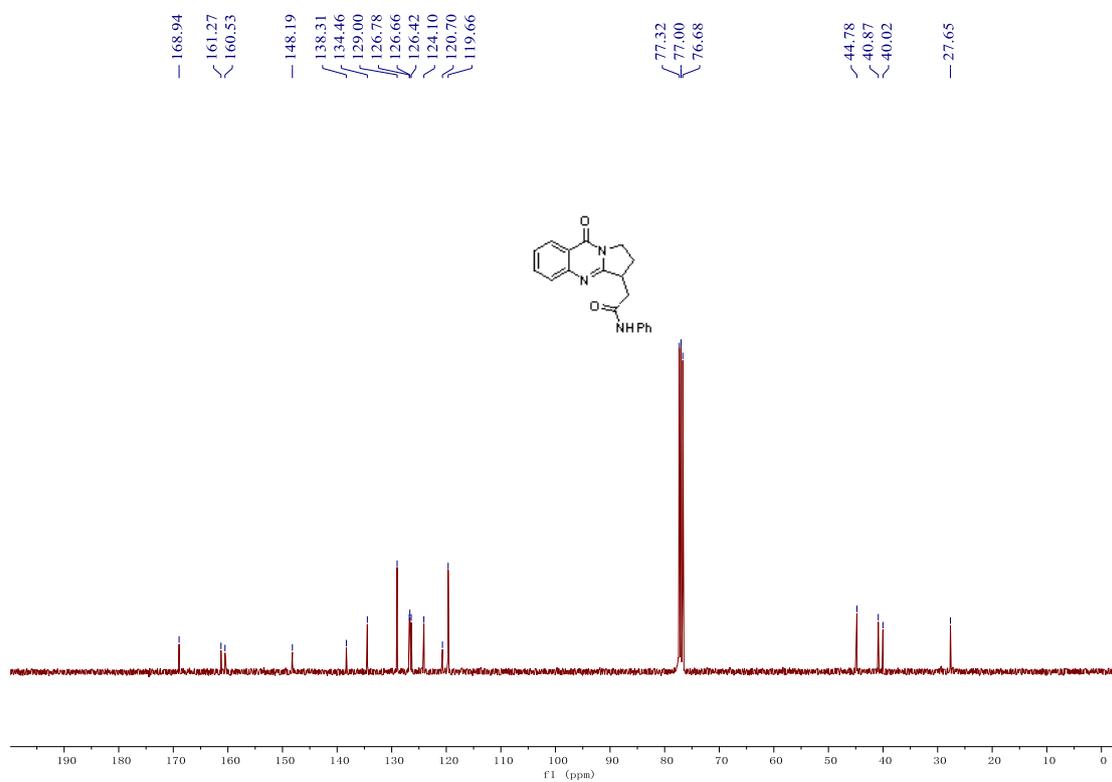


Figure S4 ^{13}C NMR spectra of 3aa

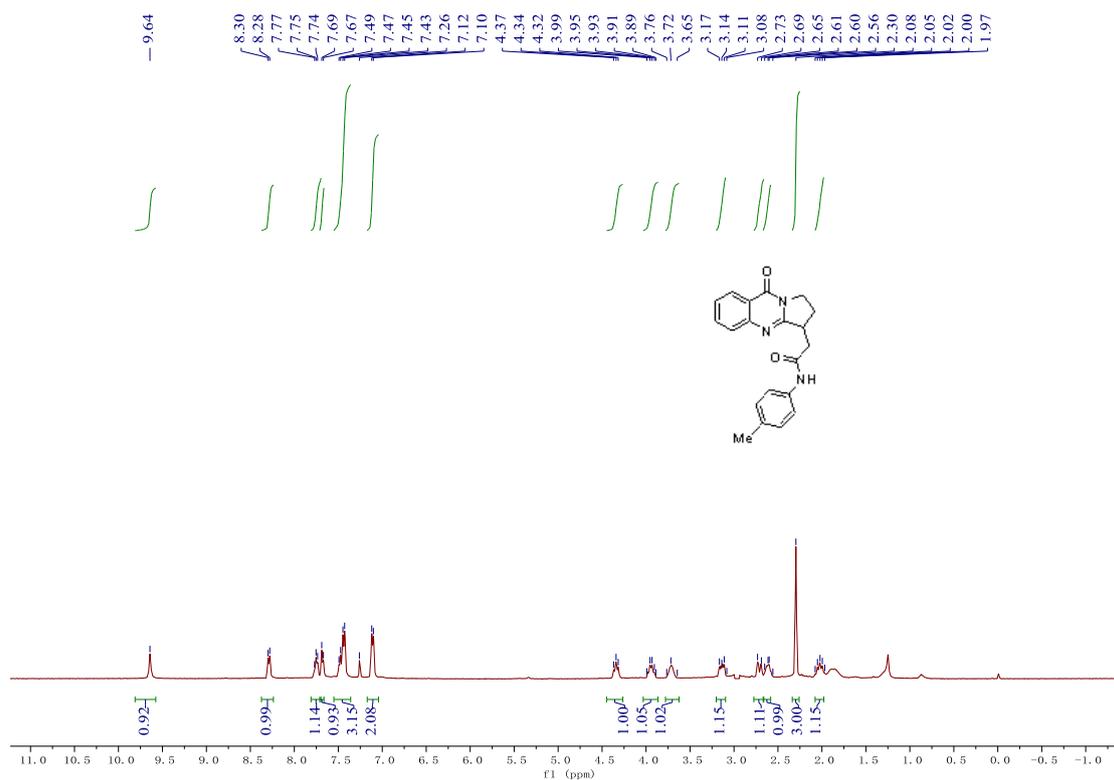


Figure S5 ^1H NMR spectra of 3ab

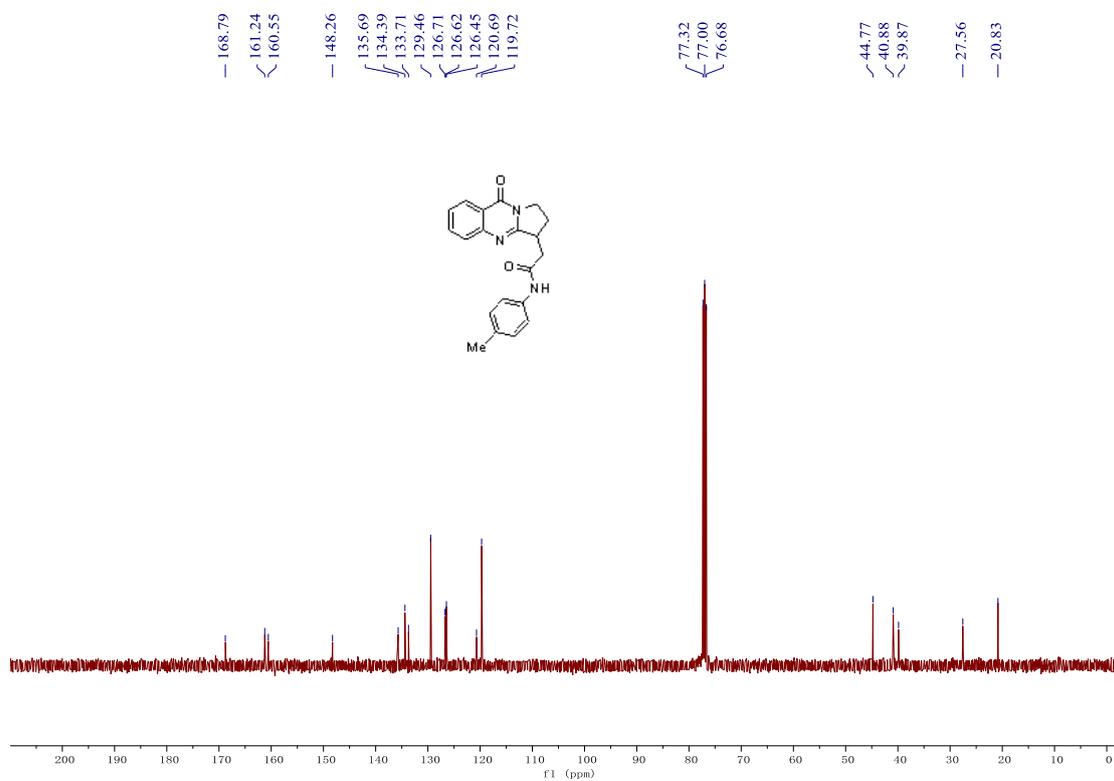


Figure S6 ^{13}C NMR spectra of 3ab

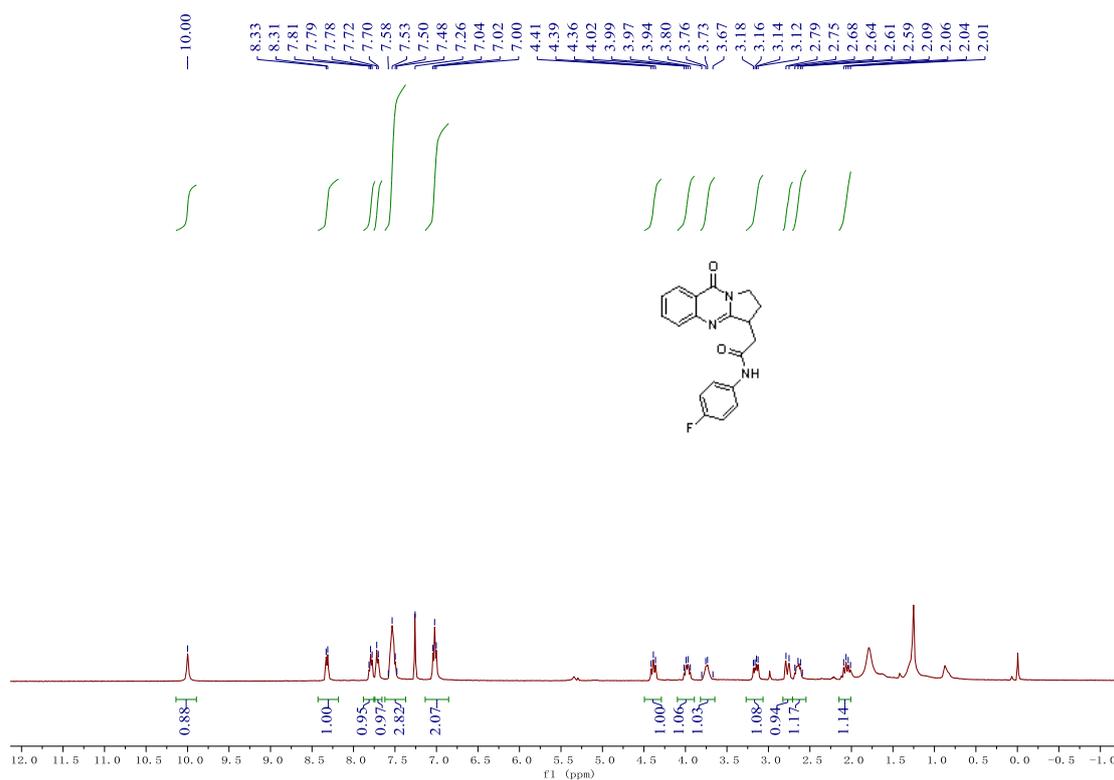


Figure S7 ^1H NMR spectra of **3ac**

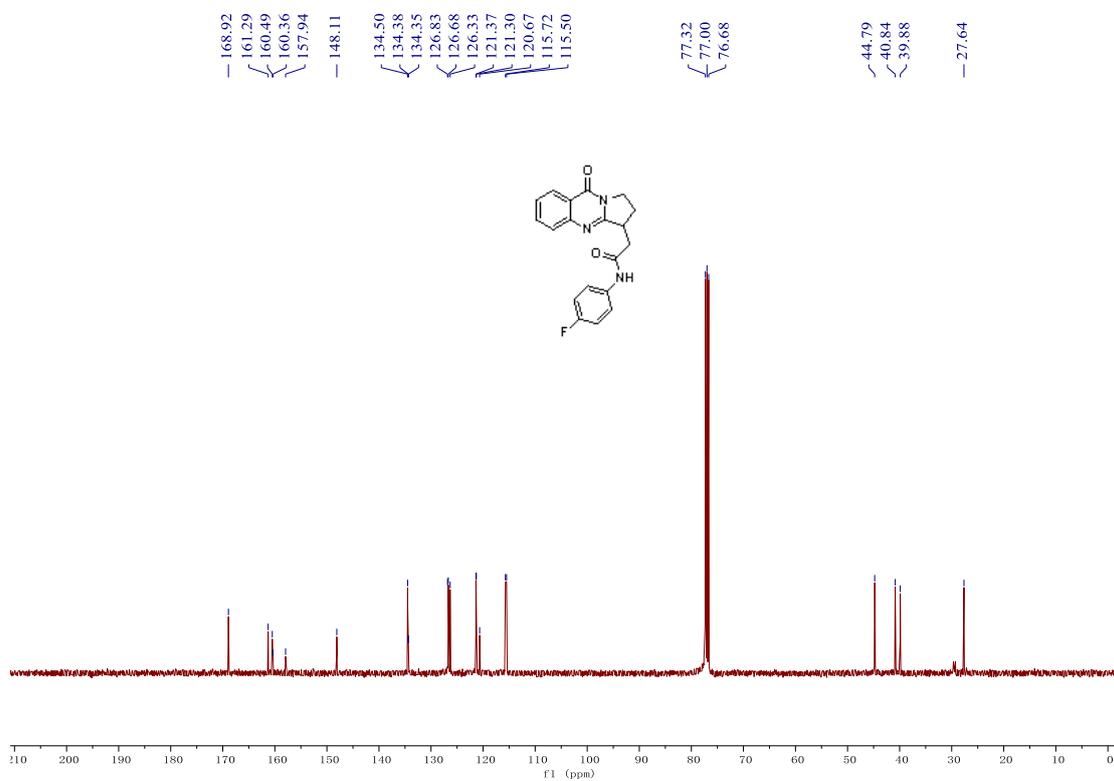


Figure S8 ^{13}C NMR spectra of **3ac**

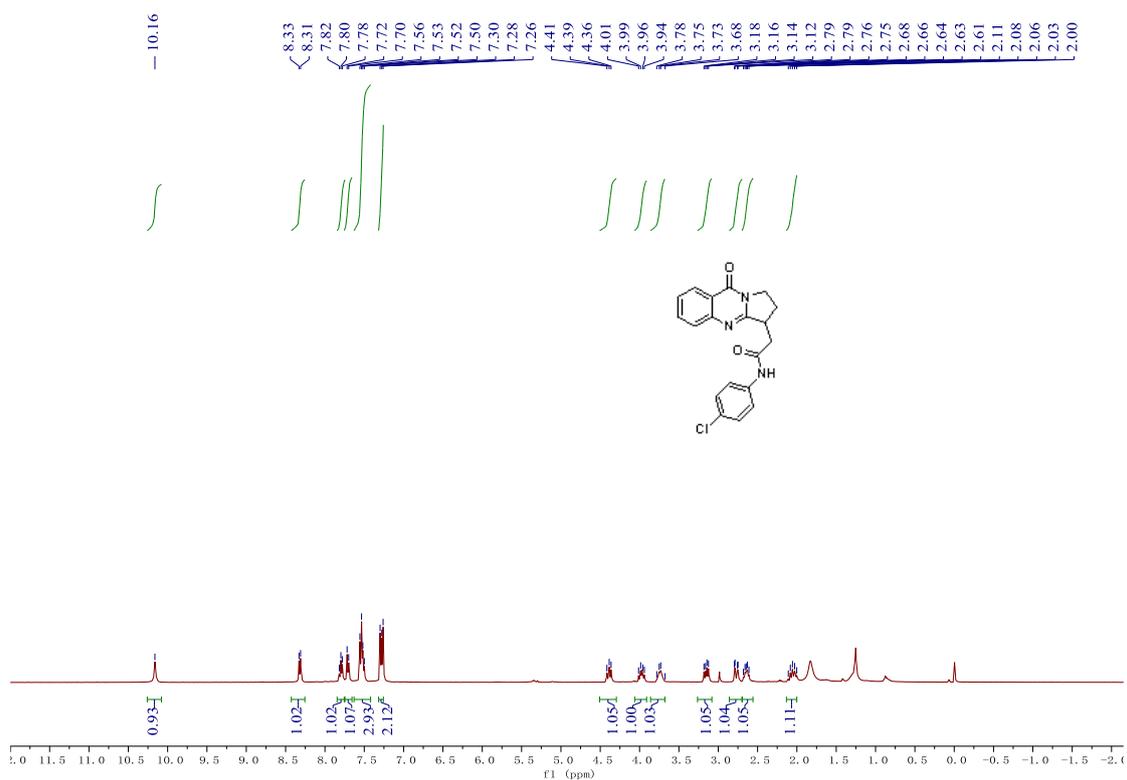


Figure S9 ¹H NMR spectra of 3ad

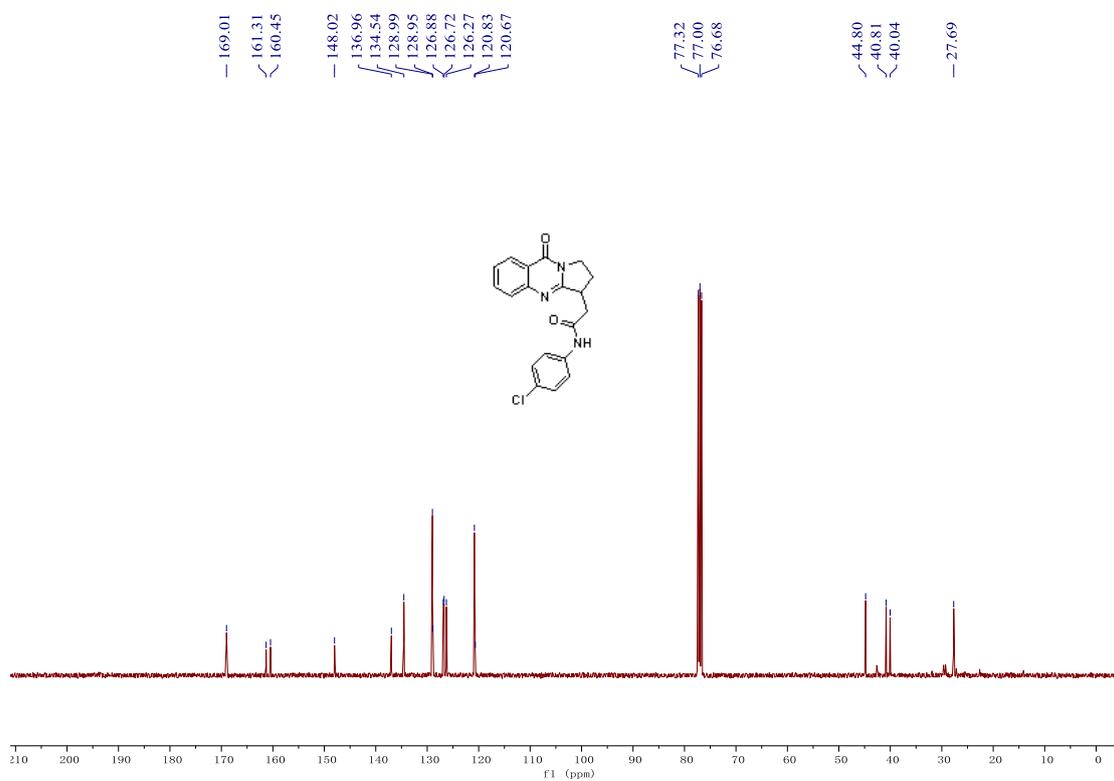


Figure S10 ¹³C NMR spectra of 3ad

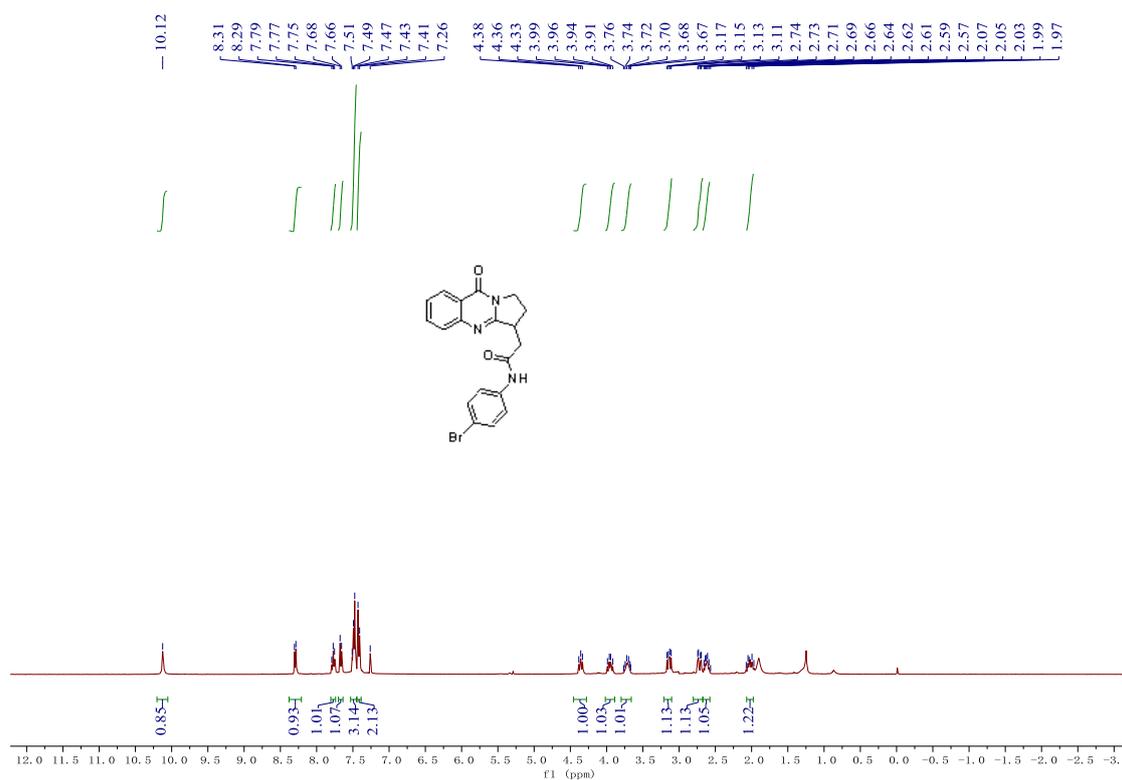


Figure S11 ¹H NMR spectra of 3ae

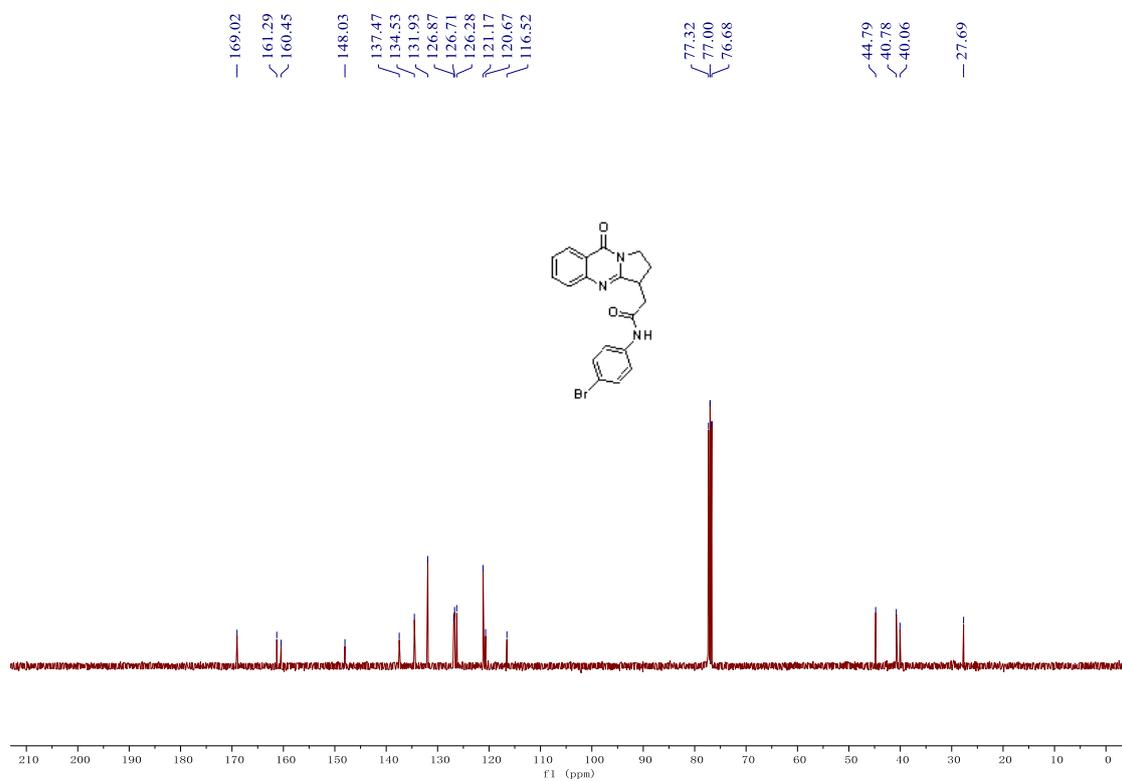


Figure S12 ¹³C NMR spectra of 3ae

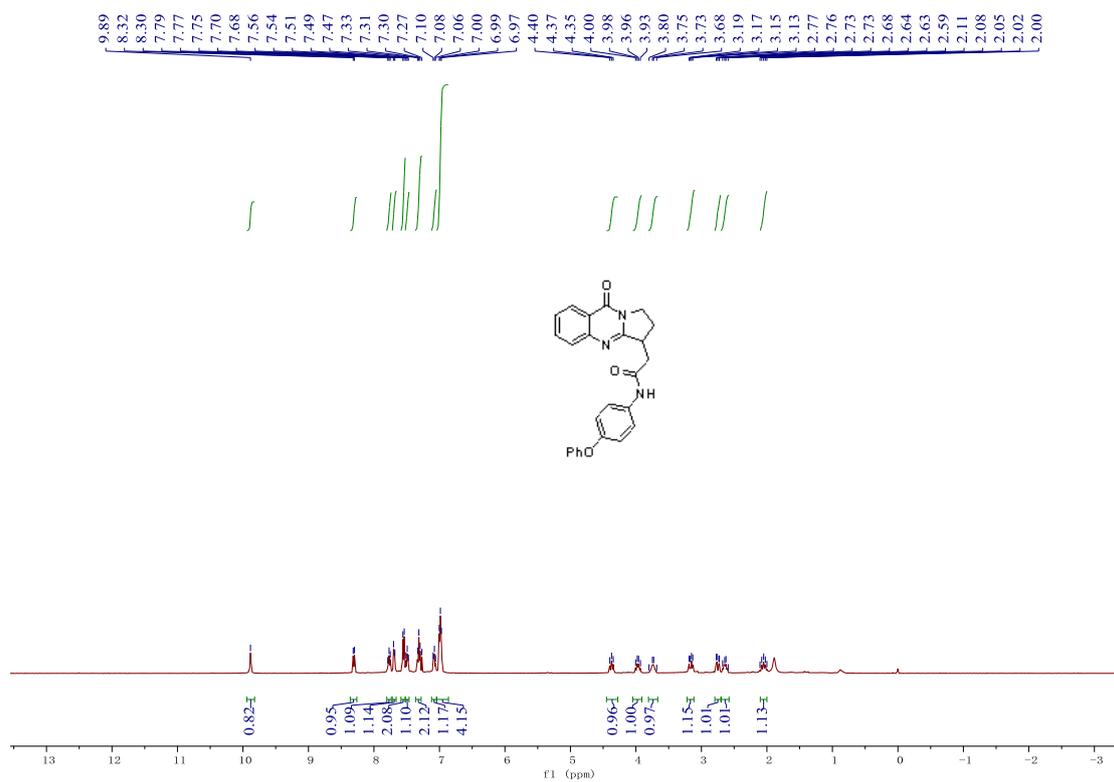


Figure S13 ¹H NMR spectra of 3af

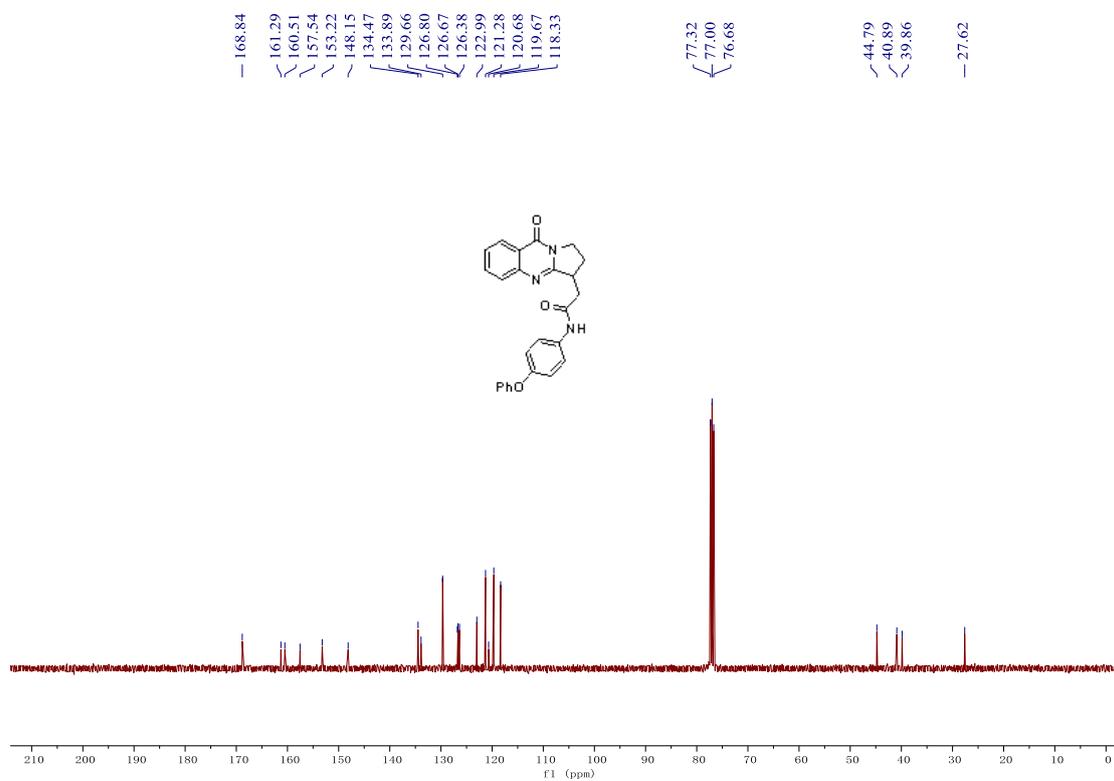


Figure S14 ¹³C NMR spectra of 3af

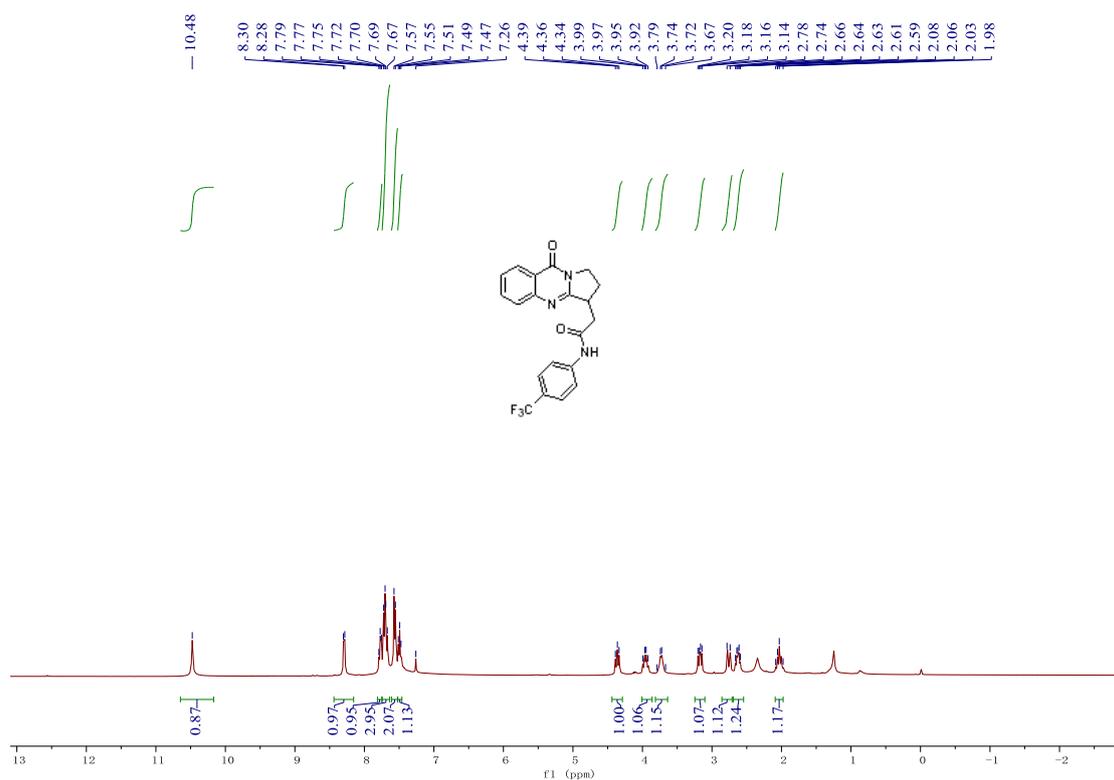


Figure S15 ¹H NMR spectra of **3ag**

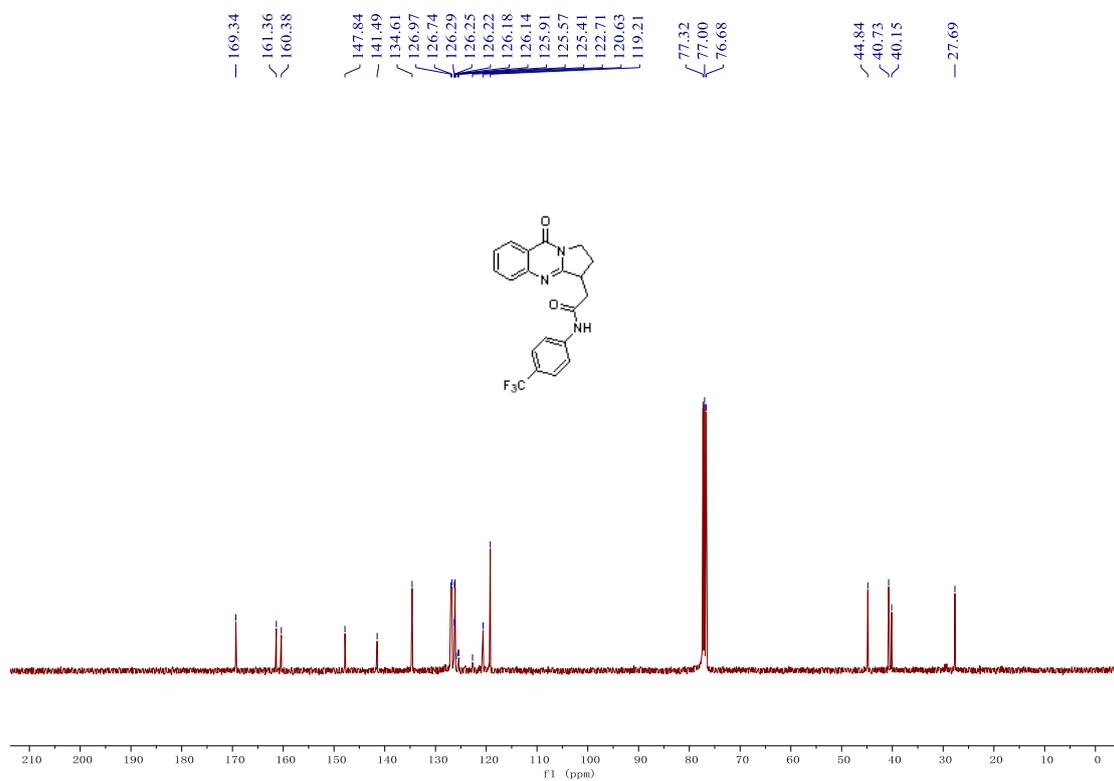


Figure S16 ¹³C NMR spectra of **3ag**

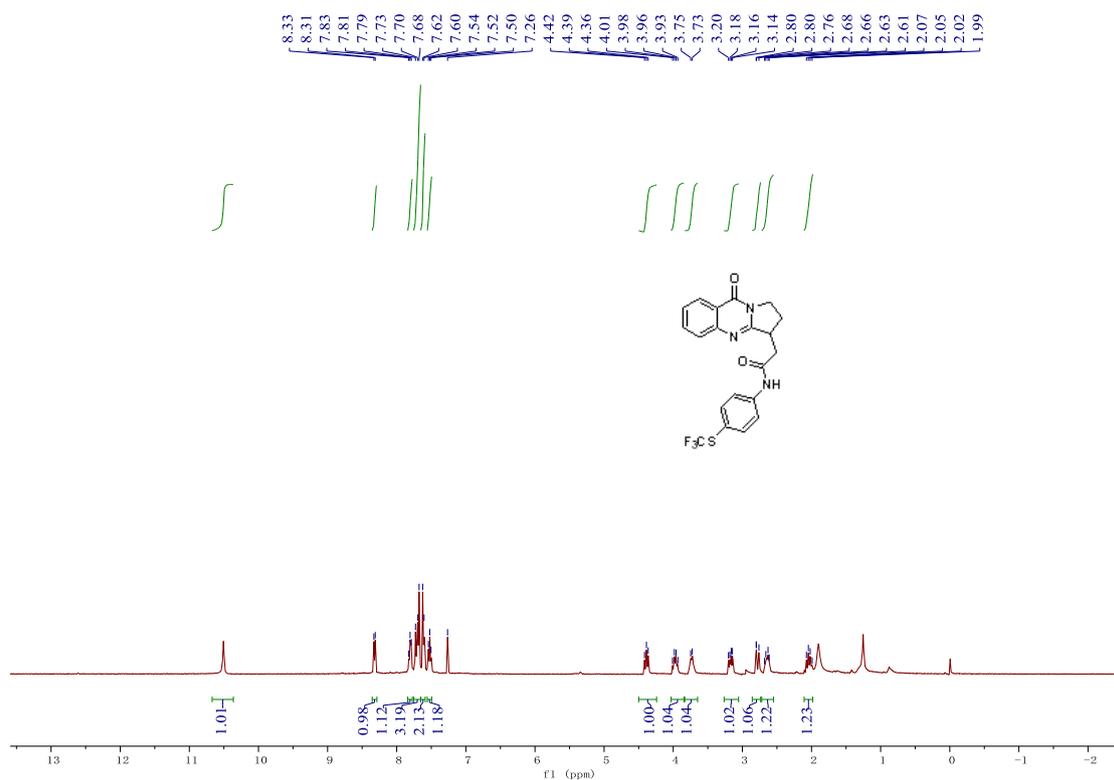


Figure S17 ¹H NMR spectra of 3ah

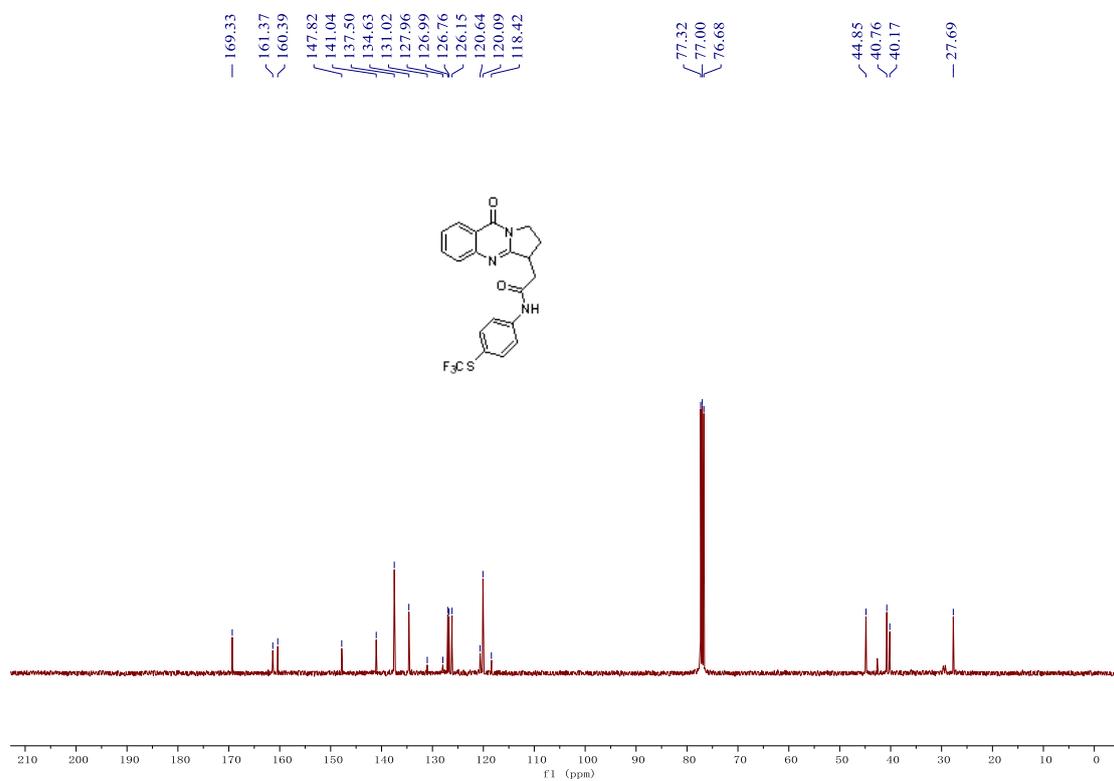


Figure S18 ¹³C NMR spectra of 3ah

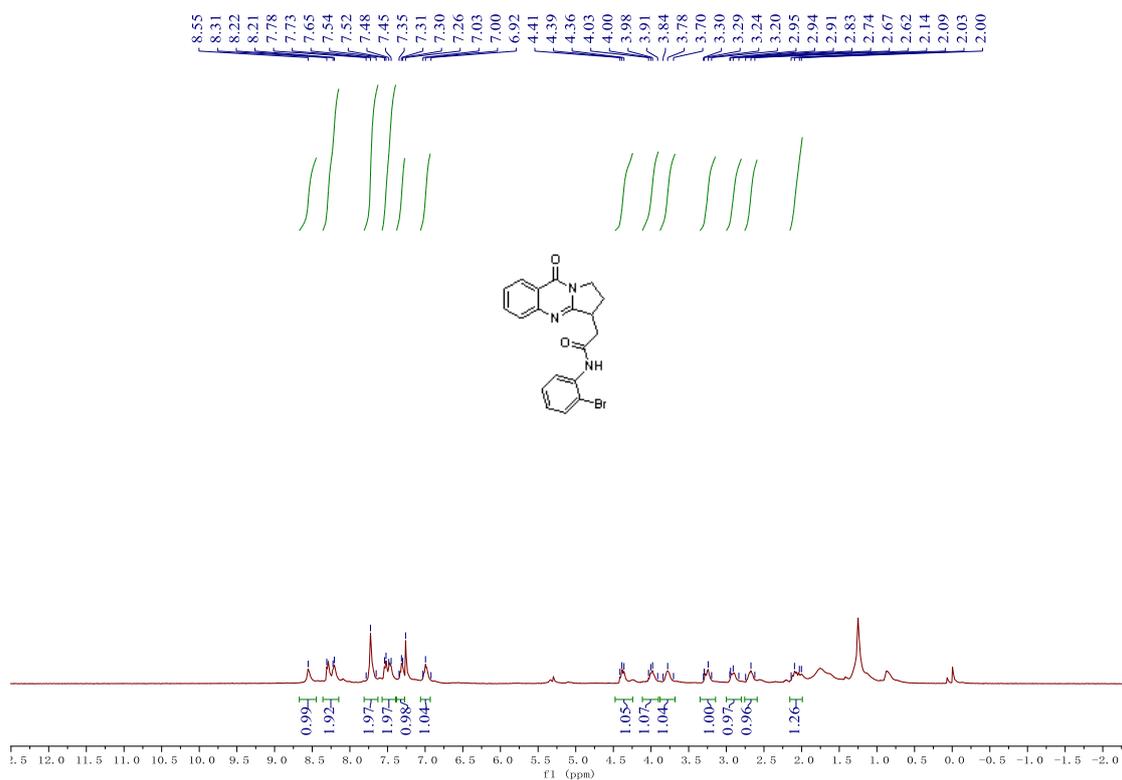


Figure S19 ¹H NMR spectra of 3ai

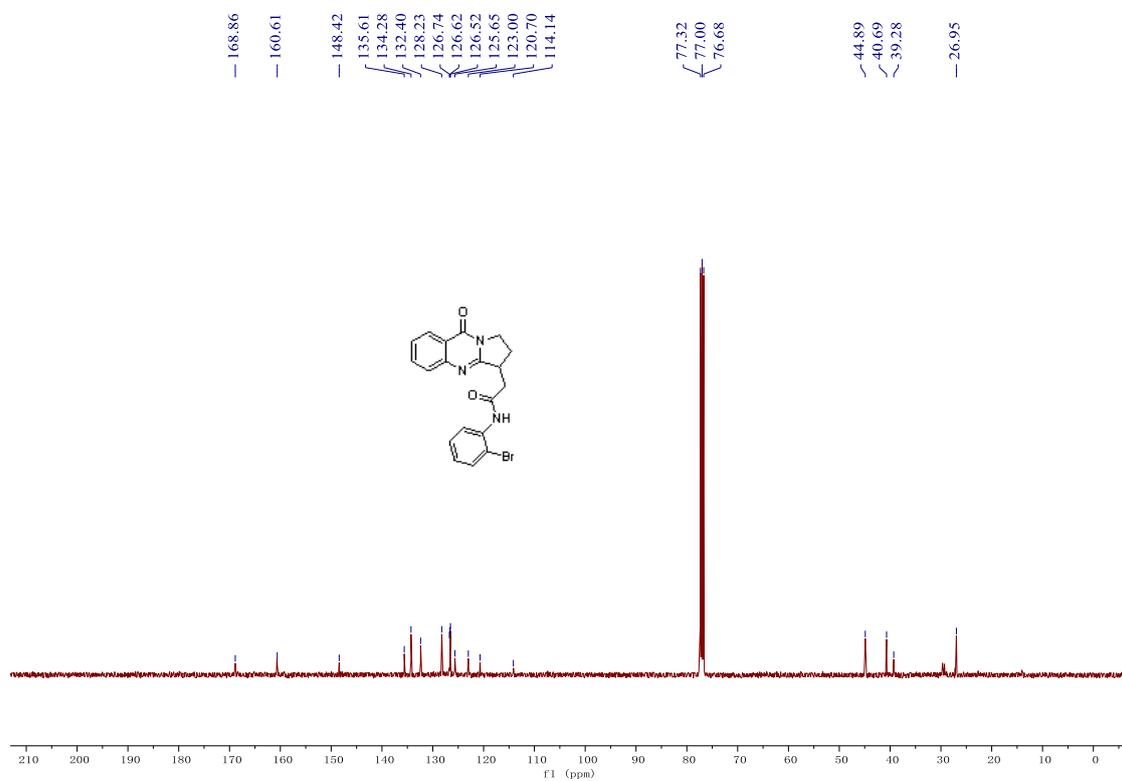


Figure S20 ¹³C NMR spectra of 3ai

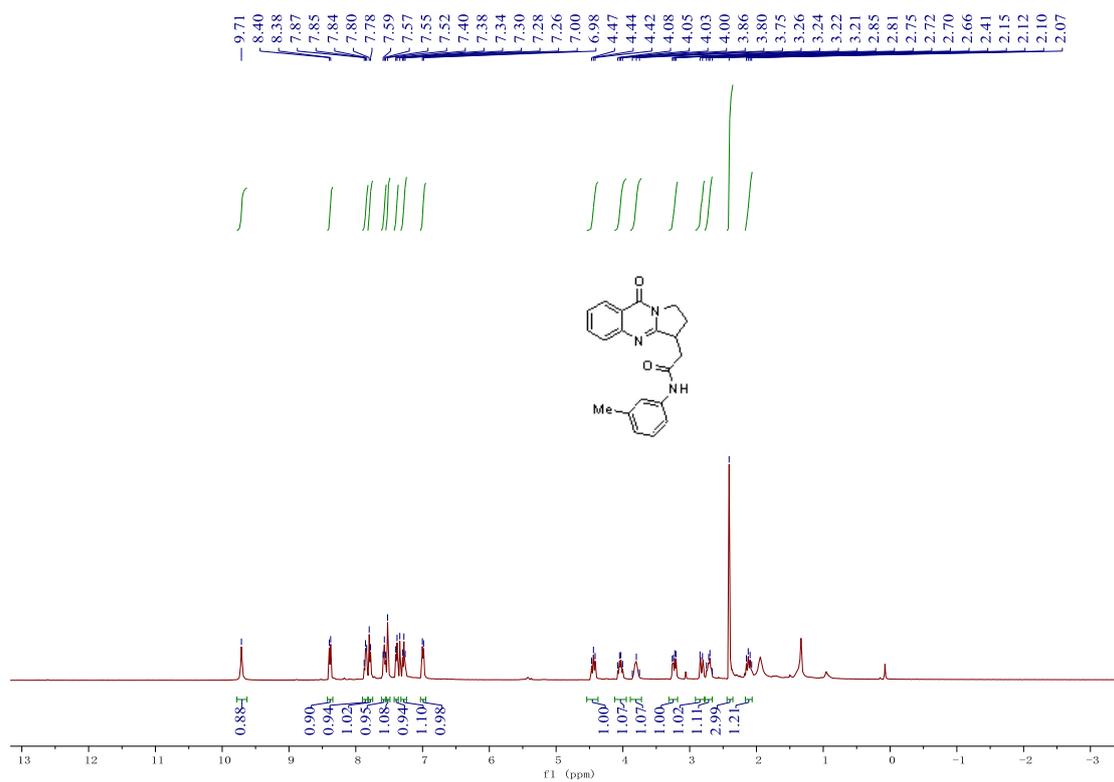


Figure S21 ¹H NMR spectra of 3aj

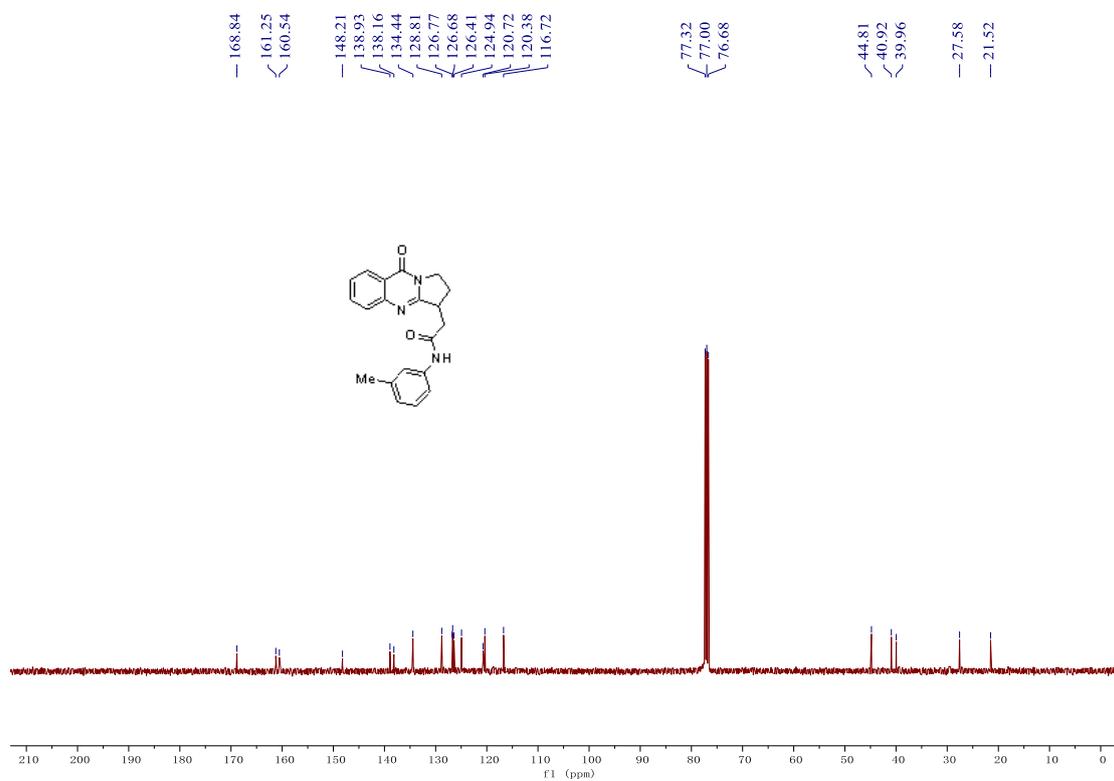


Figure S22 ¹³C NMR spectra of 3aj

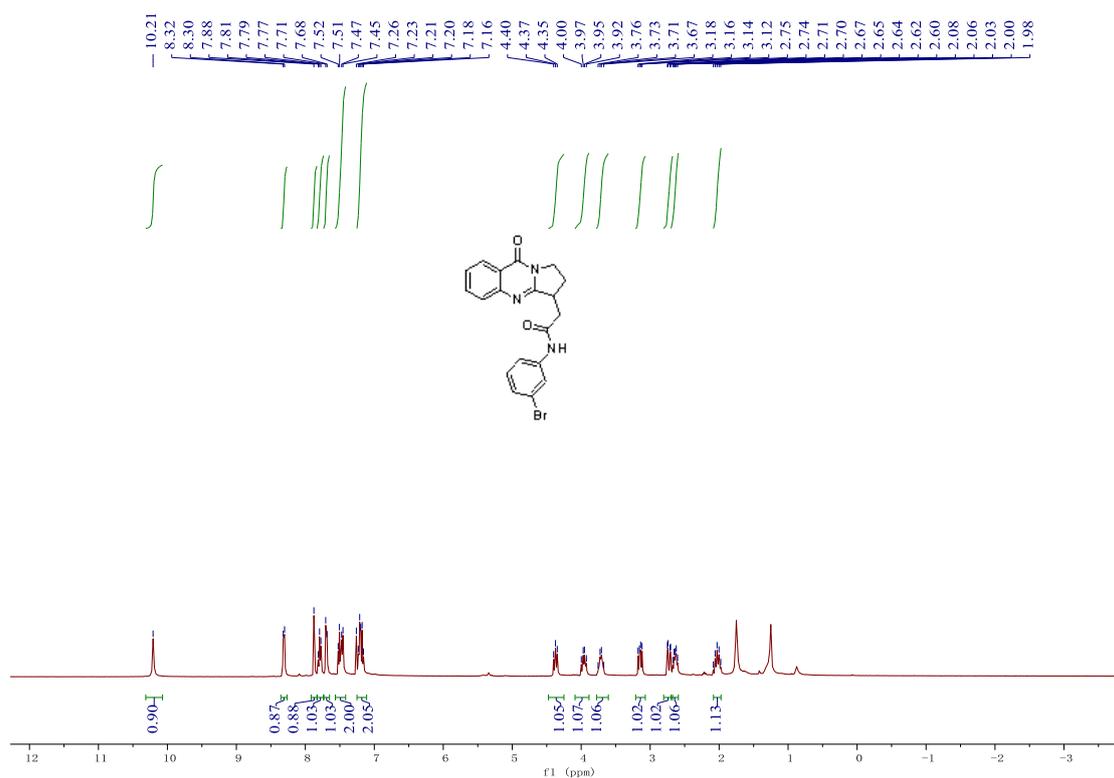


Figure S23 ¹H NMR spectra of 3ak

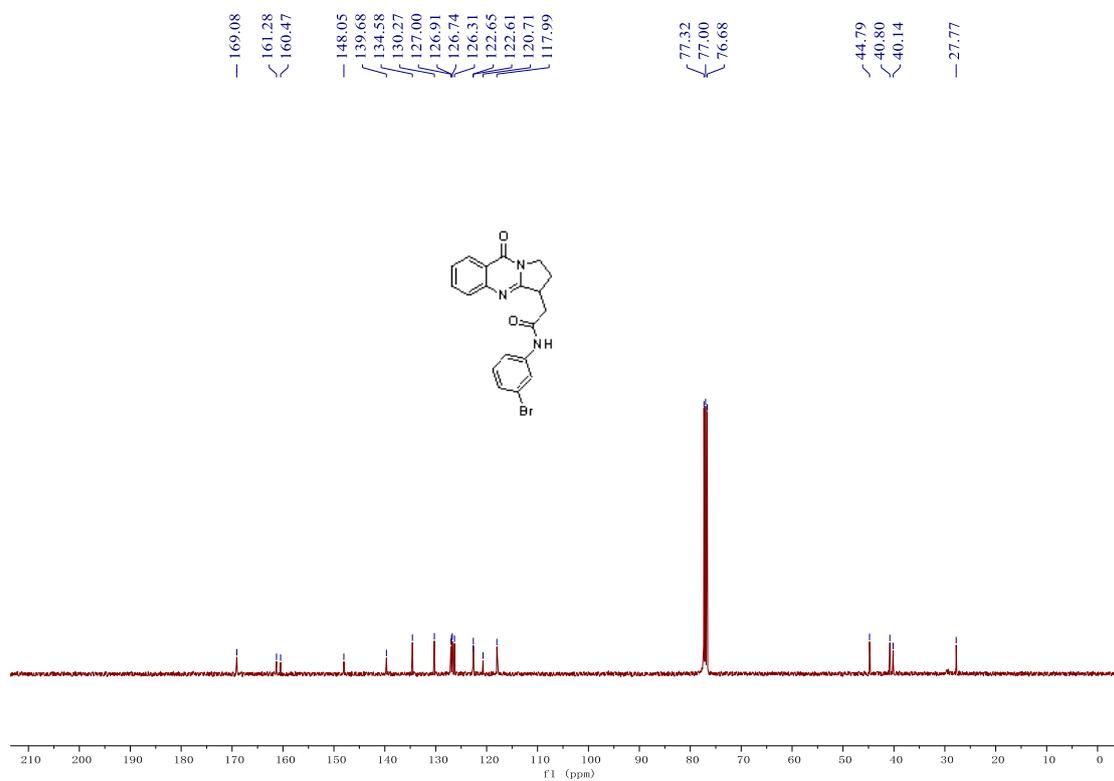


Figure S24 ¹³C NMR spectra of 3ak

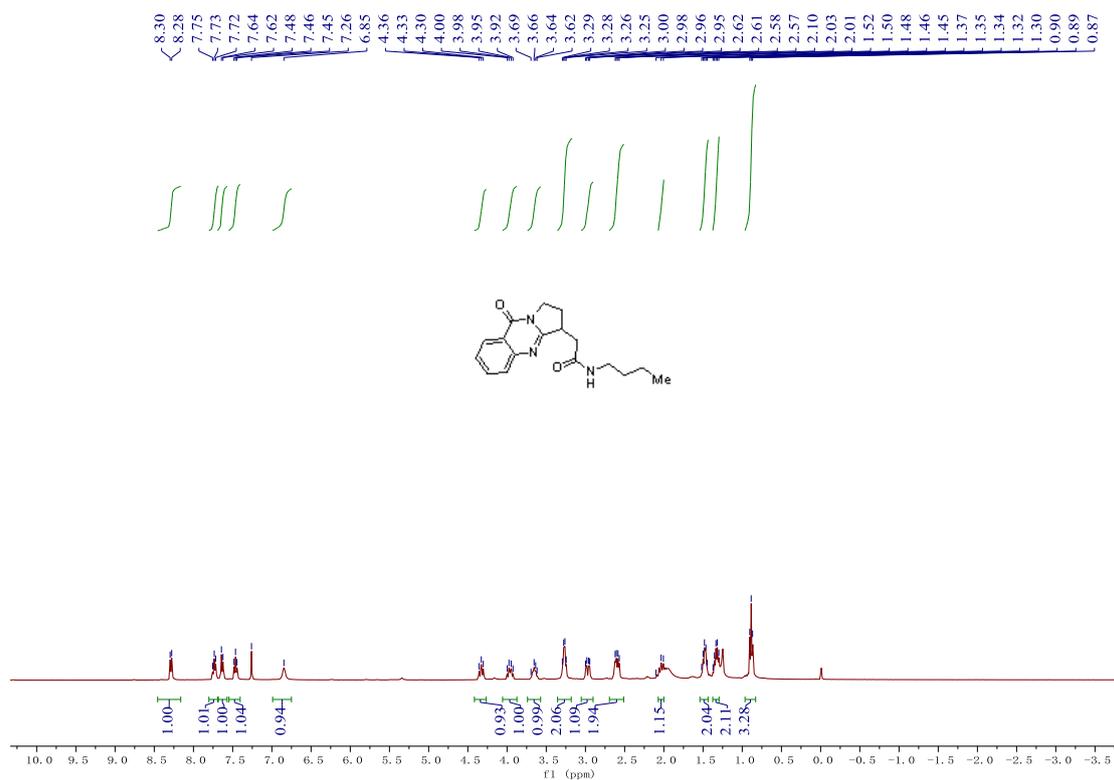


Figure S25 ¹H NMR spectra of 3al

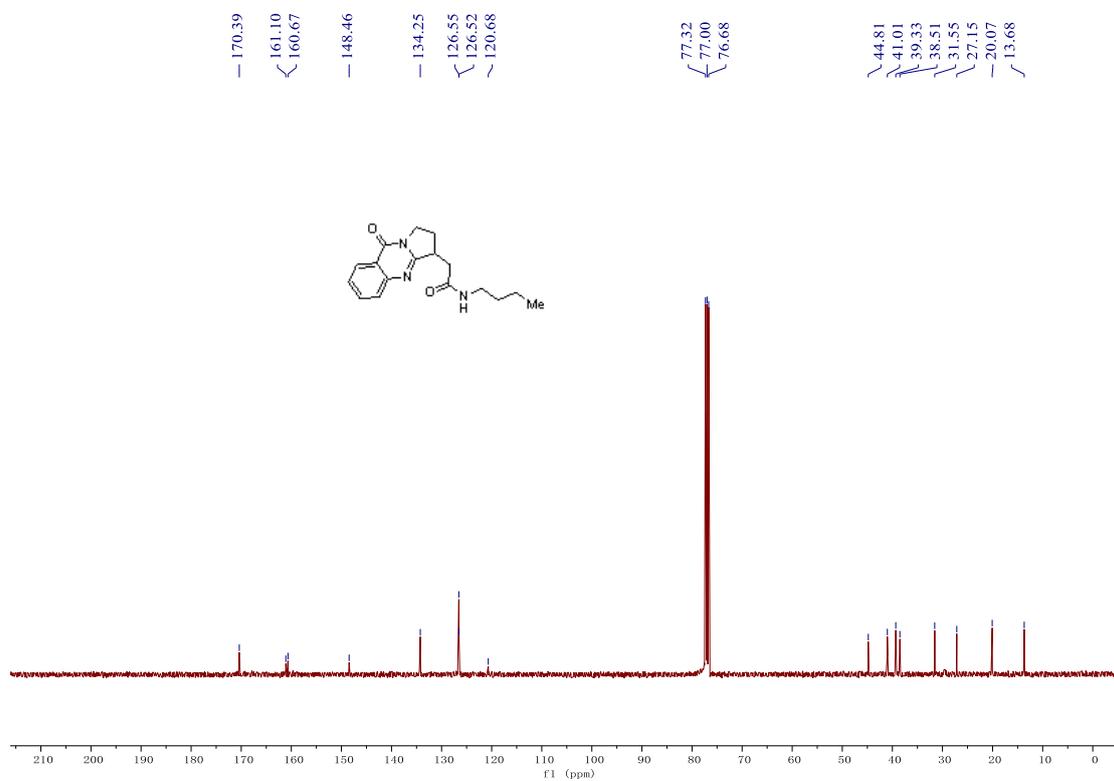


Figure S26 ¹³C NMR spectra of 3al

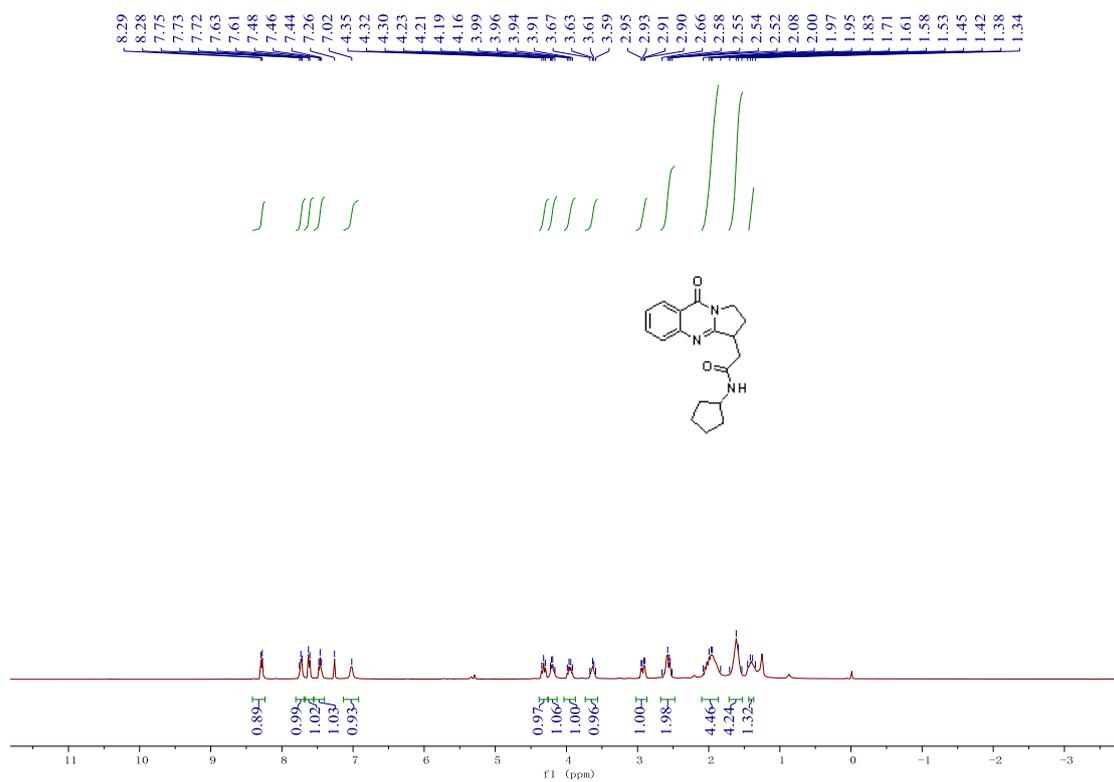


Figure S27 ¹H NMR spectra of 3am

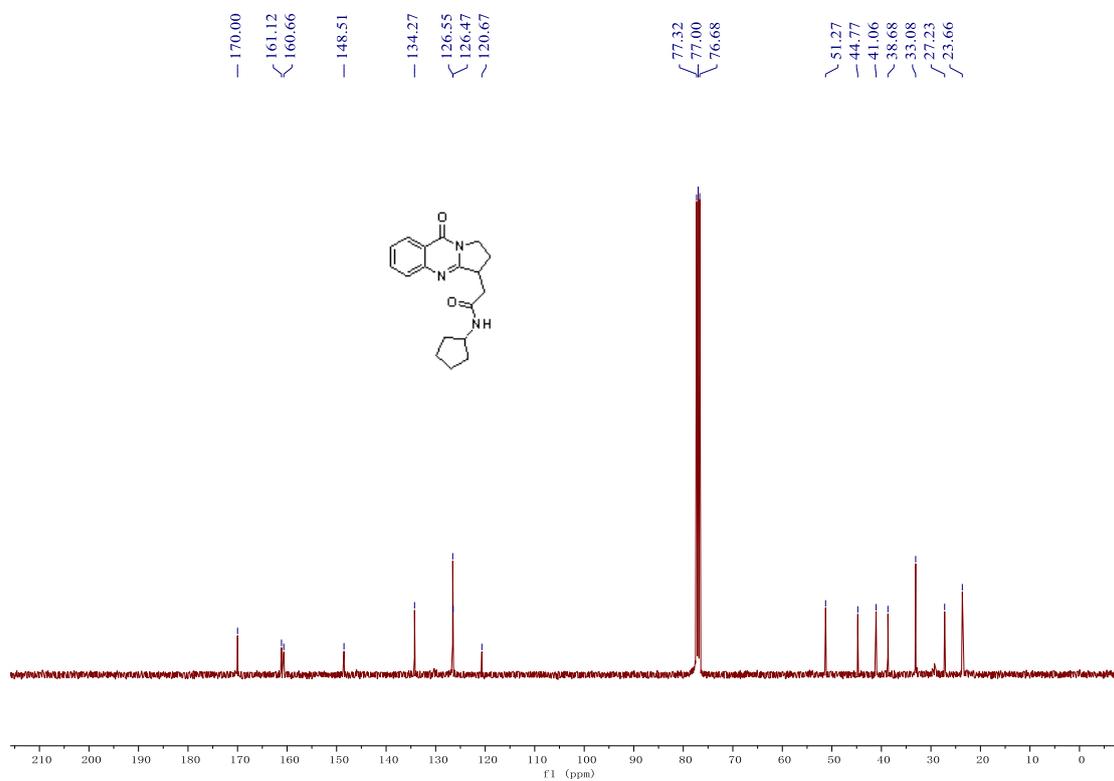


Figure S28 ¹³C NMR spectra of 3am

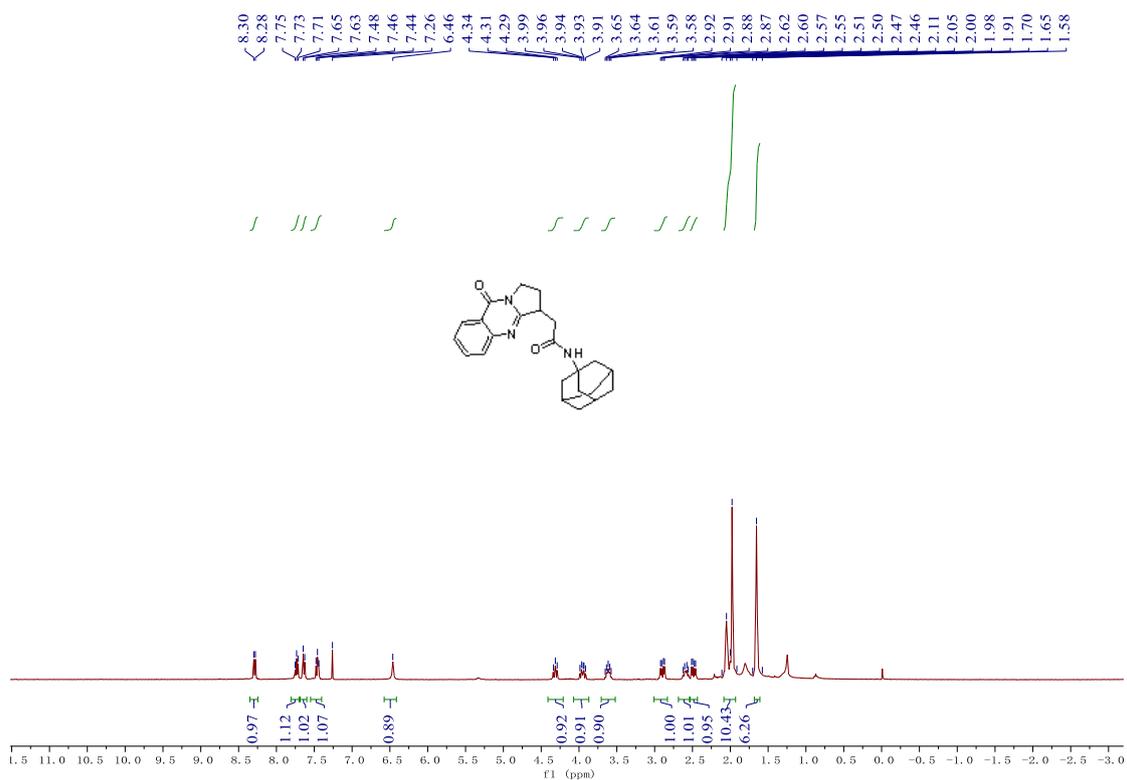


Figure S29 ¹H NMR spectra of 3an

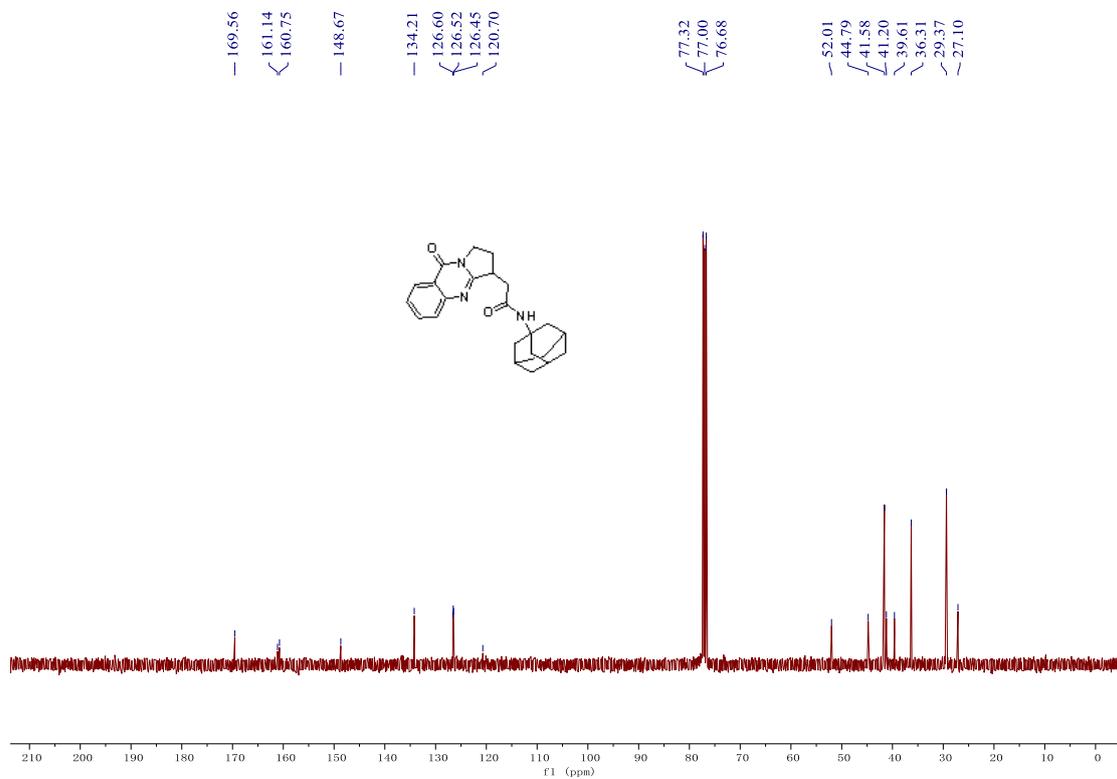


Figure S30 ¹³C NMR spectra of 3an

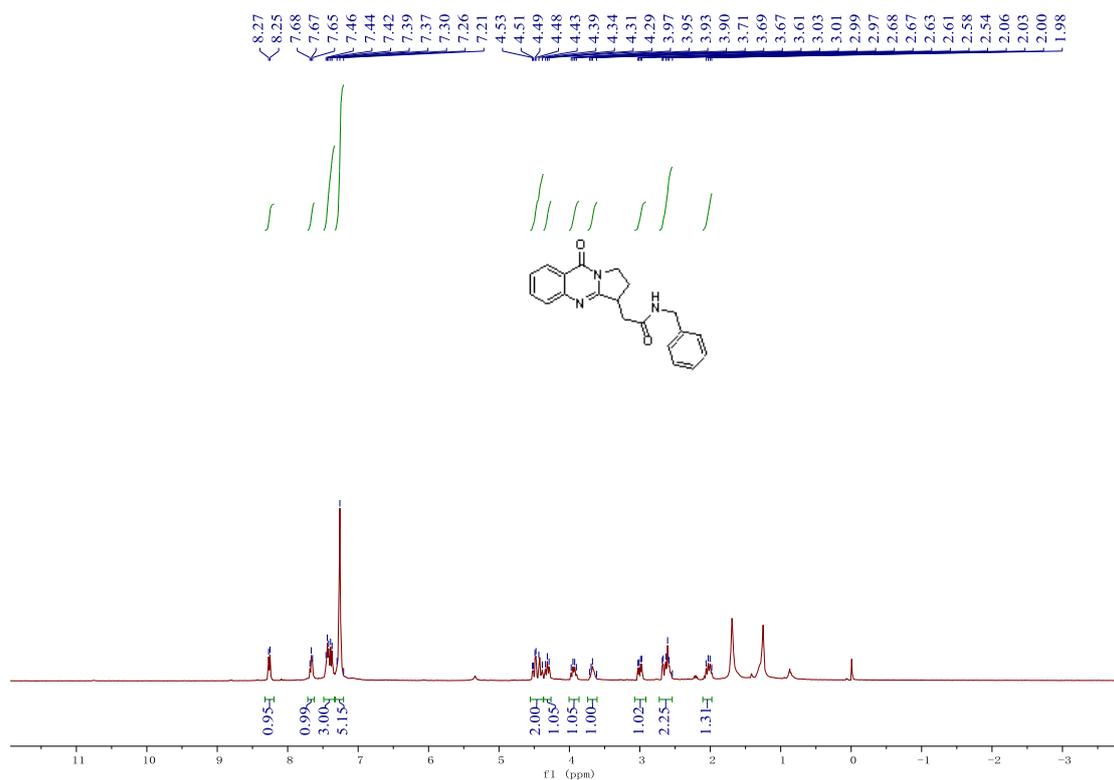


Figure S31 ^1H NMR spectra of 3ao

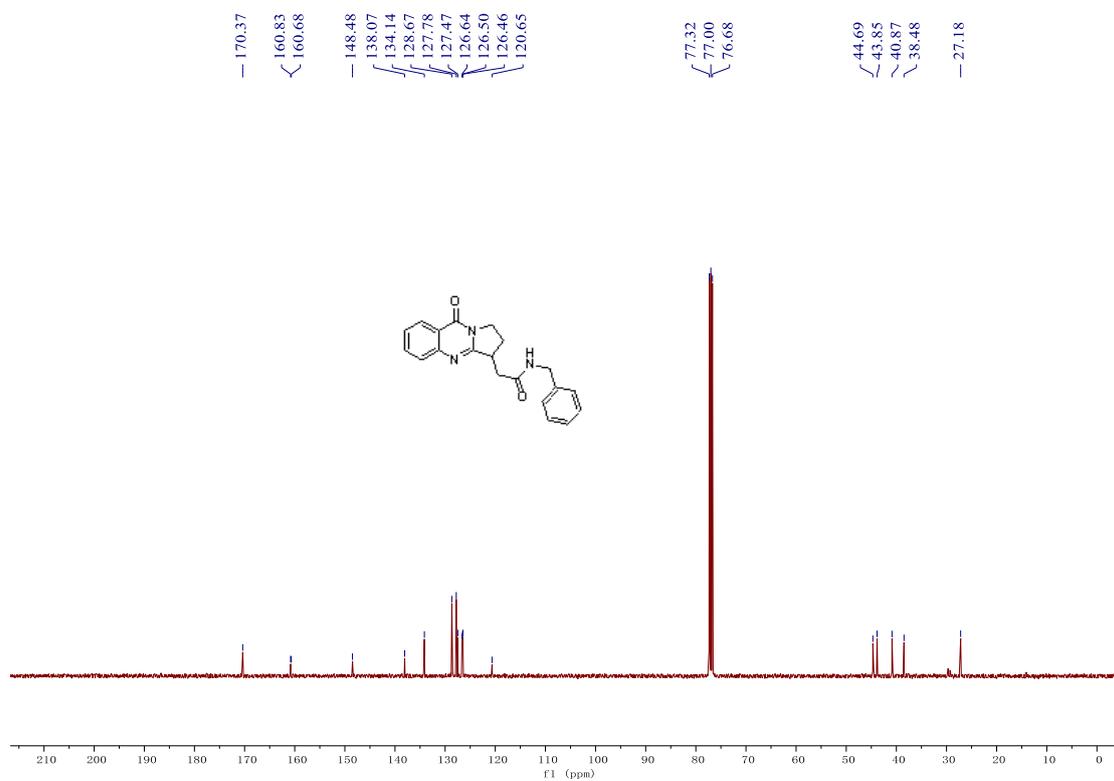


Figure S32 ^{13}C NMR spectra of 3ao

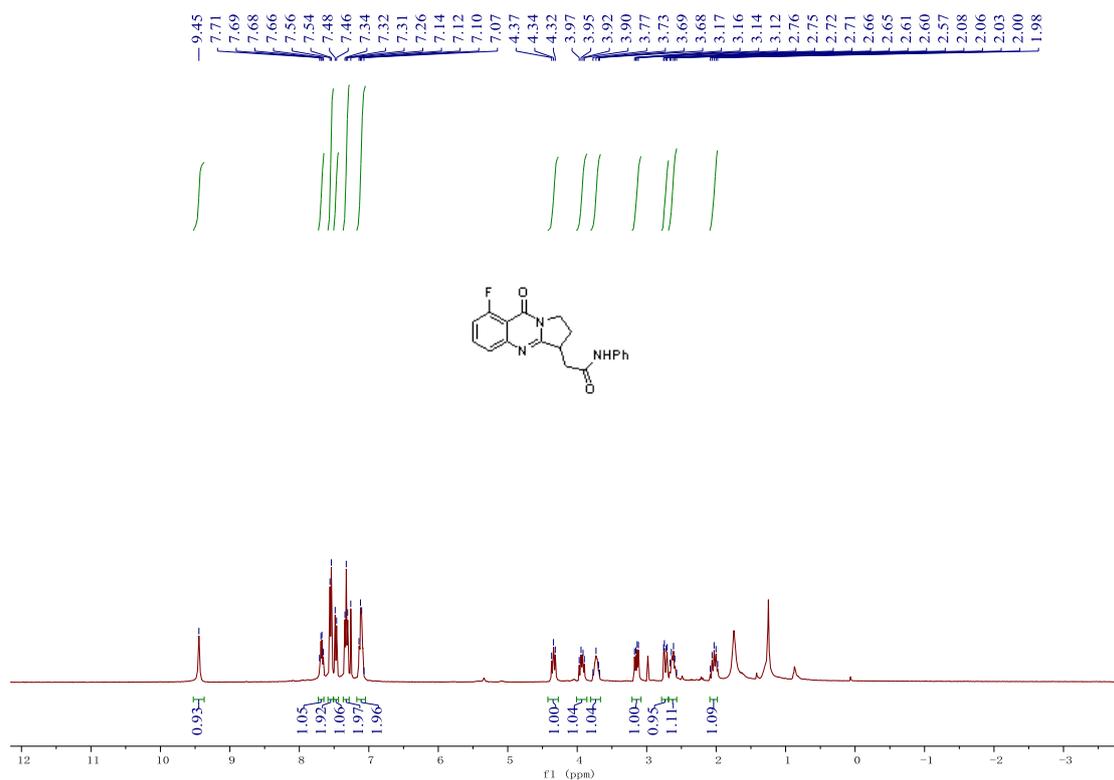


Figure S33 ¹H NMR spectra of 3ba

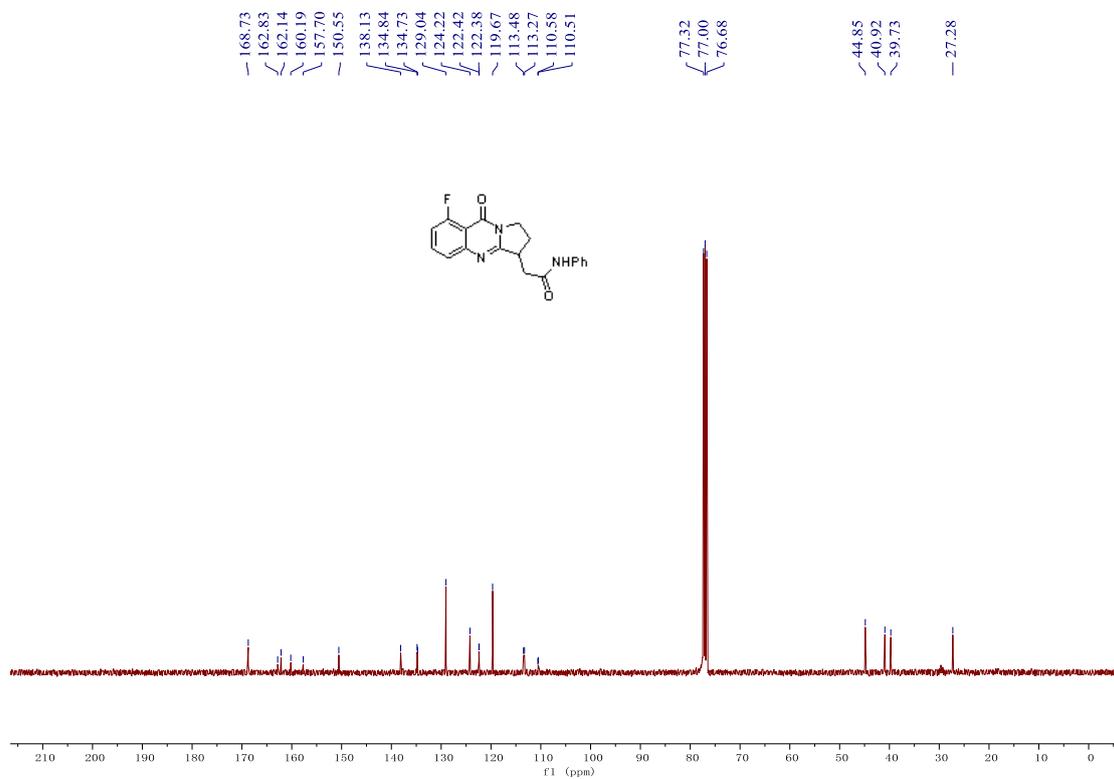


Figure S34 ¹³C NMR spectra of 3ba

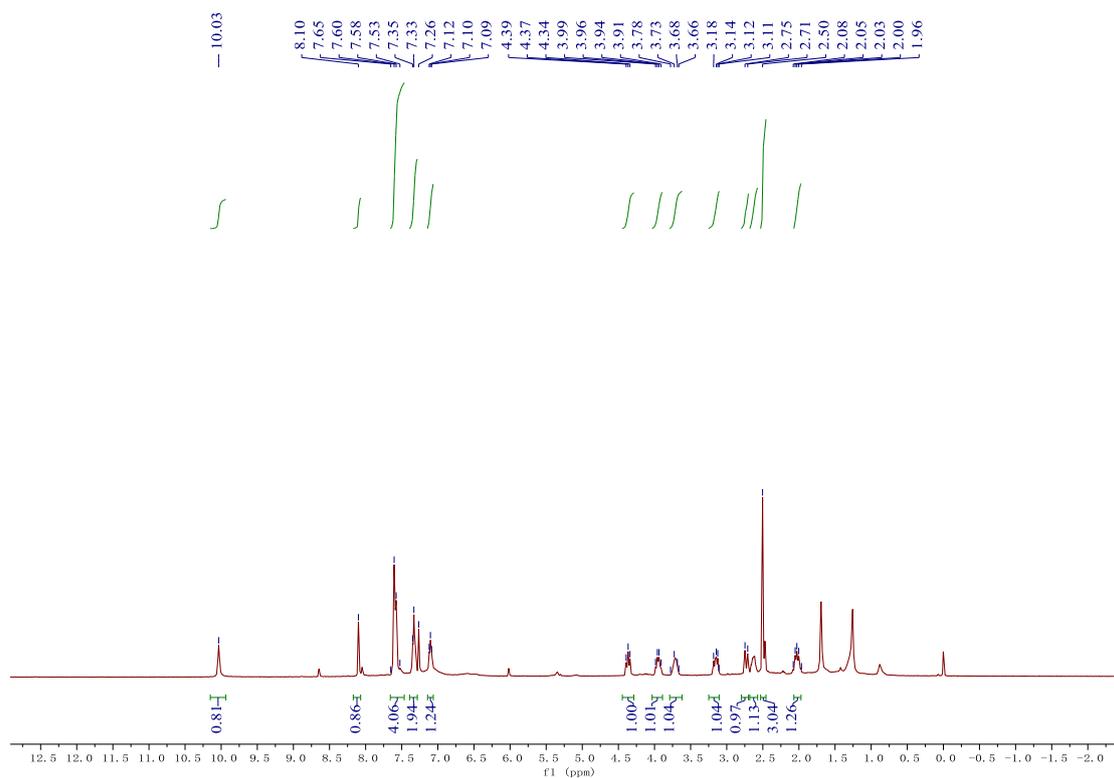


Figure S35 ¹H NMR spectra of 3a

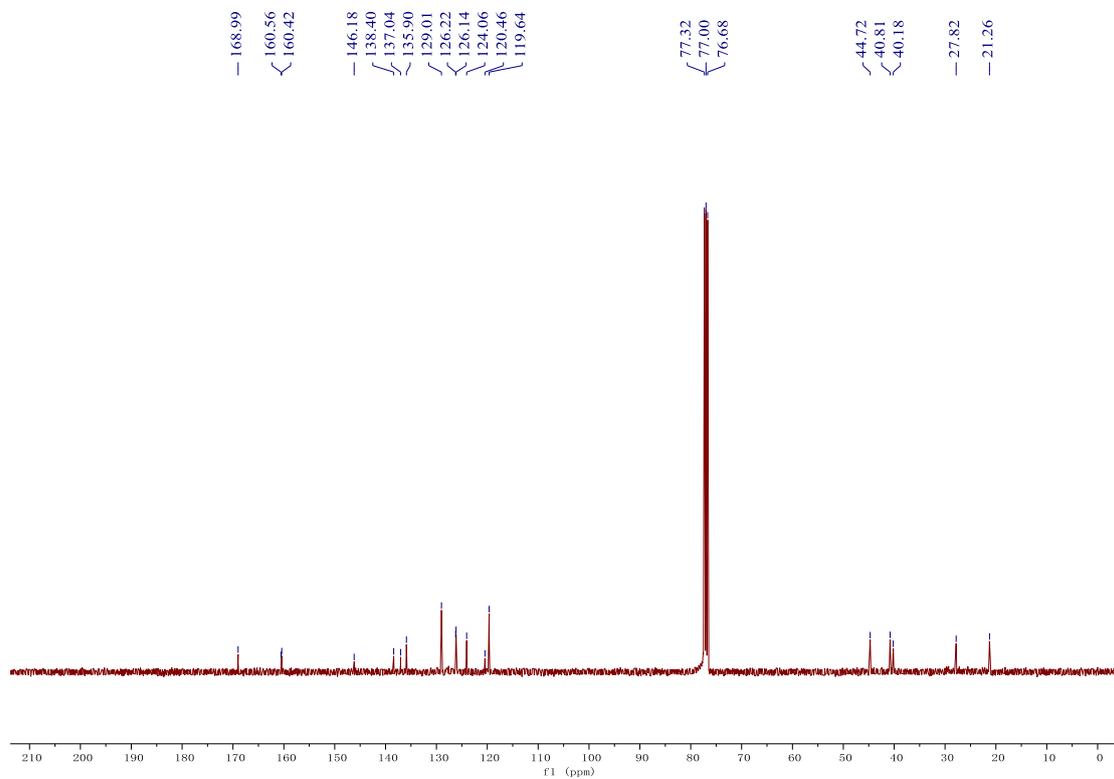


Figure S36 ¹³C NMR spectra of 3a

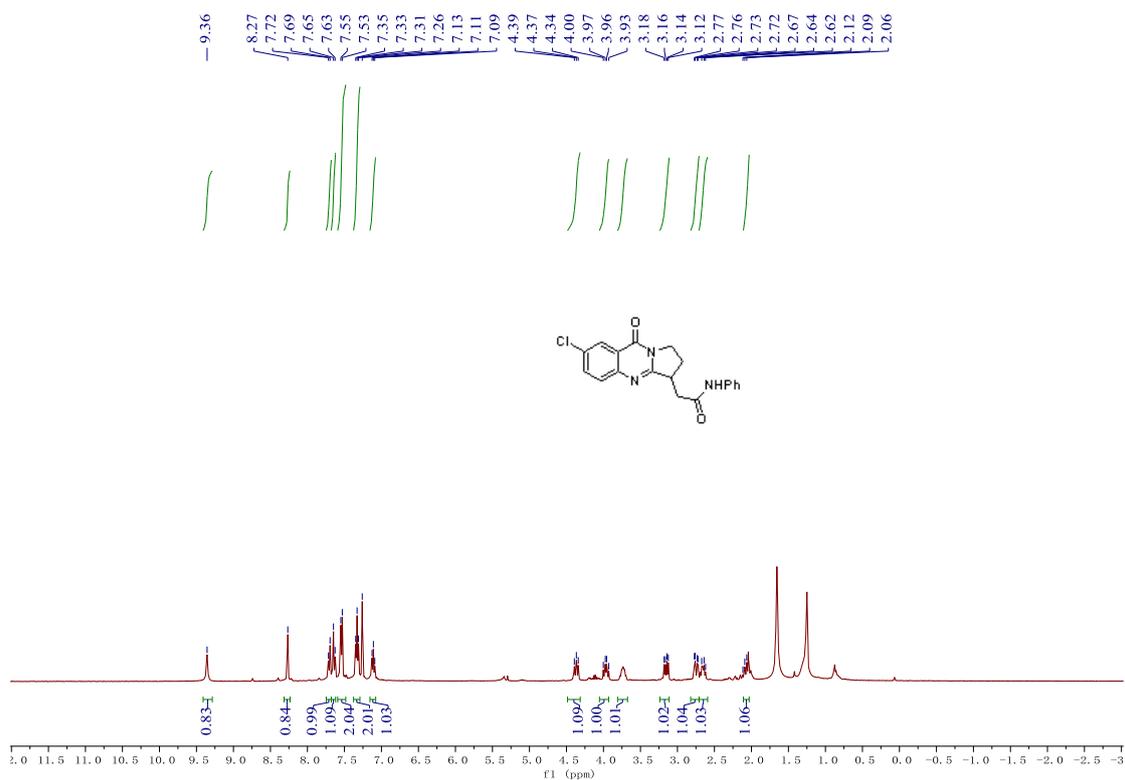


Figure S37 ¹H NMR spectra of 3da

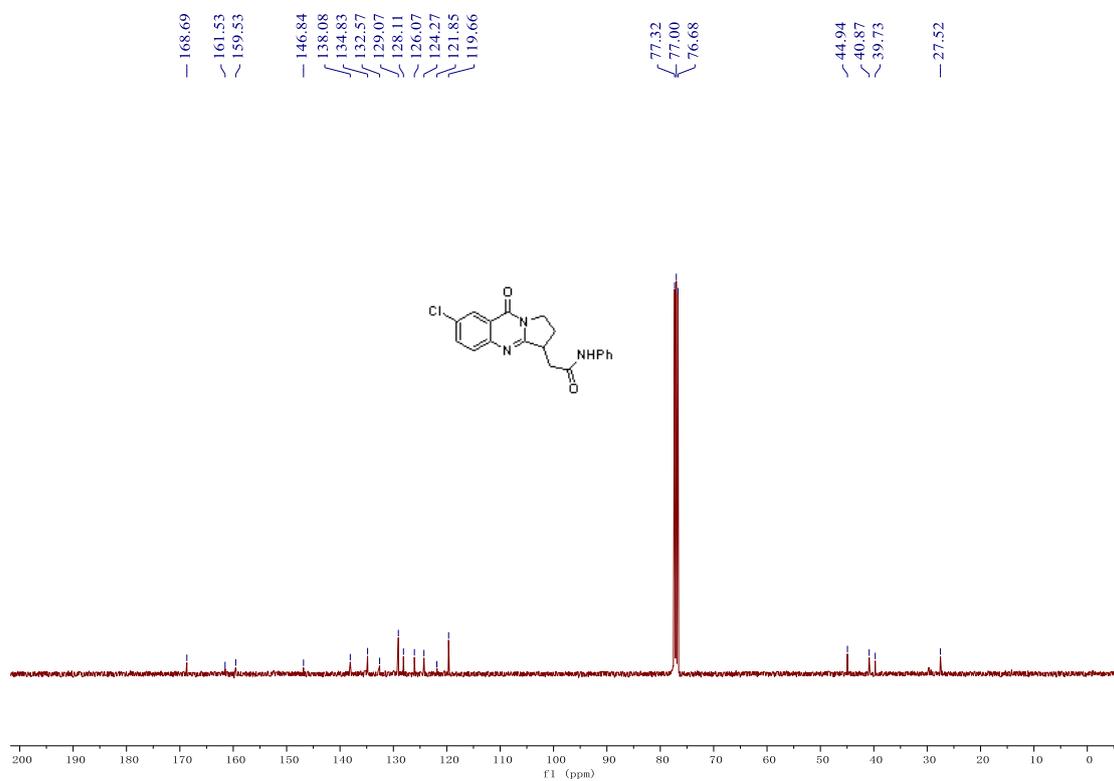


Figure S38 ¹³C NMR spectra of 3da

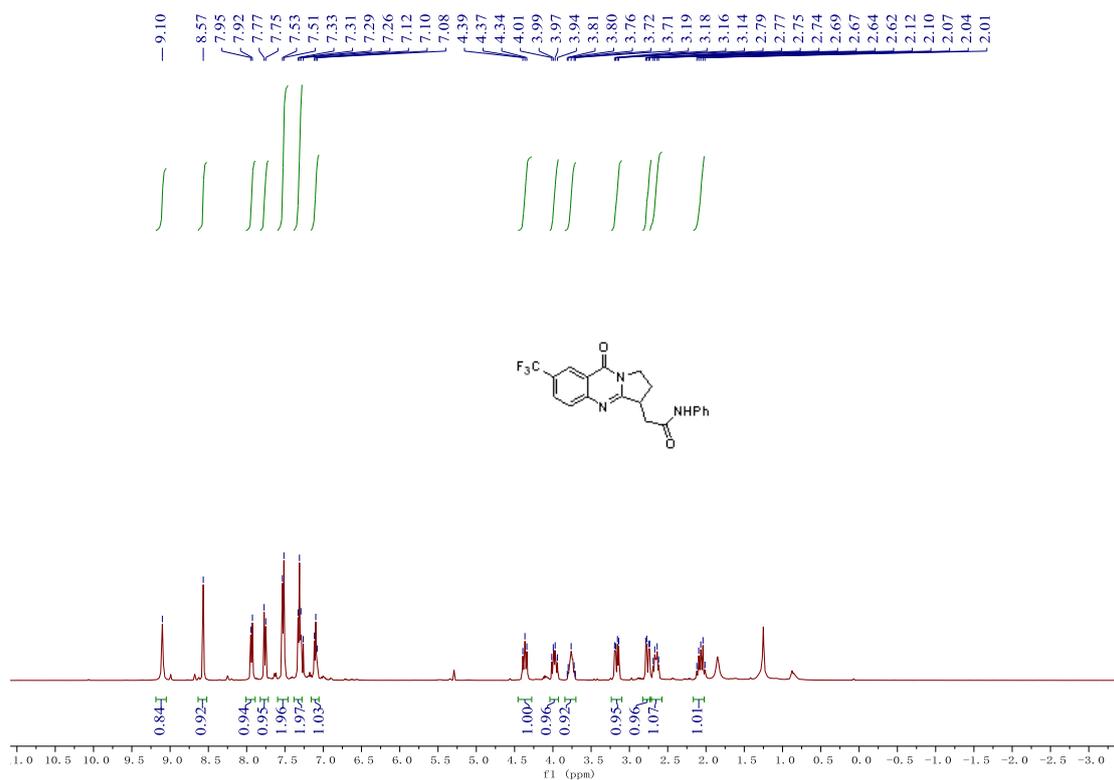


Figure S39 ¹H NMR spectra of 3ea

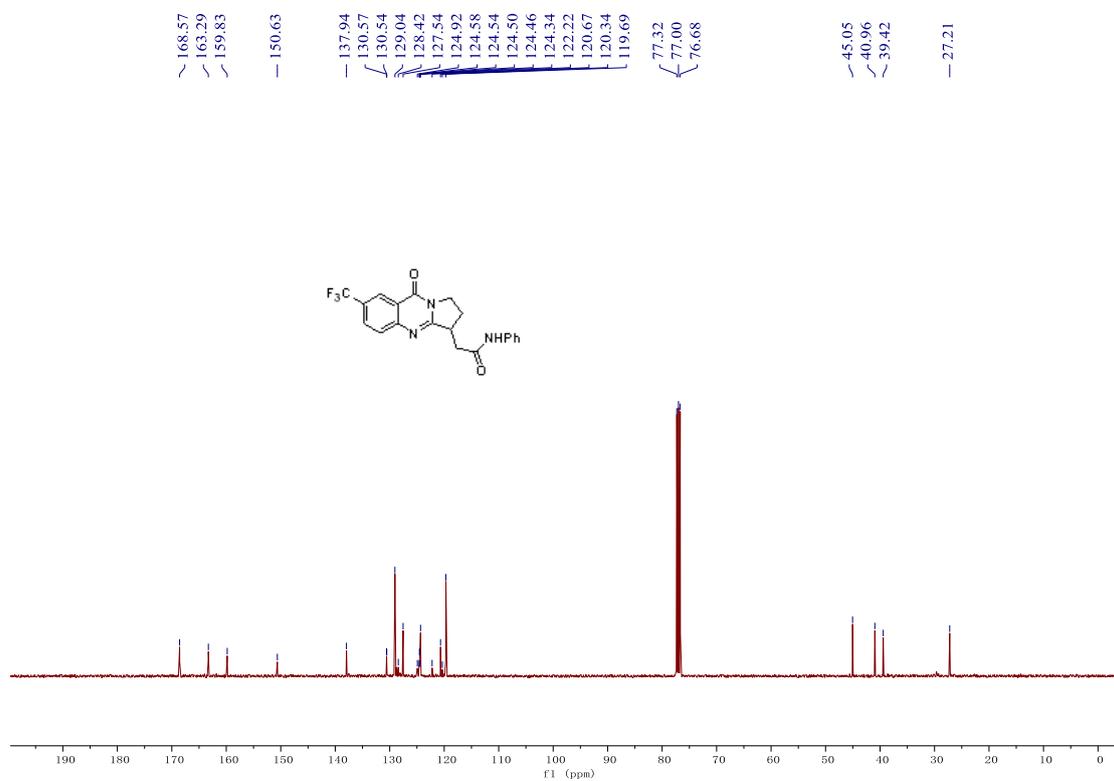


Figure S40 ¹³C NMR spectra of 3ea

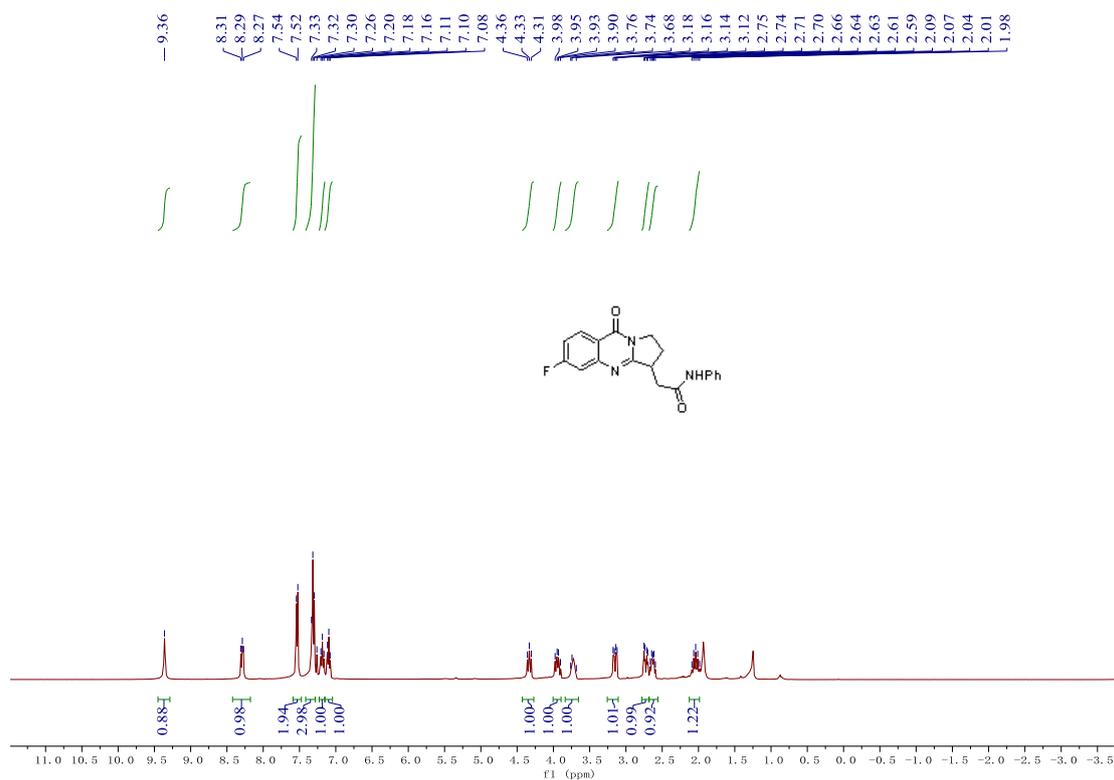


Figure S41 ¹H NMR spectra of 3fa

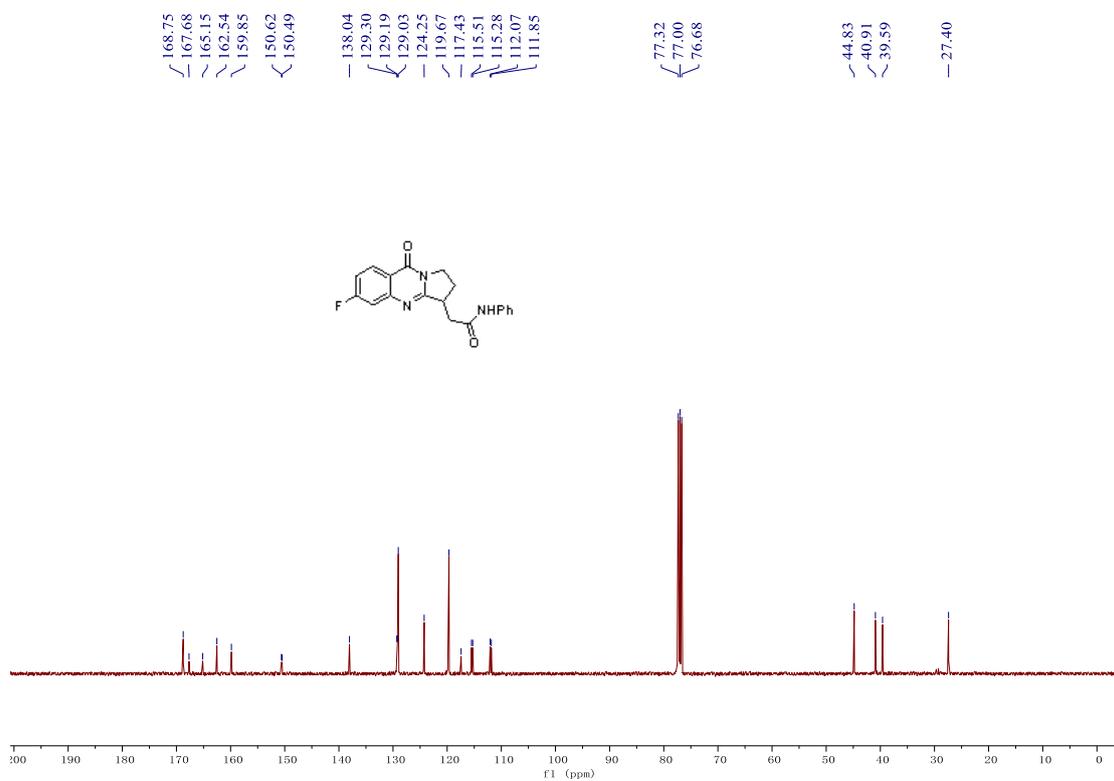


Figure S42 ¹³C NMR spectra of 3fa

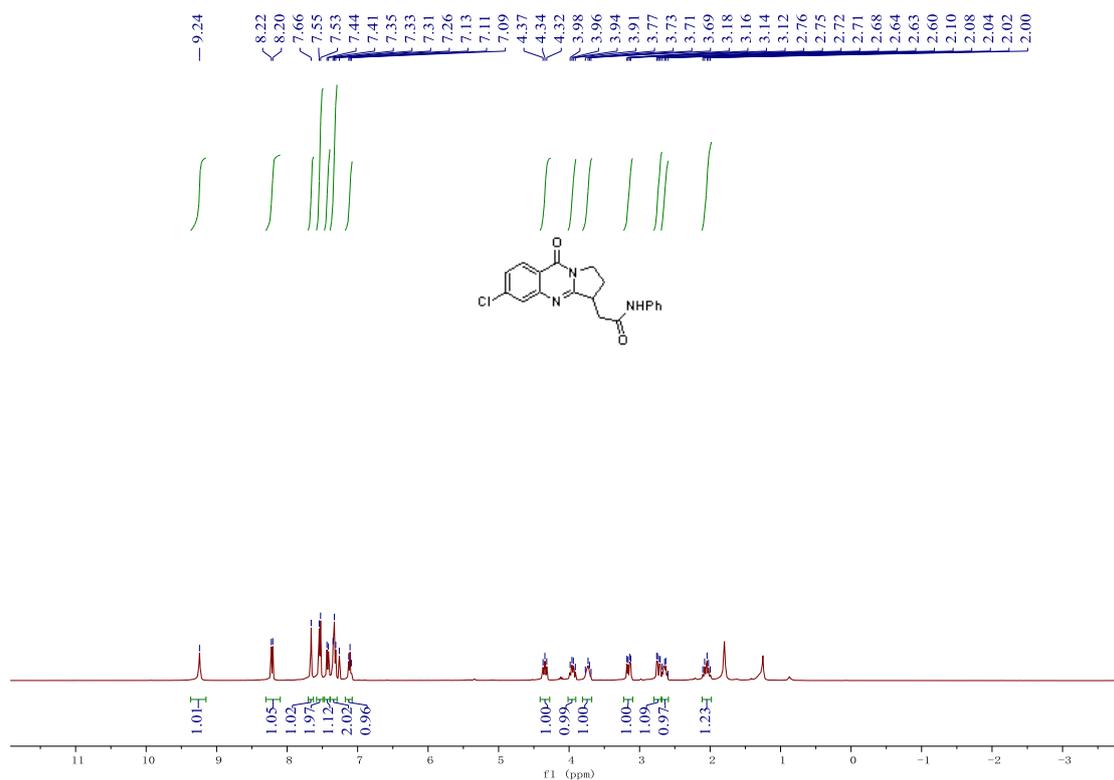


Figure S43 ¹H NMR spectra of 3ga

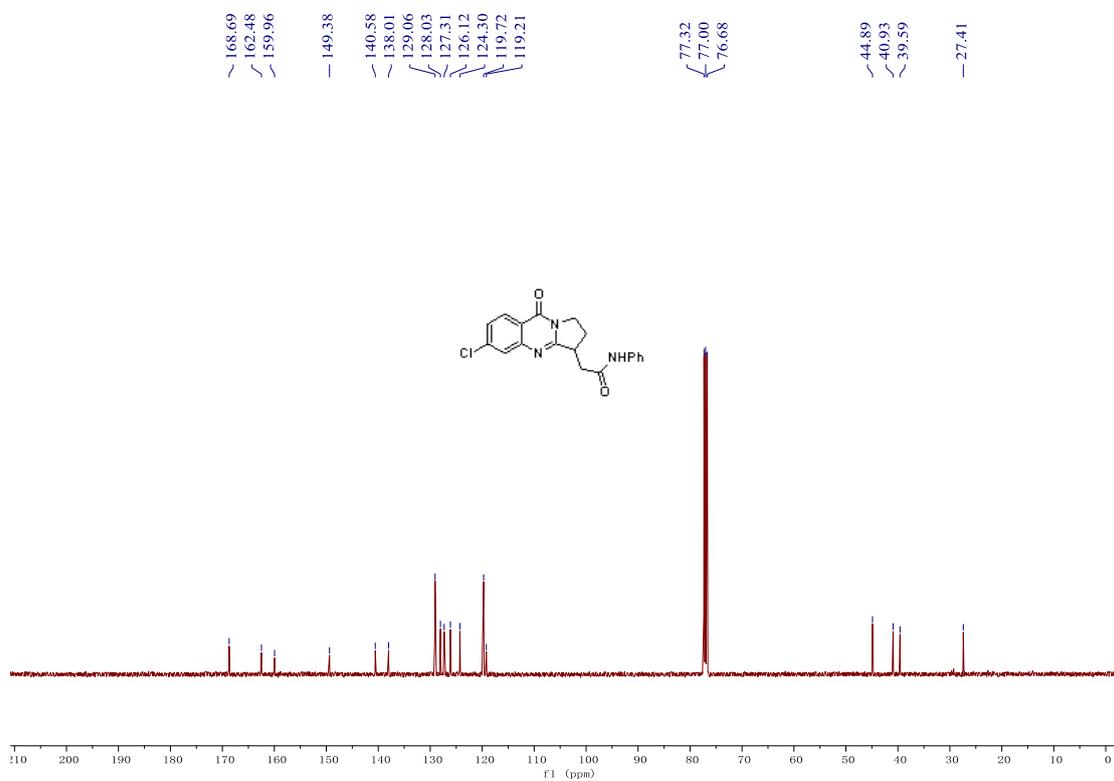


Figure S44 ¹³C NMR spectra of 3ga

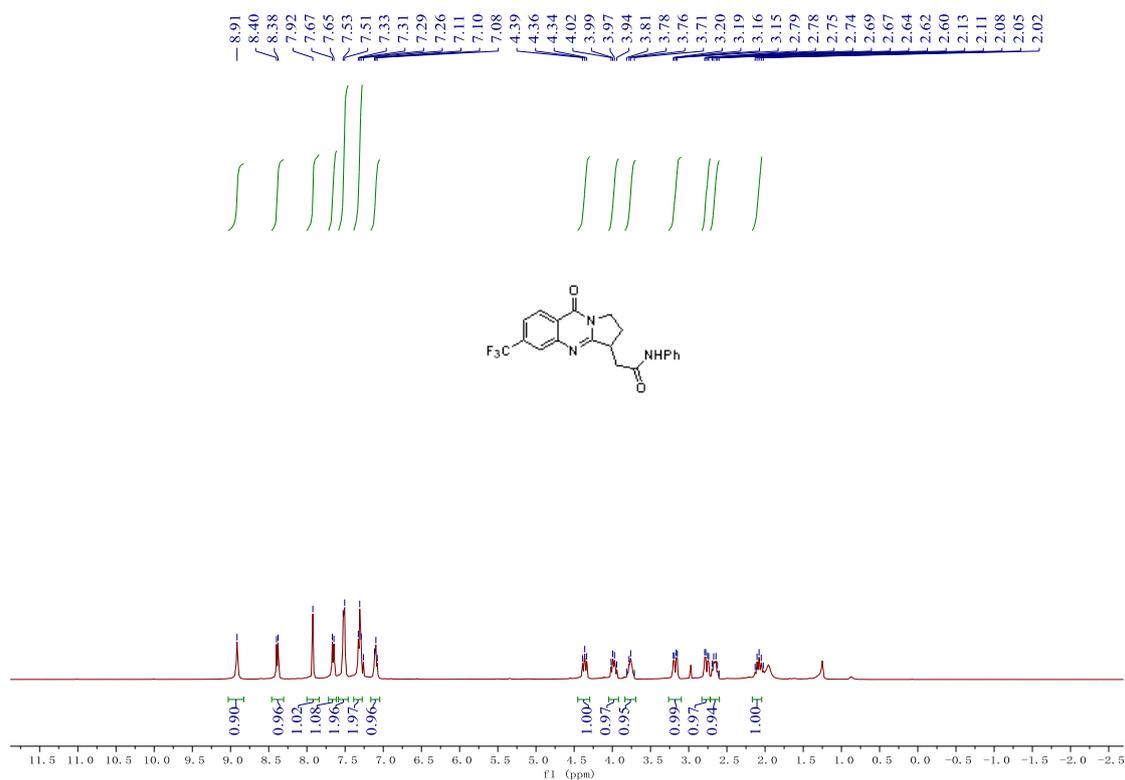


Figure S45 ¹H NMR spectra of 3ha

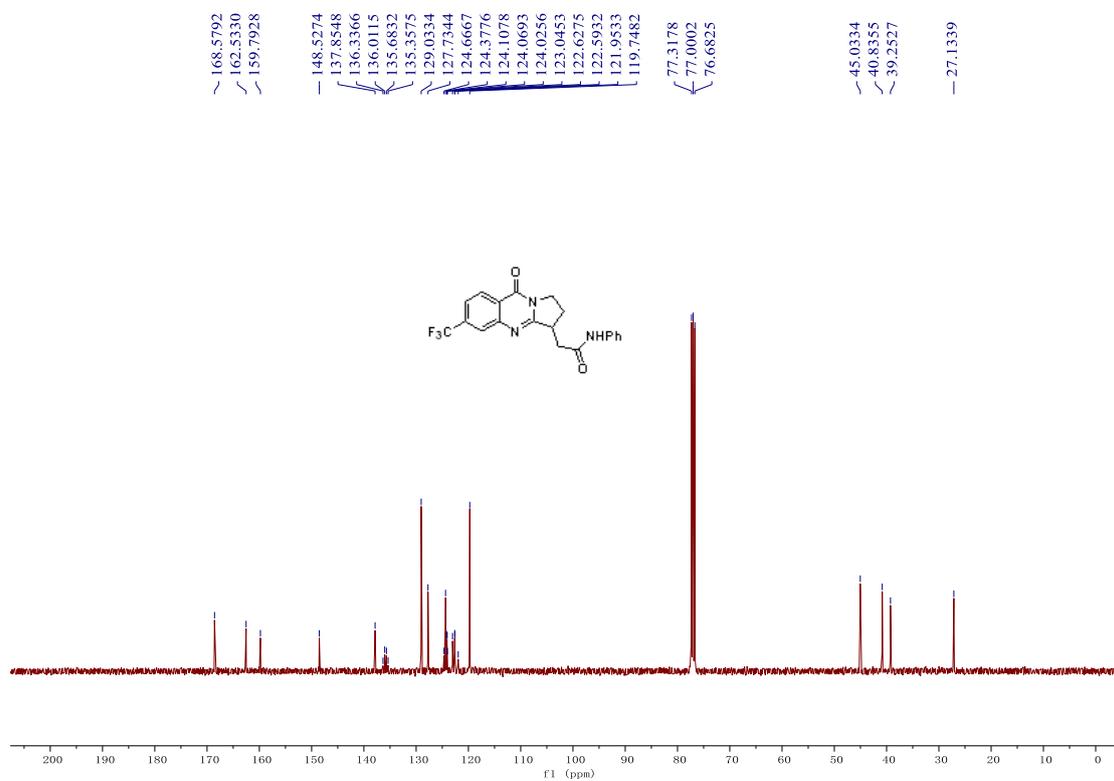


Figure S46 ¹³C NMR spectra of 3ha

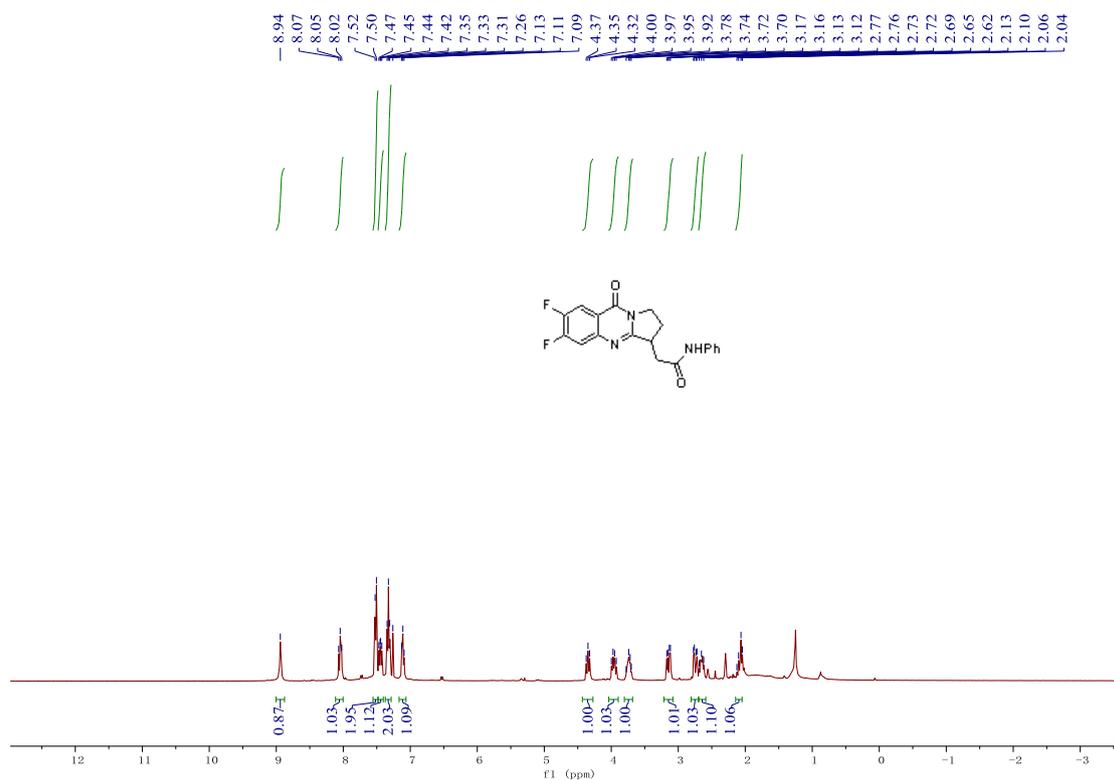


Figure S47 ¹H NMR spectra of 3ia

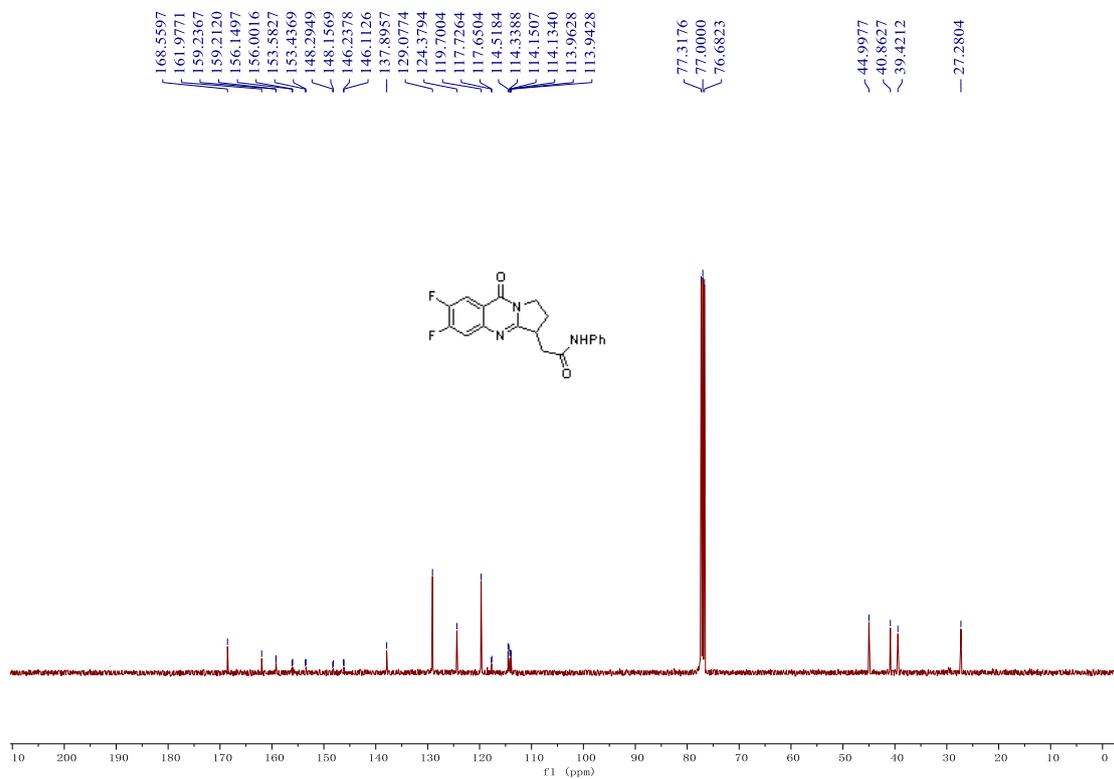


Figure S48 ¹³C NMR spectra of 3ia

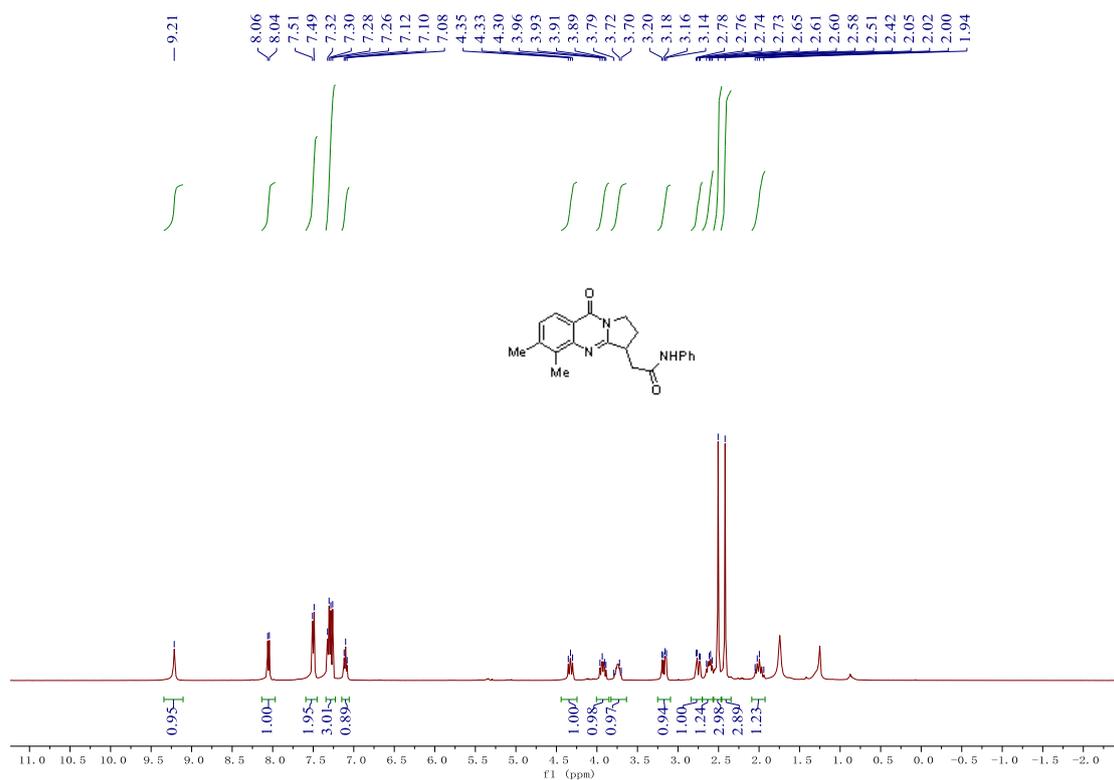


Figure S49 ¹H NMR spectra of 3ja

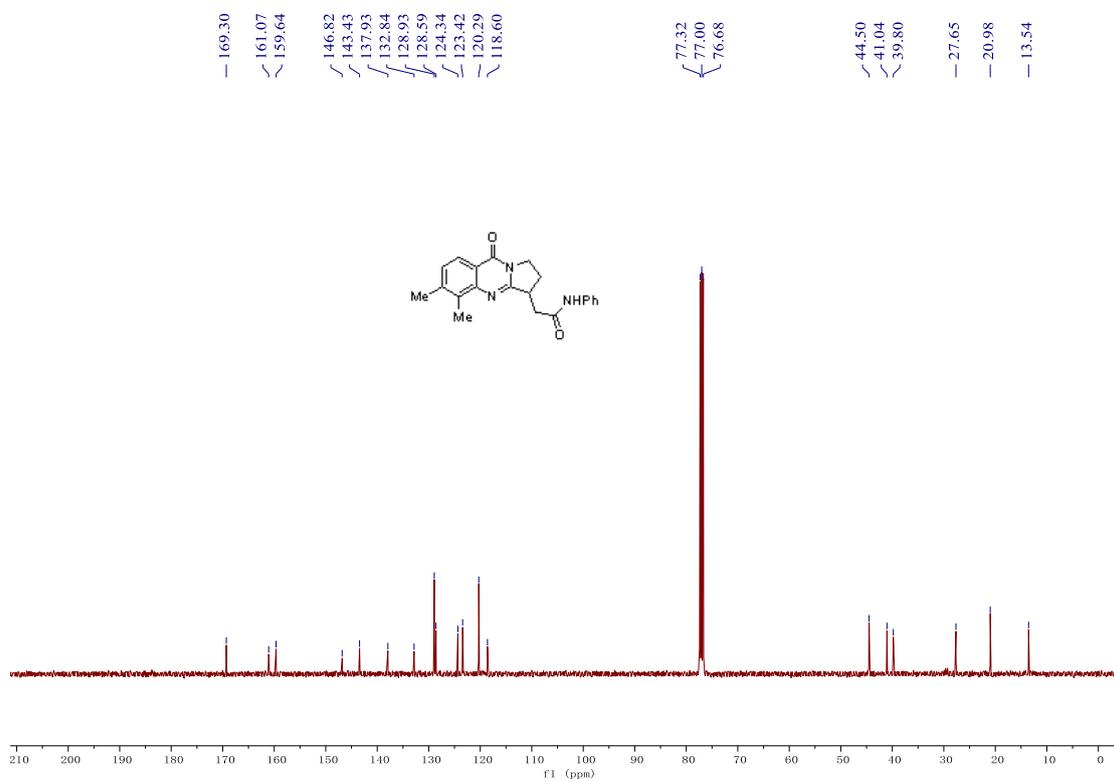


Figure S50 ¹³C NMR spectra of 3ja

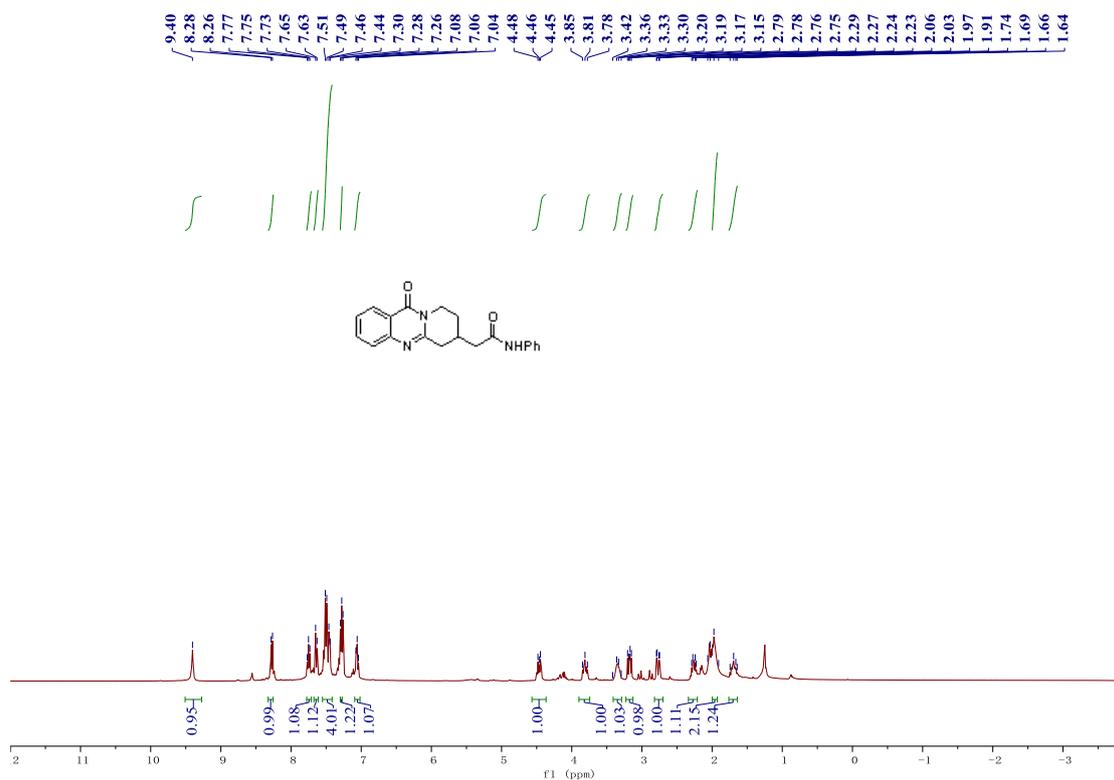


Figure S51 ¹H NMR spectra of 3ka

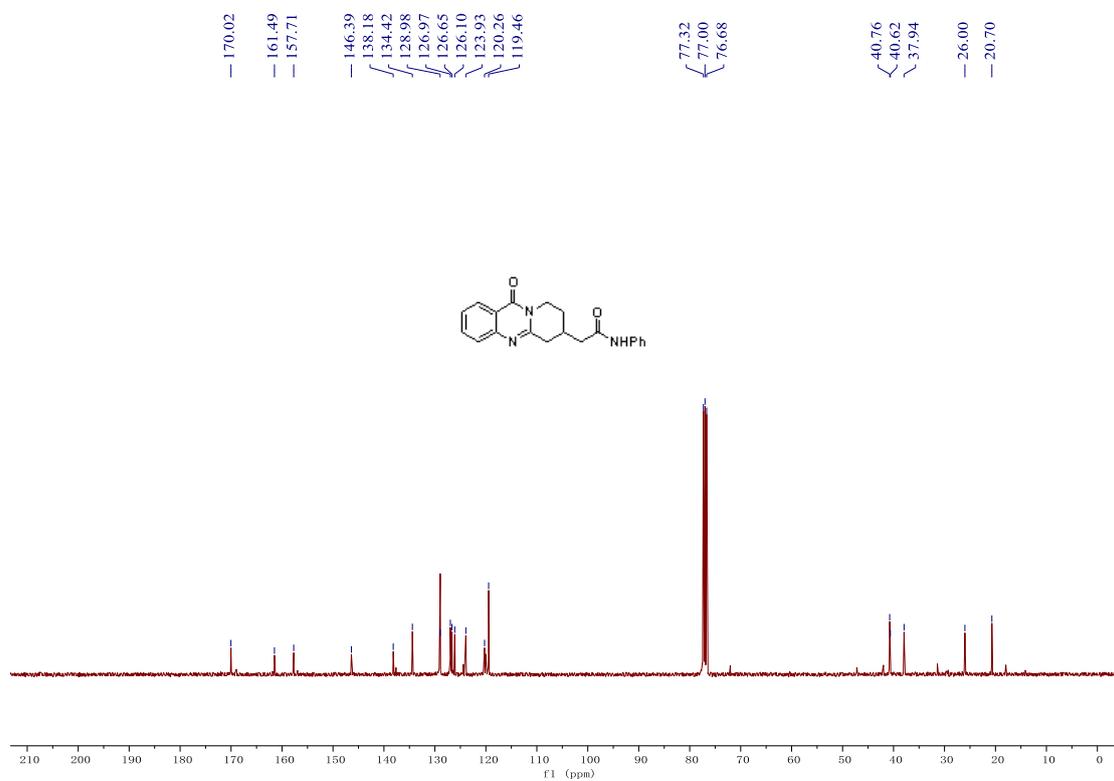


Figure S52 ¹³C NMR spectra of 3ka