

Supporting information

Cascade bicyclization of triethylammonium thiolates with hydrazines: efficient access to pyrazolo[3,4-*c*]quinolines

Wei Fan,^a Yan-Rong Li,^a Bo Jiang,^{*,b,c} and Guigen Li^{*,a,b}

^aInstitute of Chemistry & BioMedical Sciences, Collaborative Innovation Center of Chemistry for Life Sciences,
Nanjing University, Nanjing, 210093, P. R. China

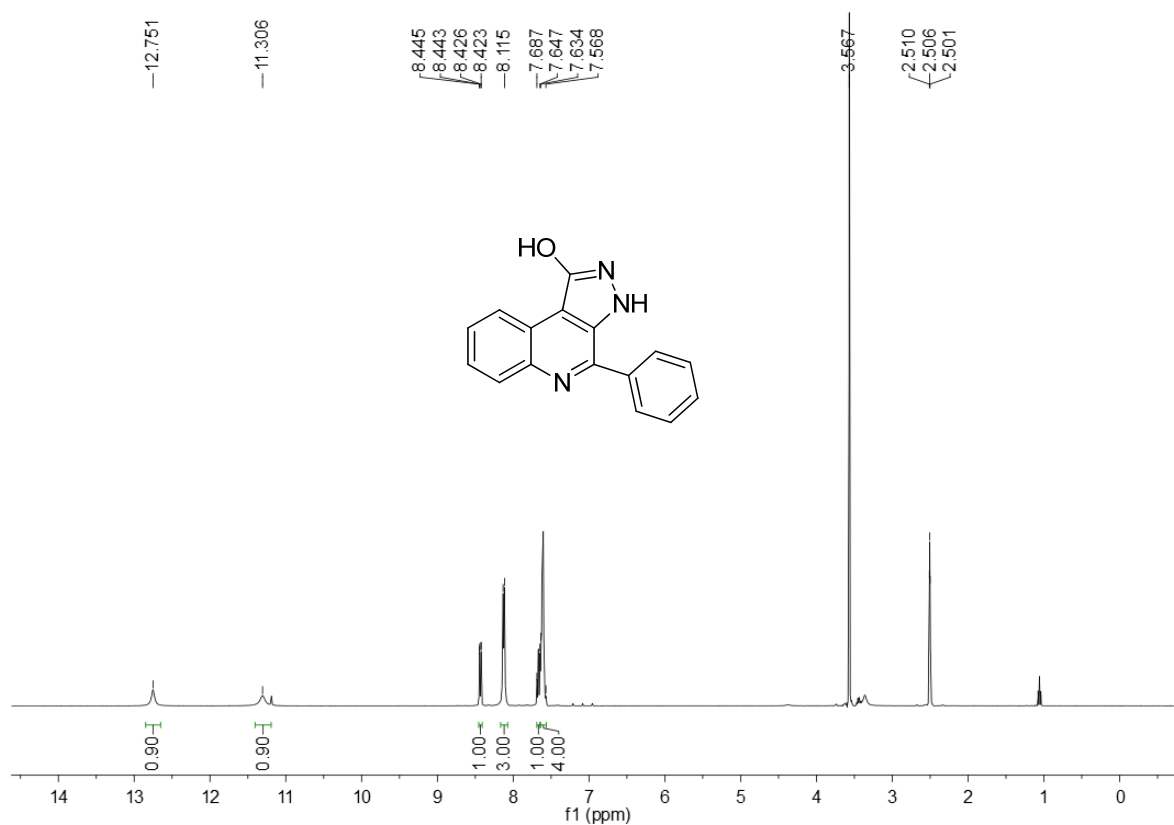
^bDepartment of Chemistry and Biochemistry, Texas Tech University, Lubbock, Texas 79409-1061, United States

^cSchool of Chemistry and Chemical Engineering, Jiangsu Normal University, Xuzhou, 221116, P. R. China

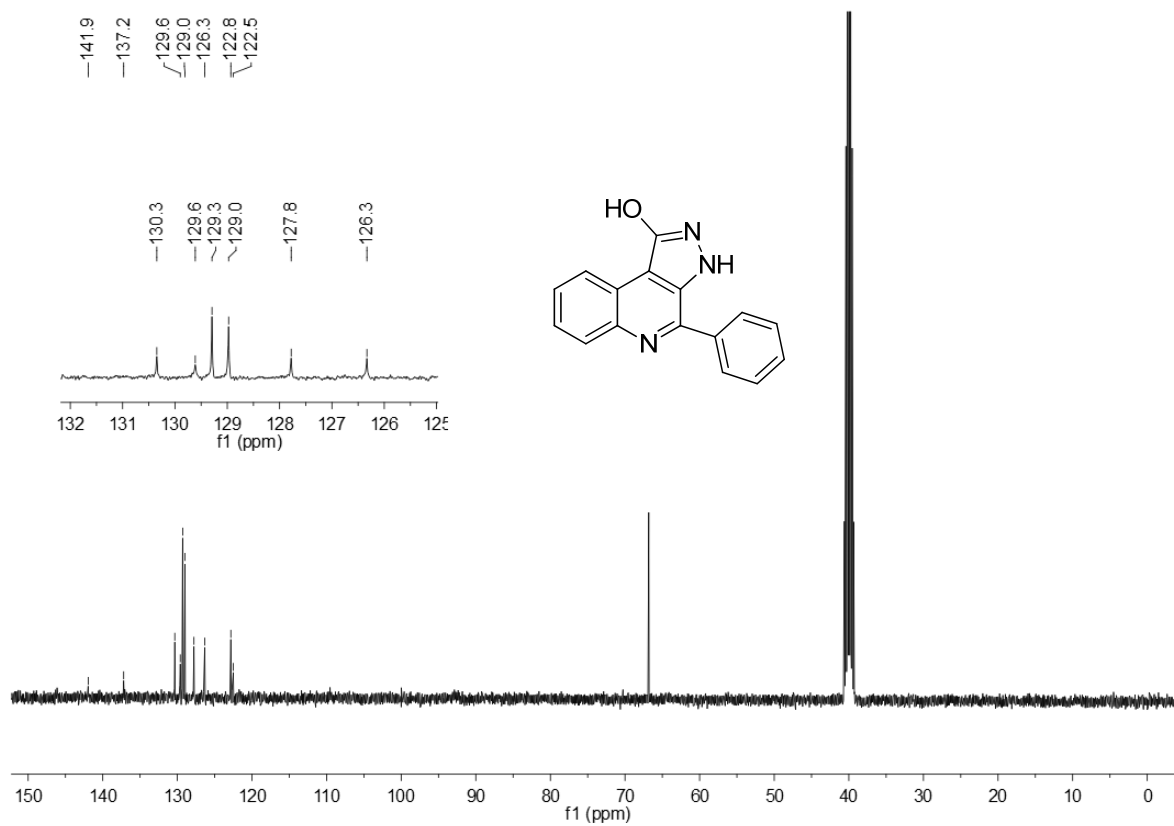
jiangchem@jsnu.edu.cn; guigen.li@ttu.edu

Table of Contents

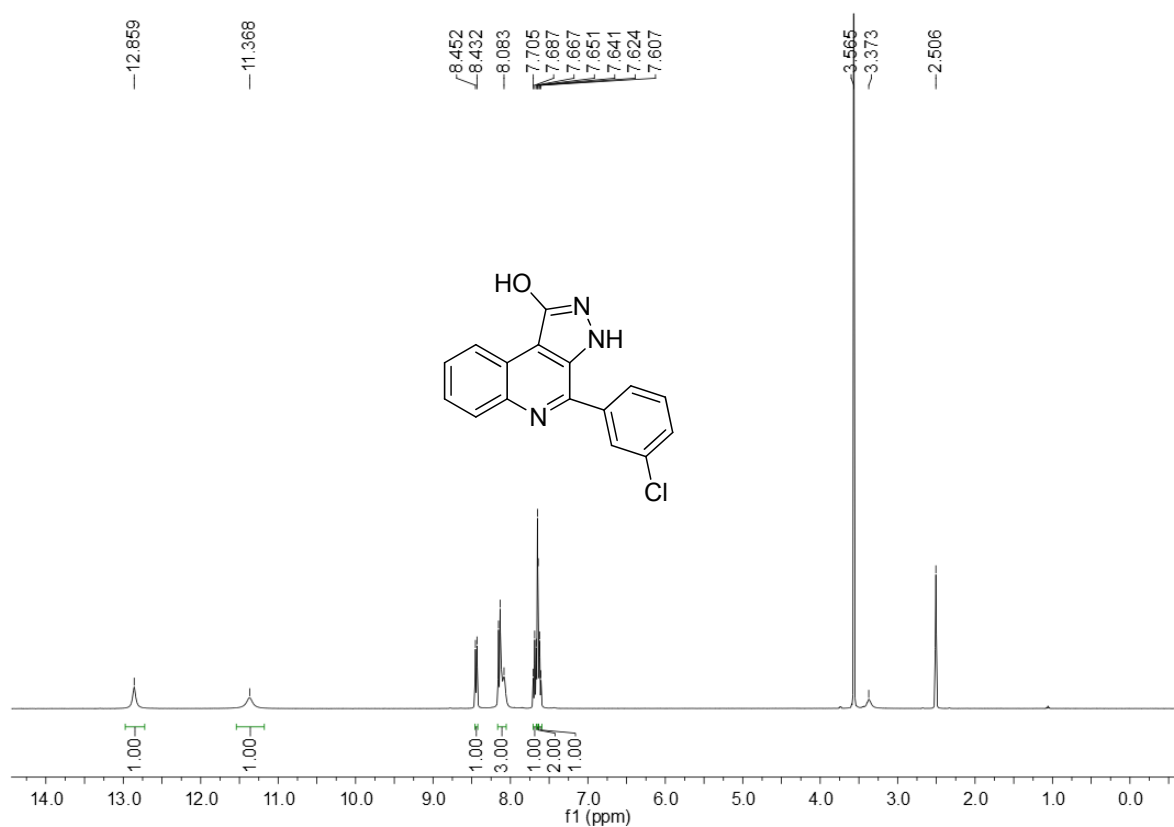
Copies of ¹H and ¹³C NMR Spectra for Compounds **3a-3hh**-----S2-S35



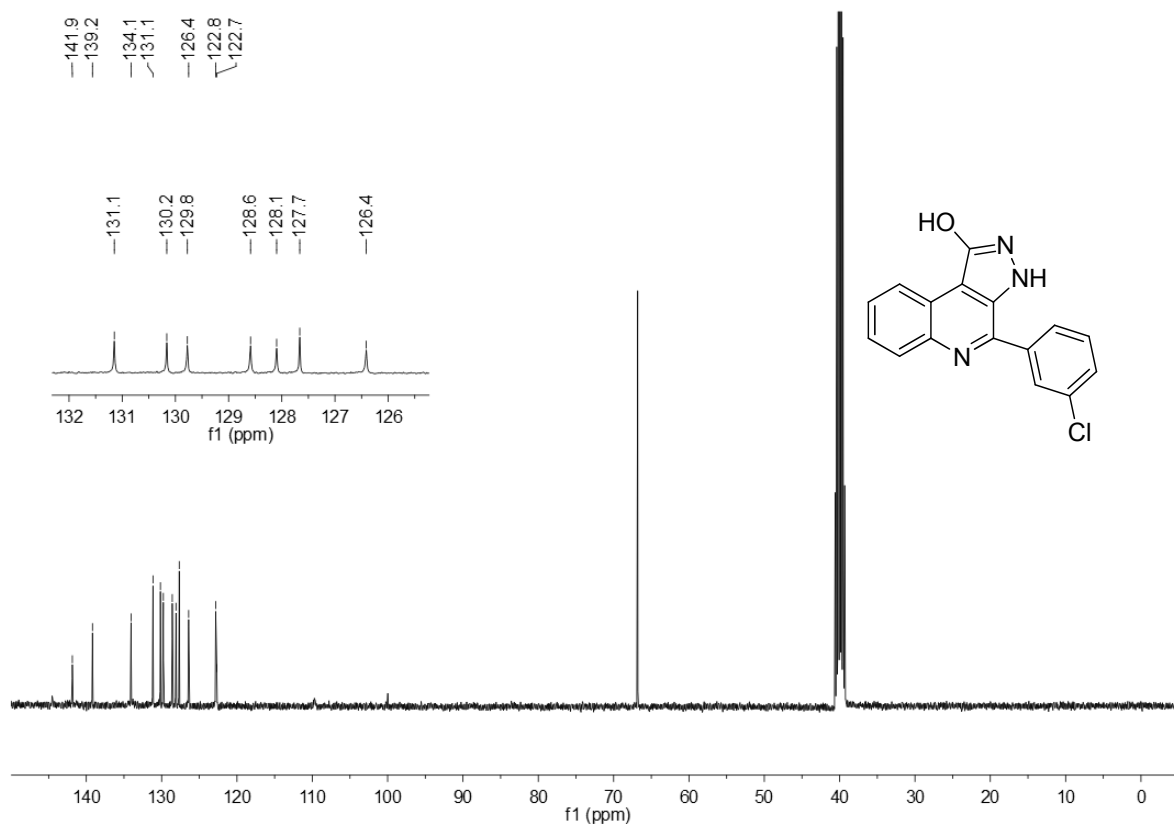
¹H NMR Spectrum of Compound 3a



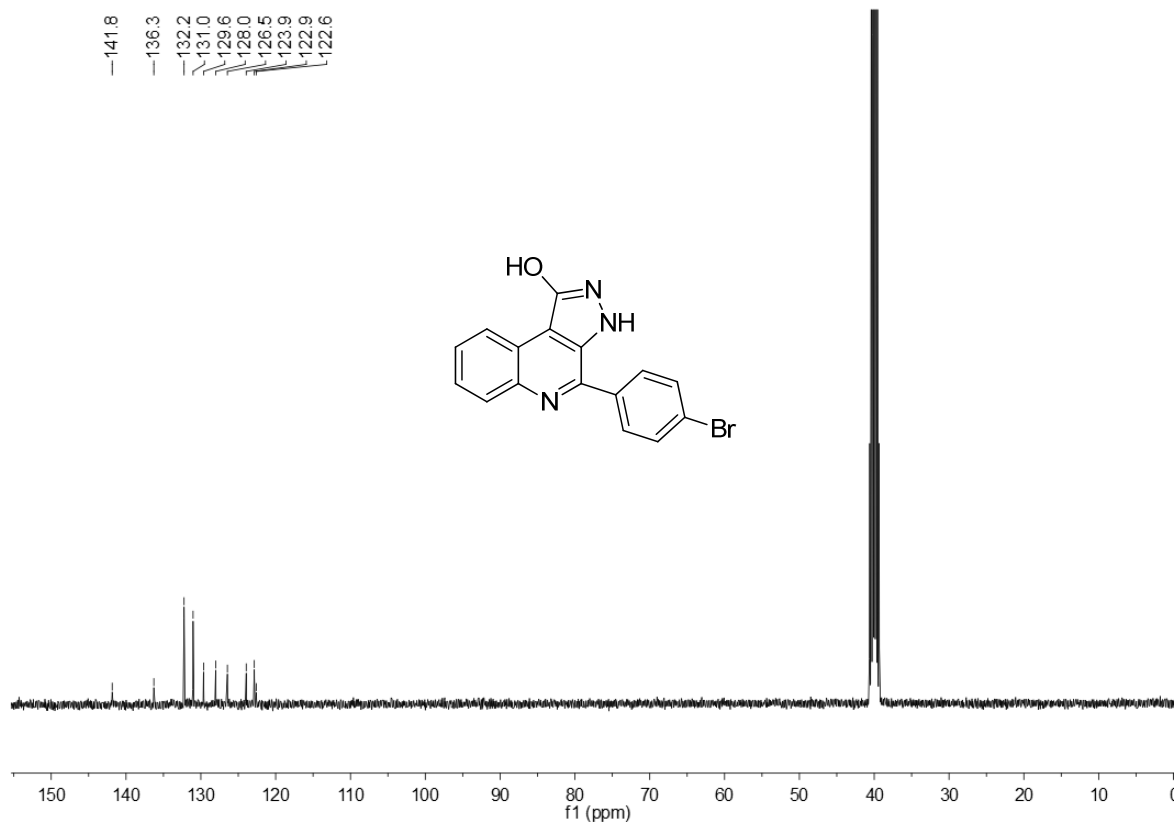
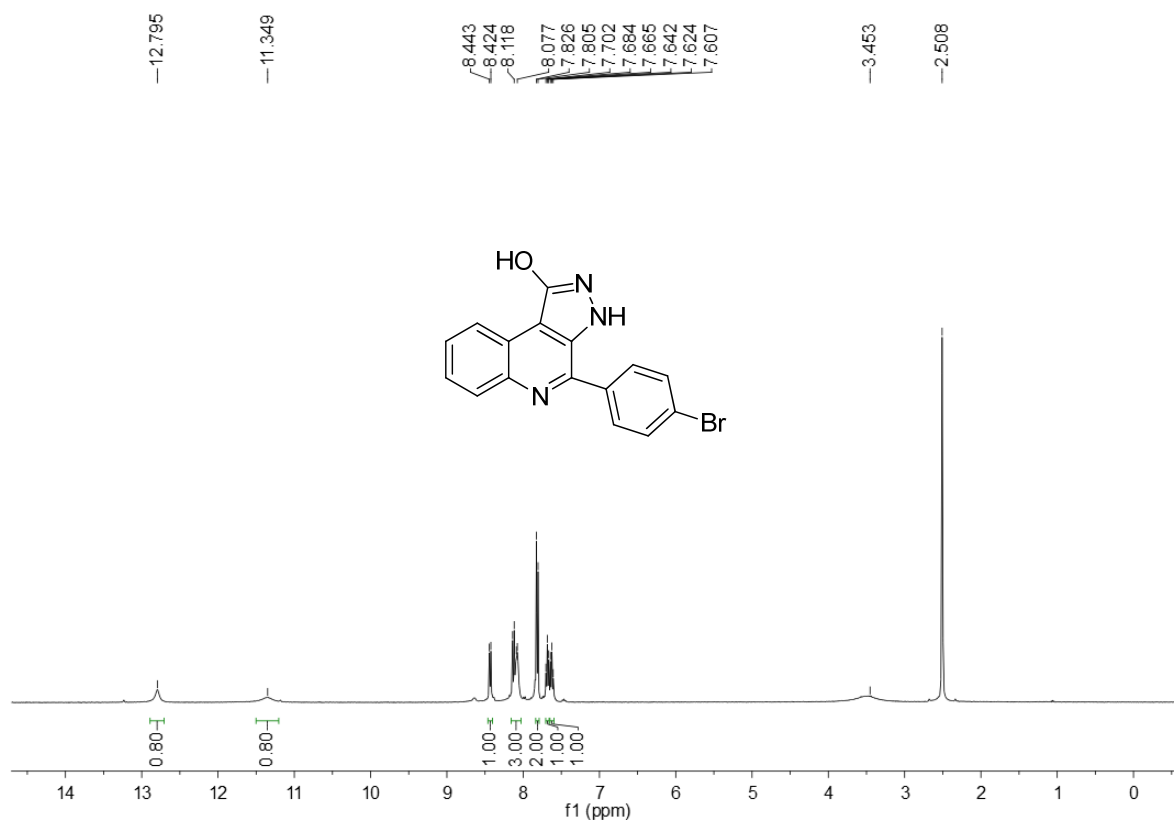
¹³C NMR Spectrum of Compound 3a



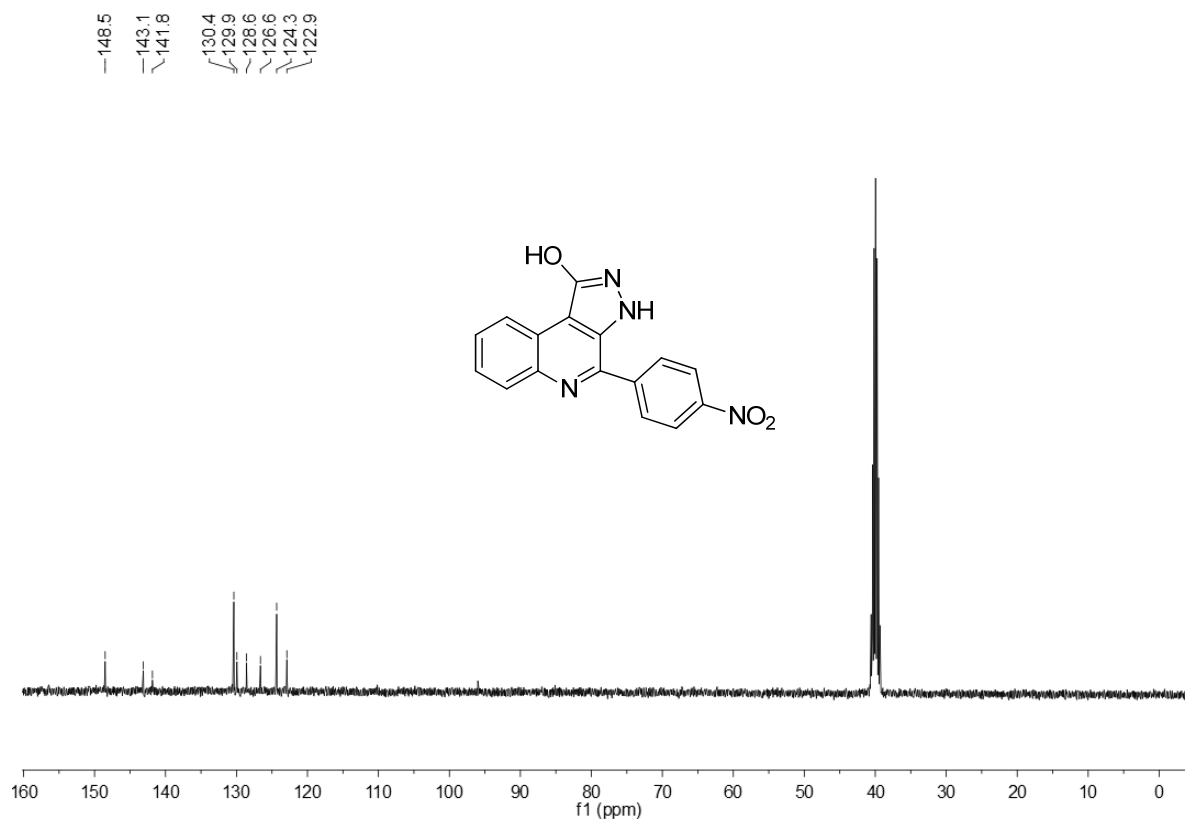
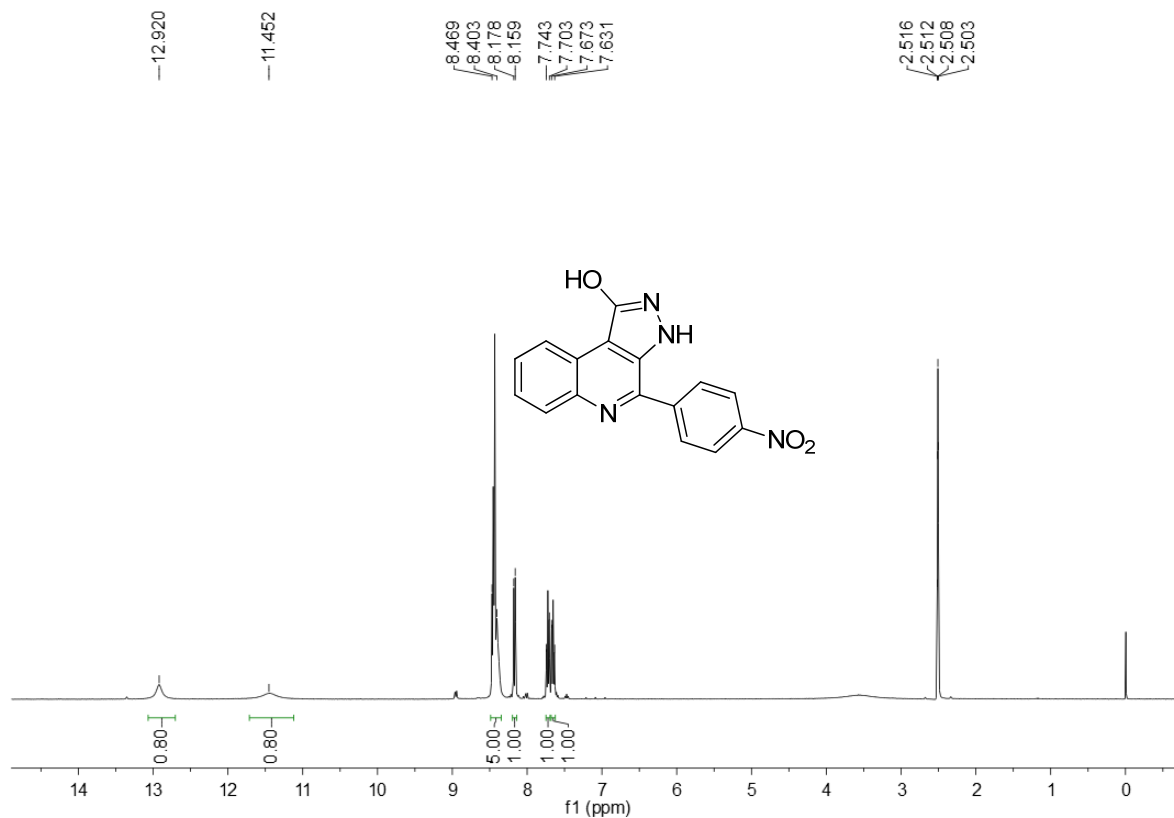
¹H NMR Spectrum of Compound 3b

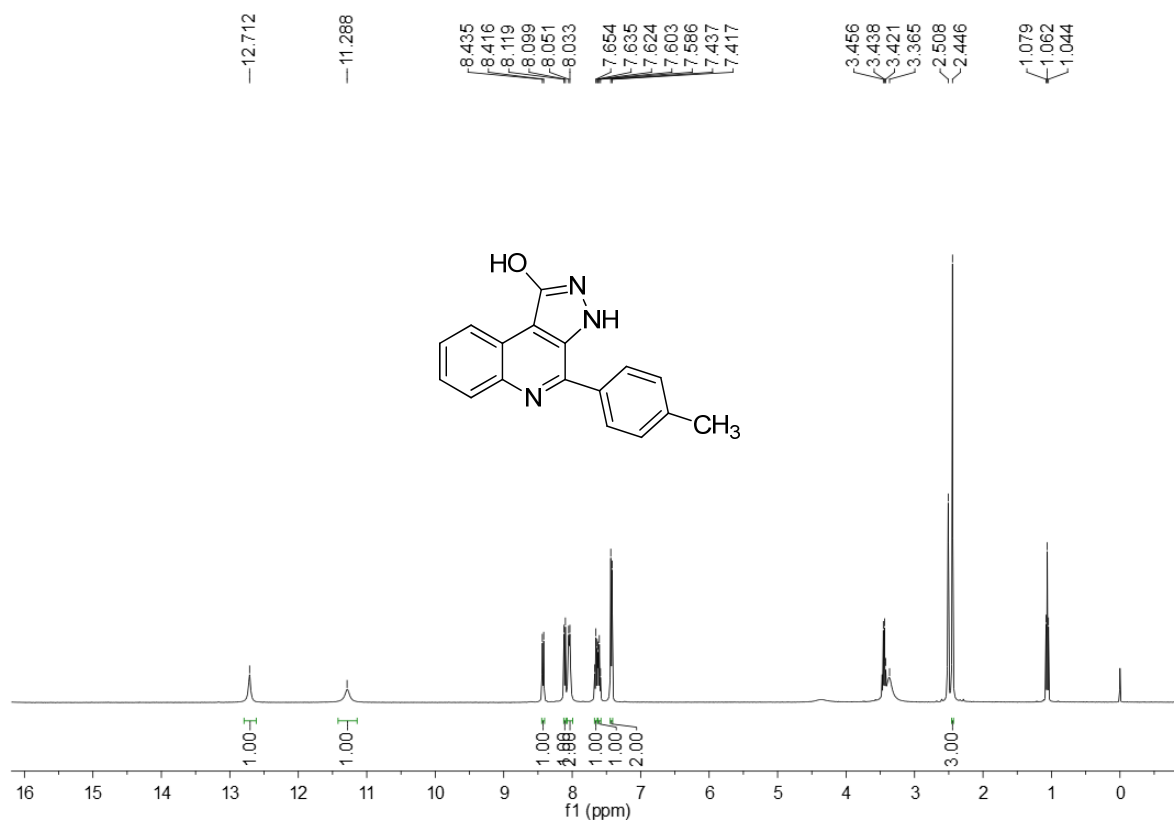


¹³C NMR Spectrum of Compound 3b

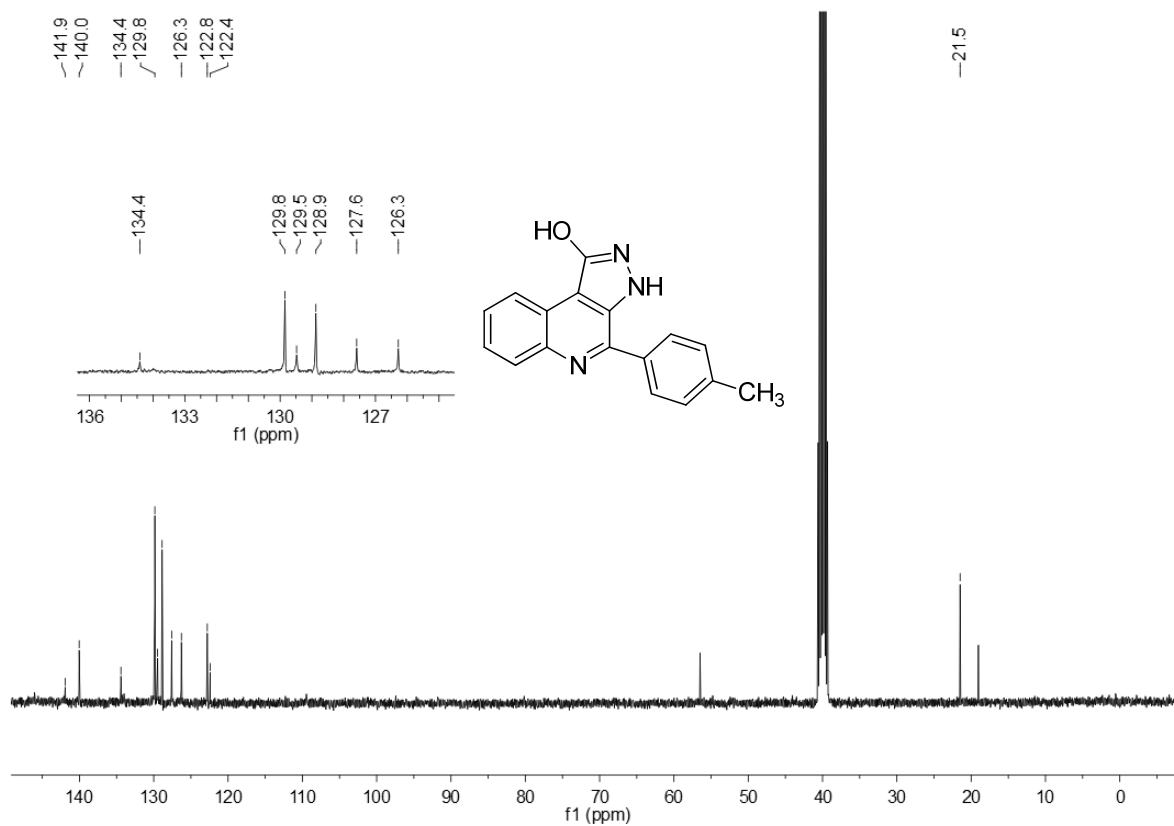


¹³C NMR Spectrum of Compound 3c

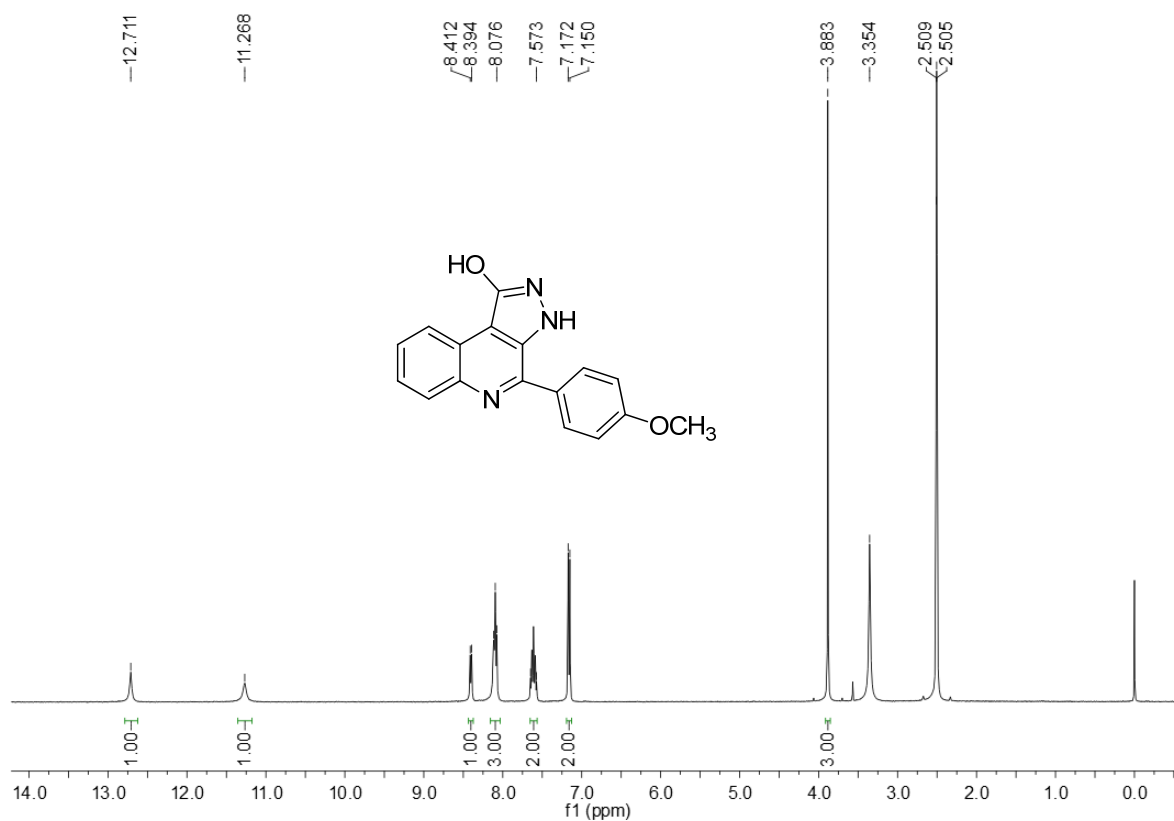




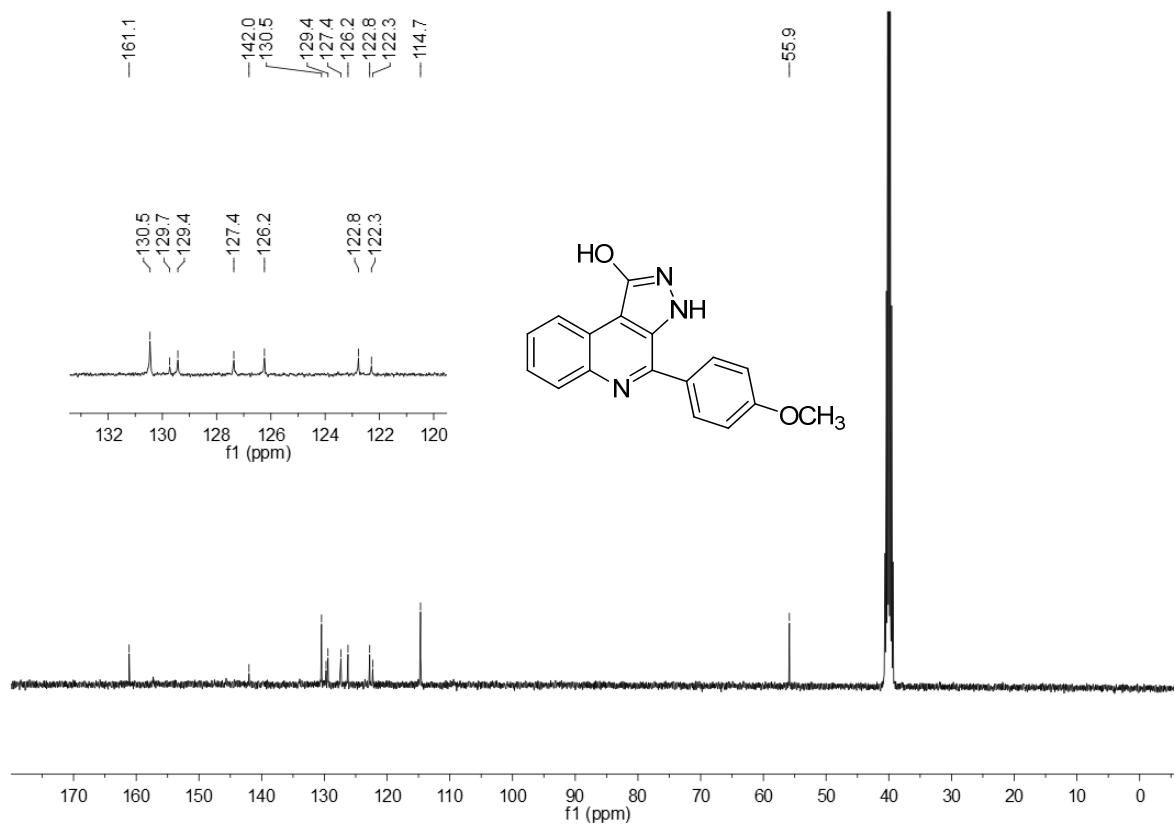
¹H NMR Spectrum of Compound 3e



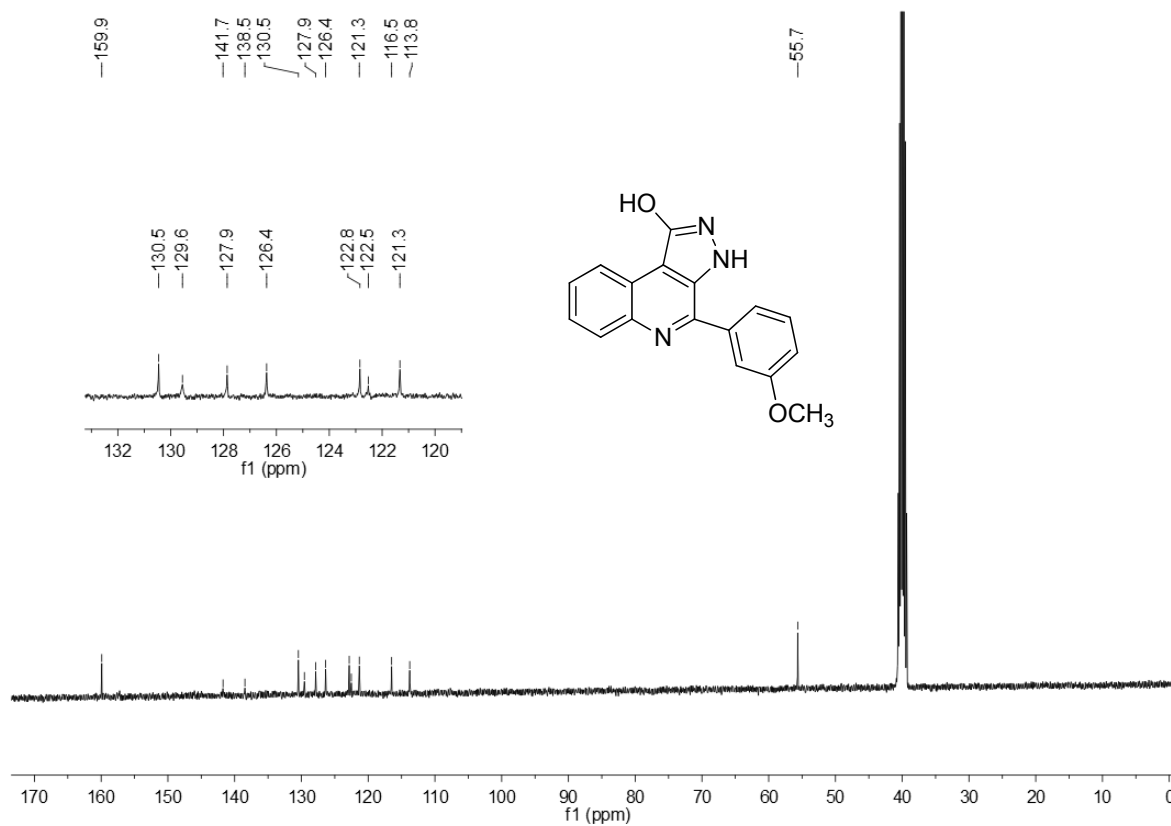
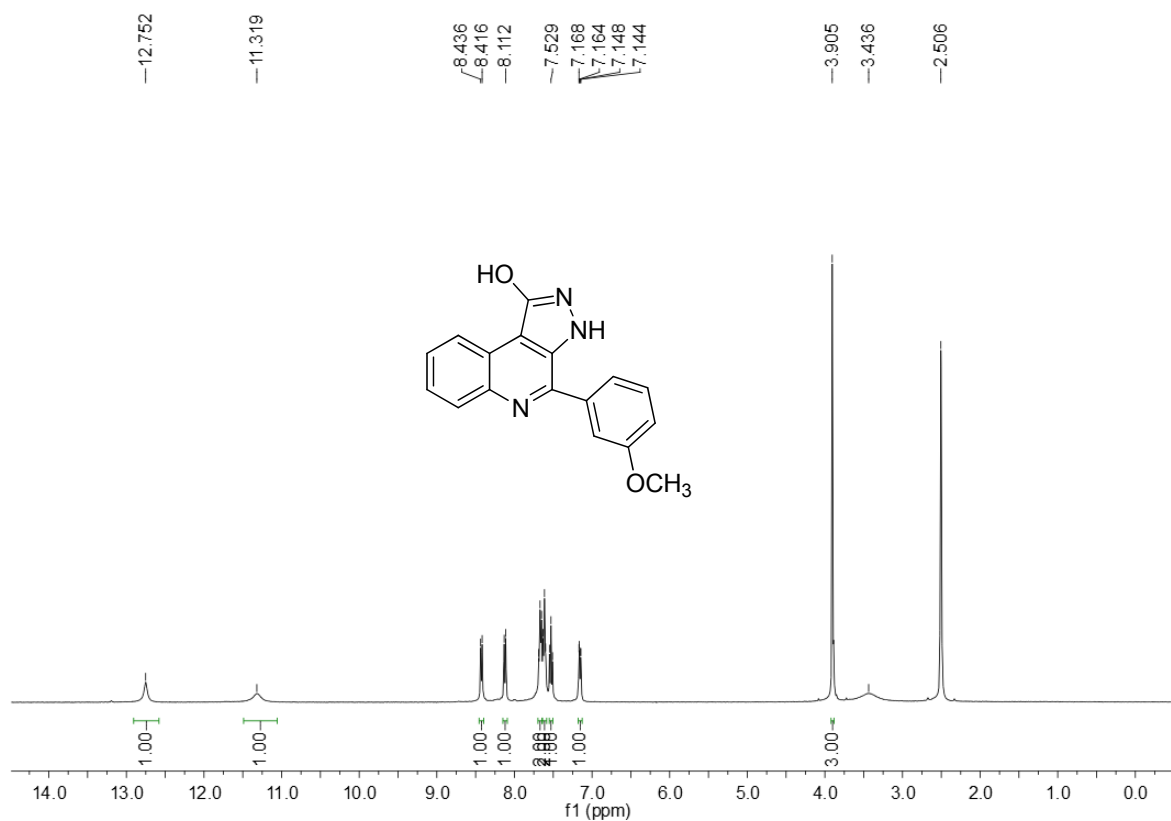
¹³C NMR Spectrum of Compound 3e



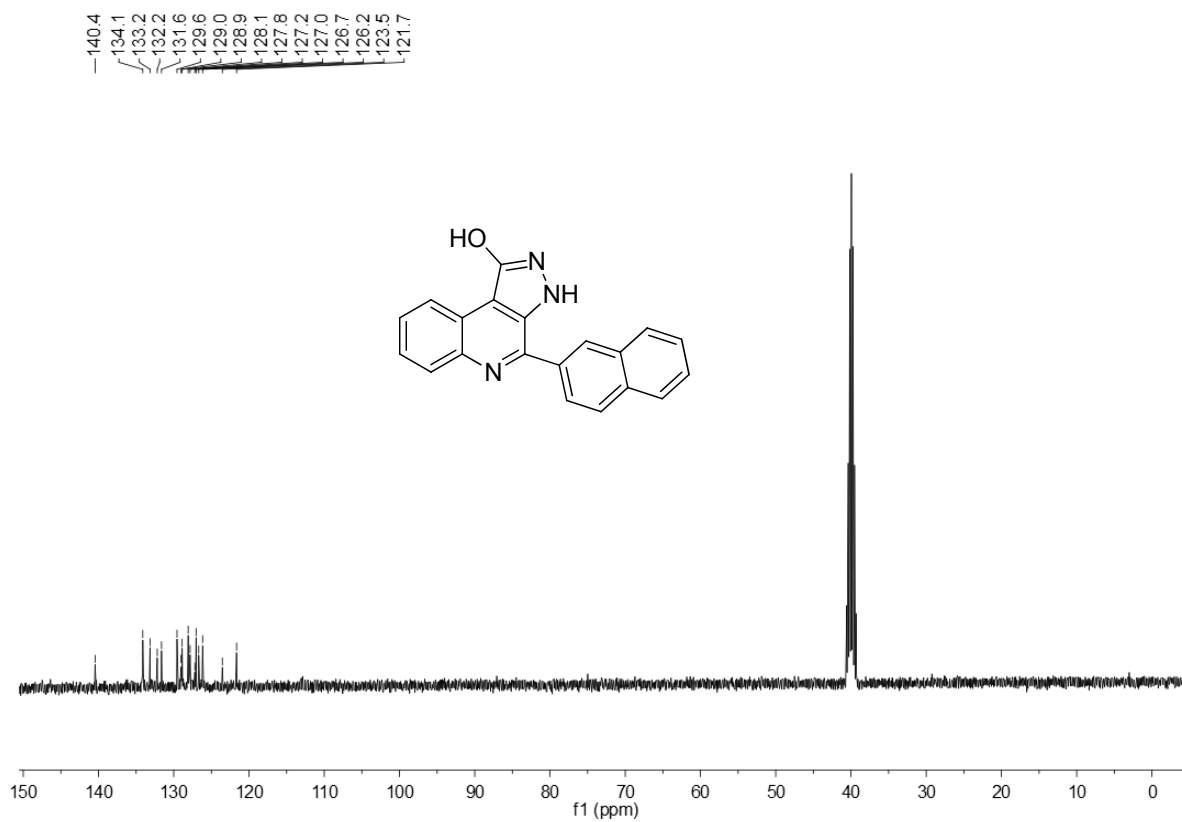
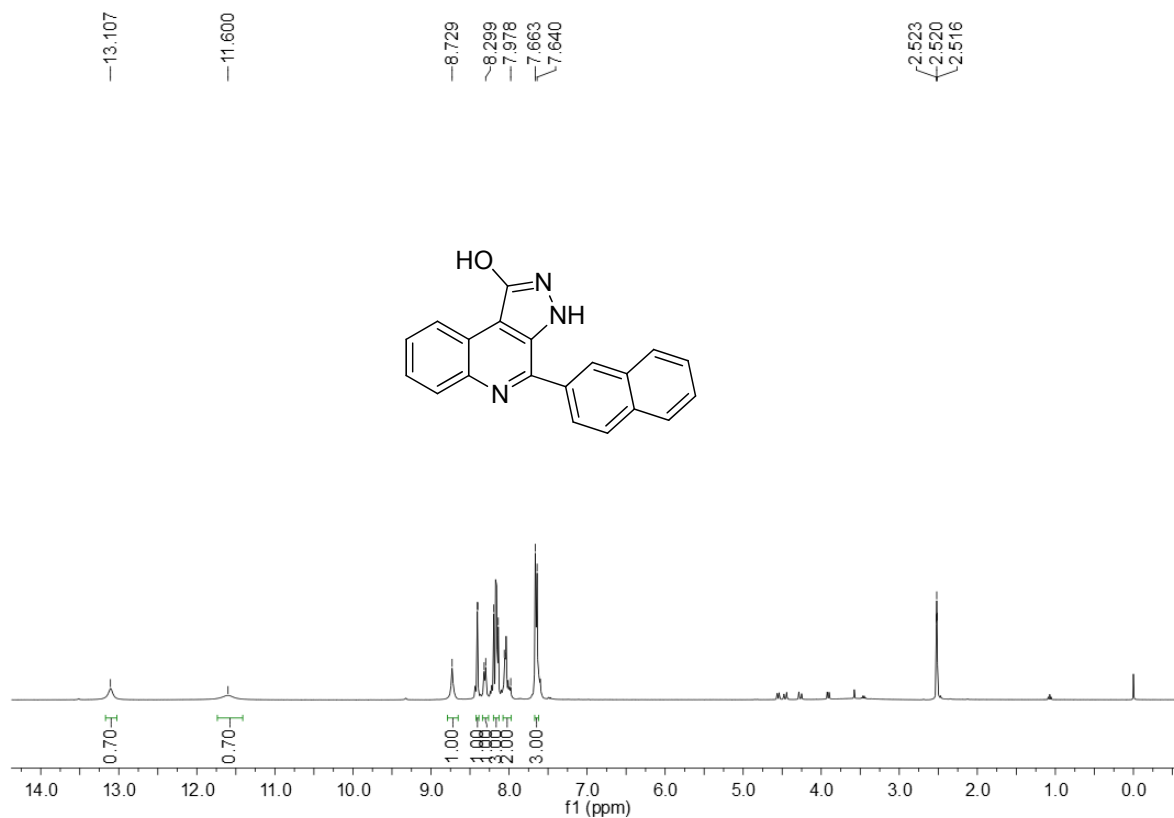
¹H NMR Spectrum of Compound 3f

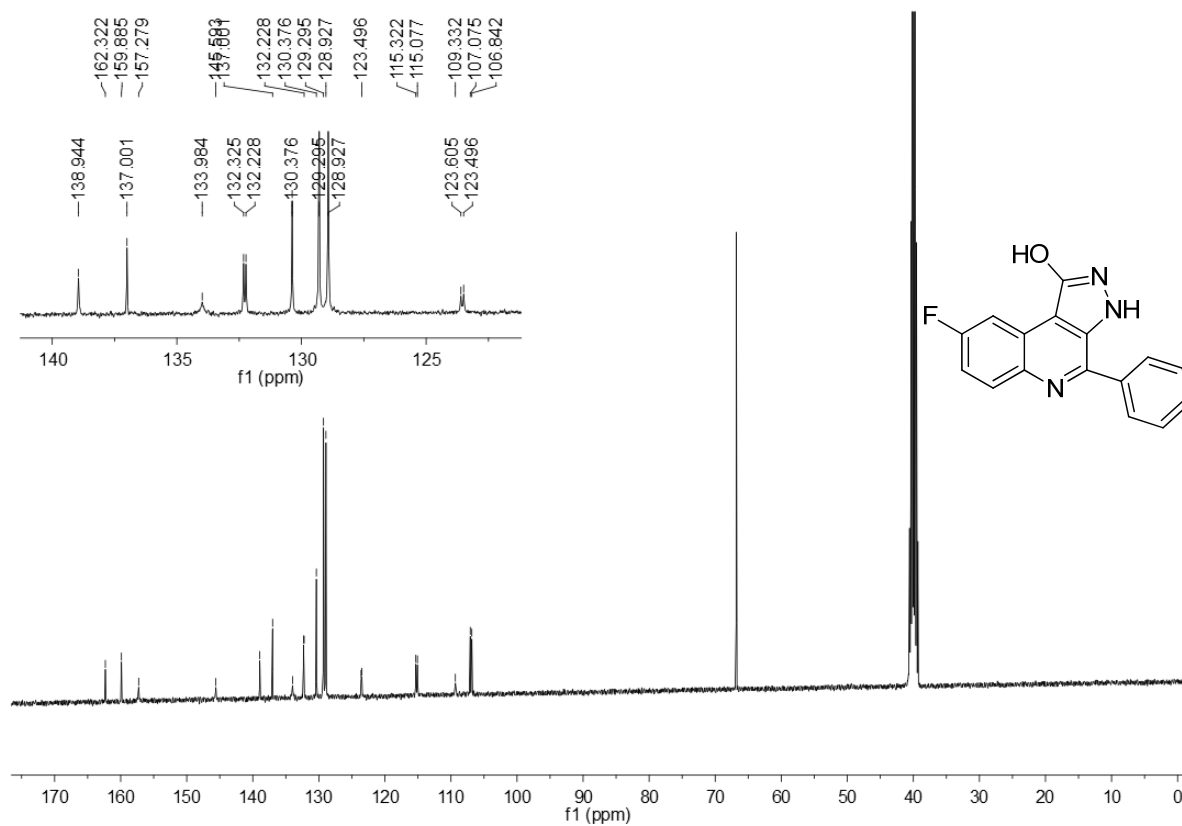
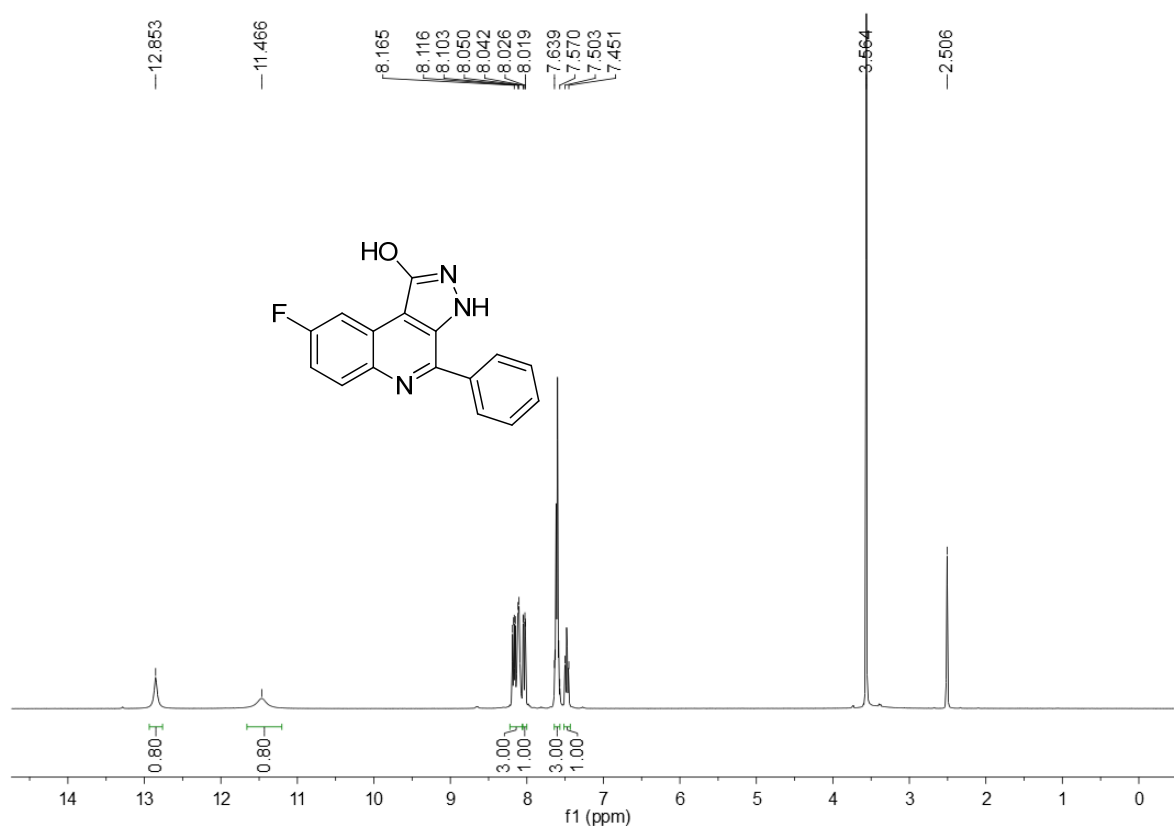


¹³C NMR Spectrum of Compound 3f

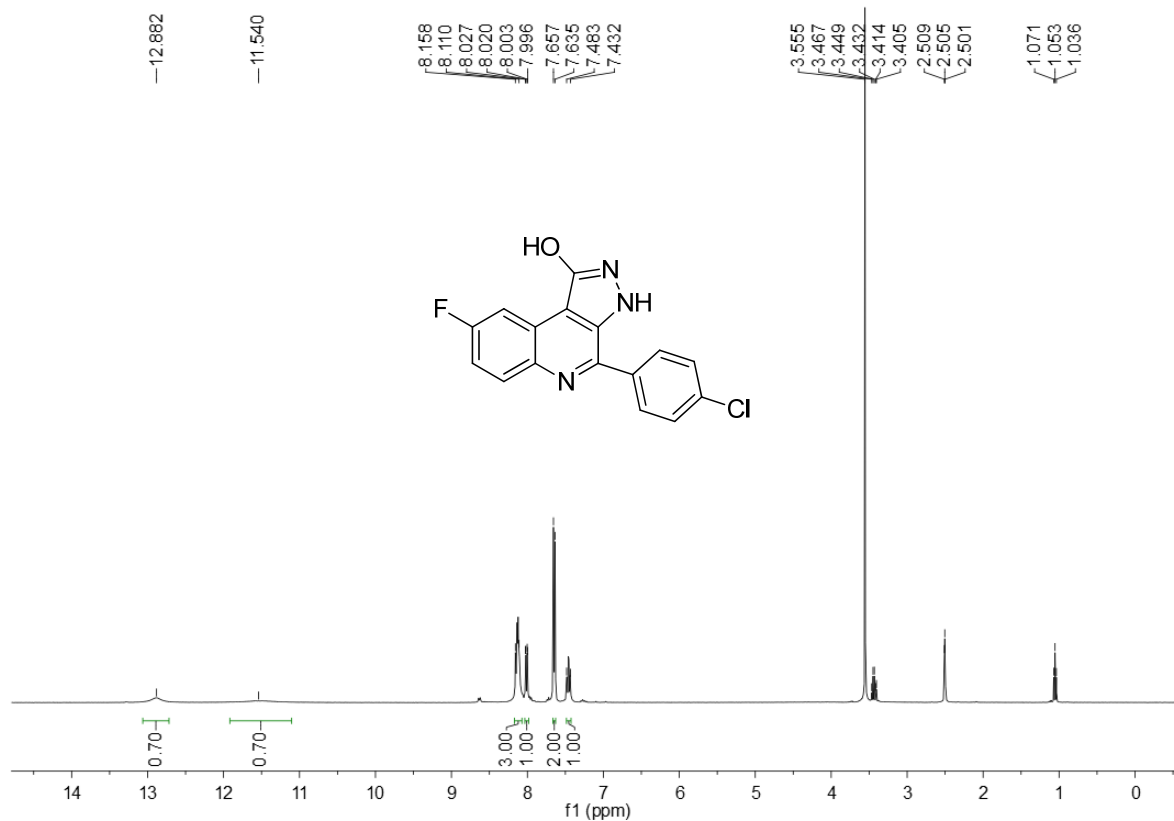


¹³C NMR Spectrum of Compound 3g

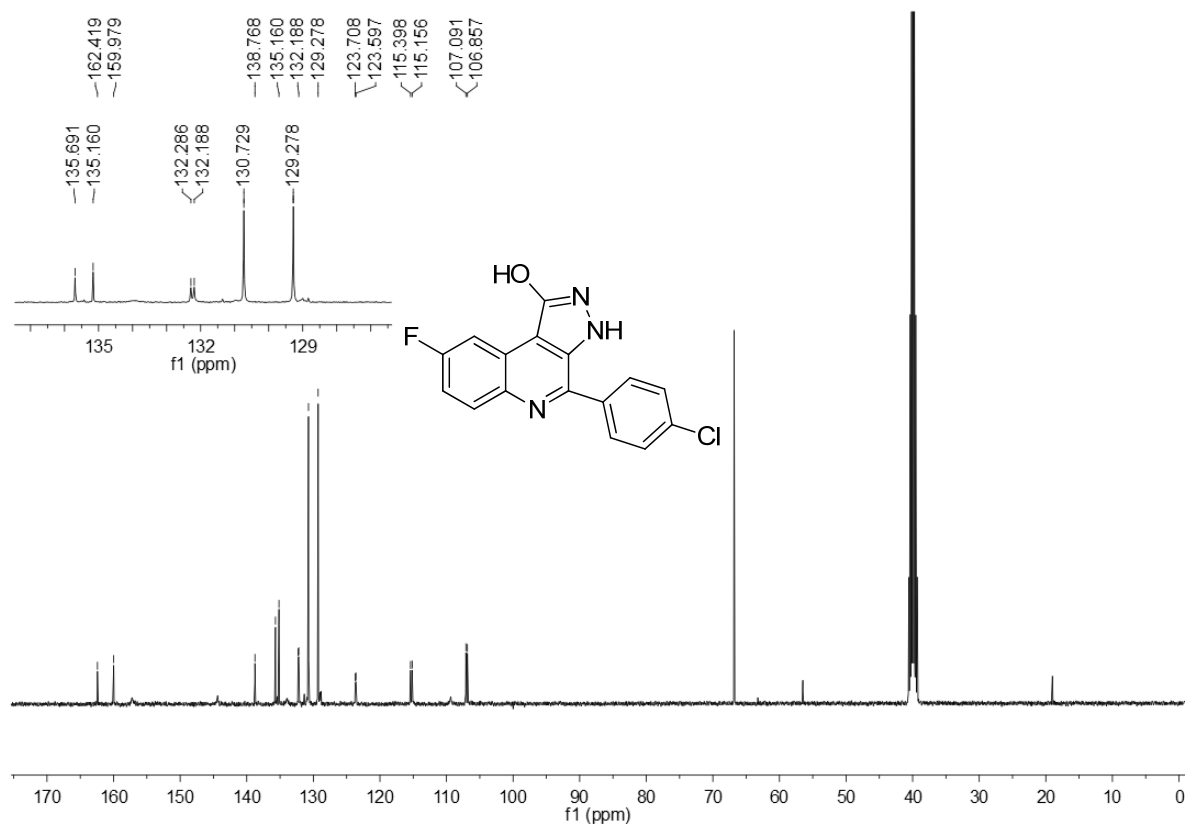




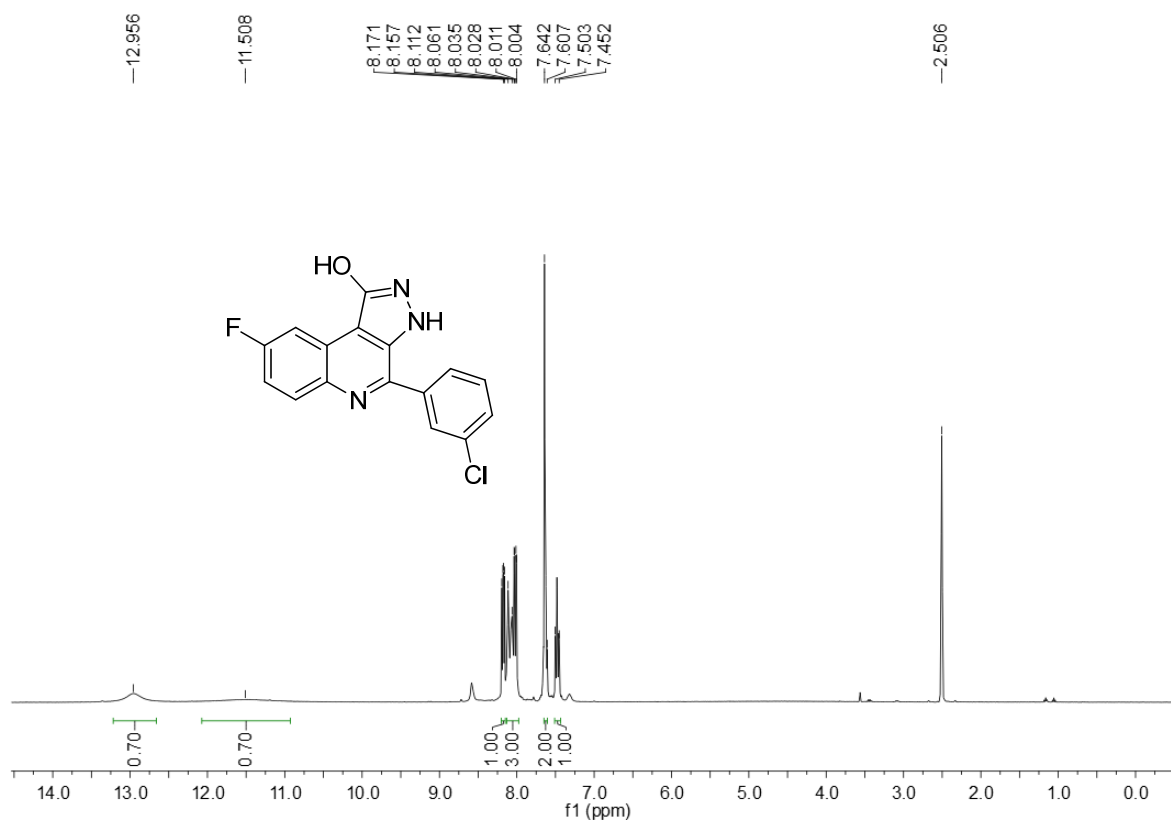
¹³C NMR Spectrum of Compound 3i



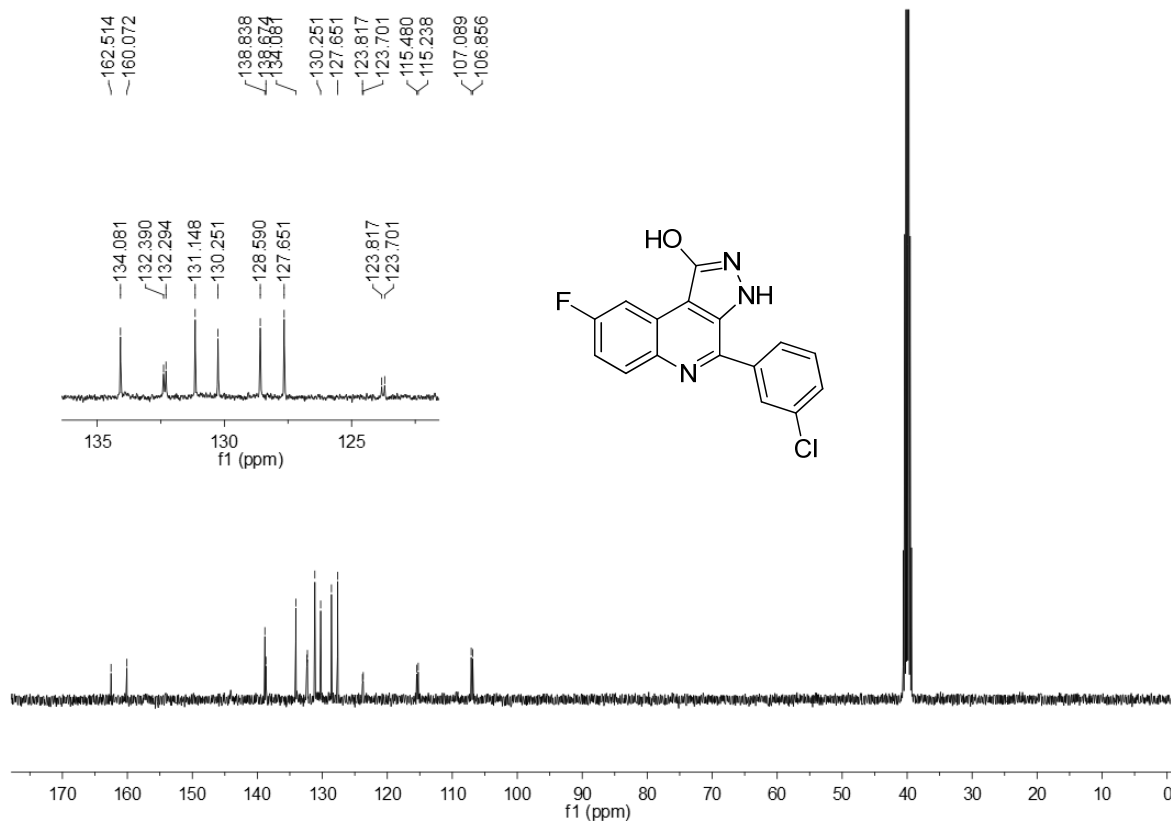
¹H NMR Spectrum of Compound 3j



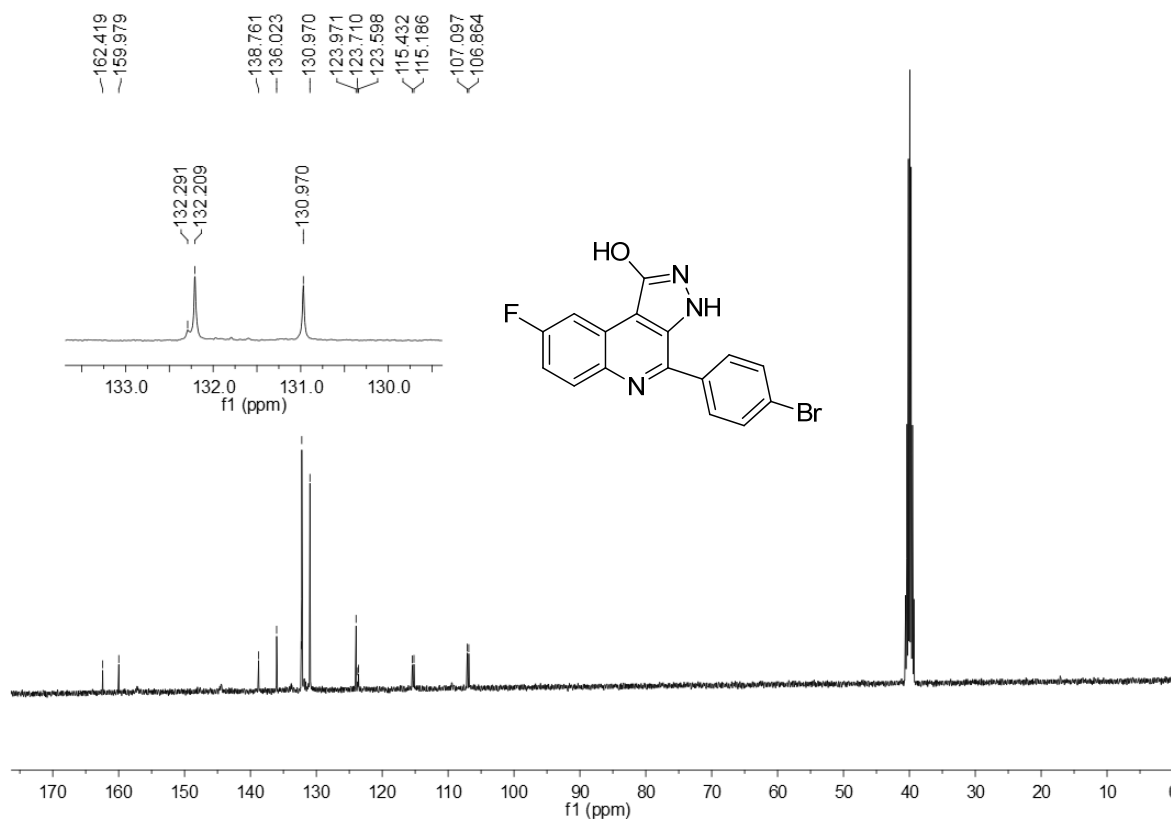
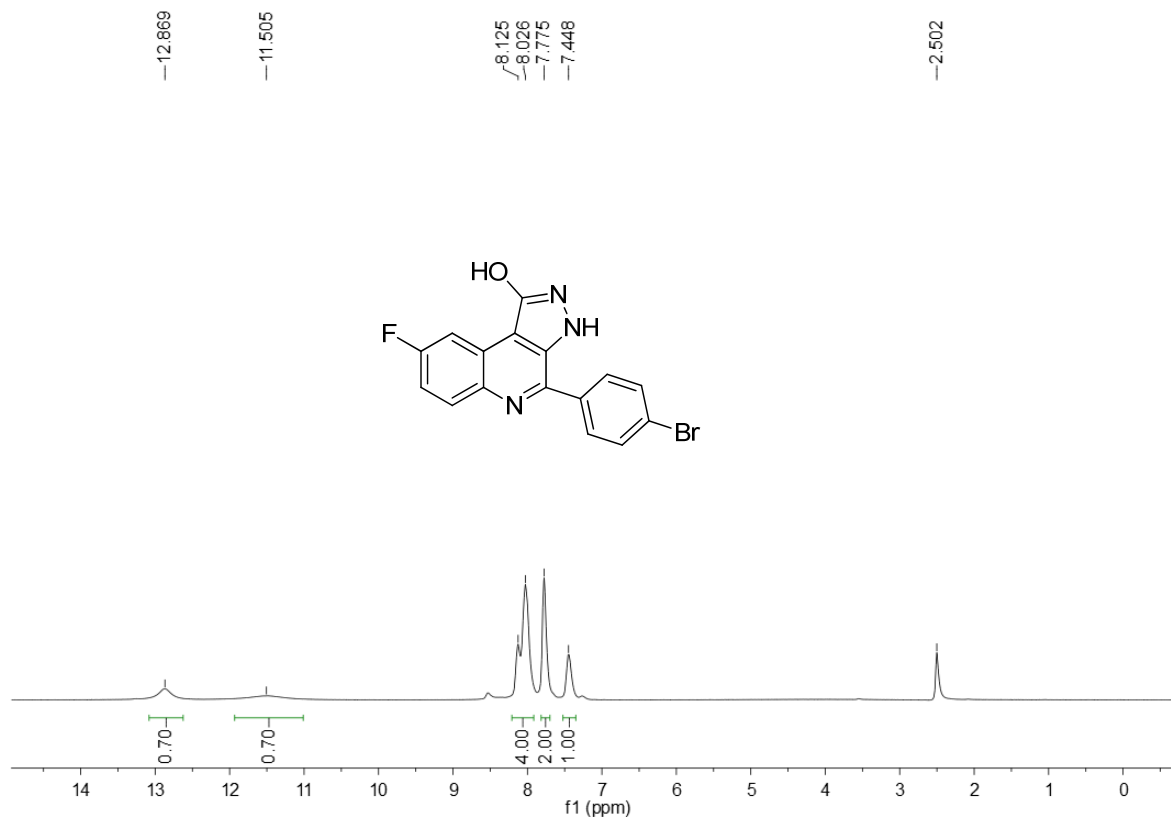
¹³C NMR Spectrum of Compound 3j



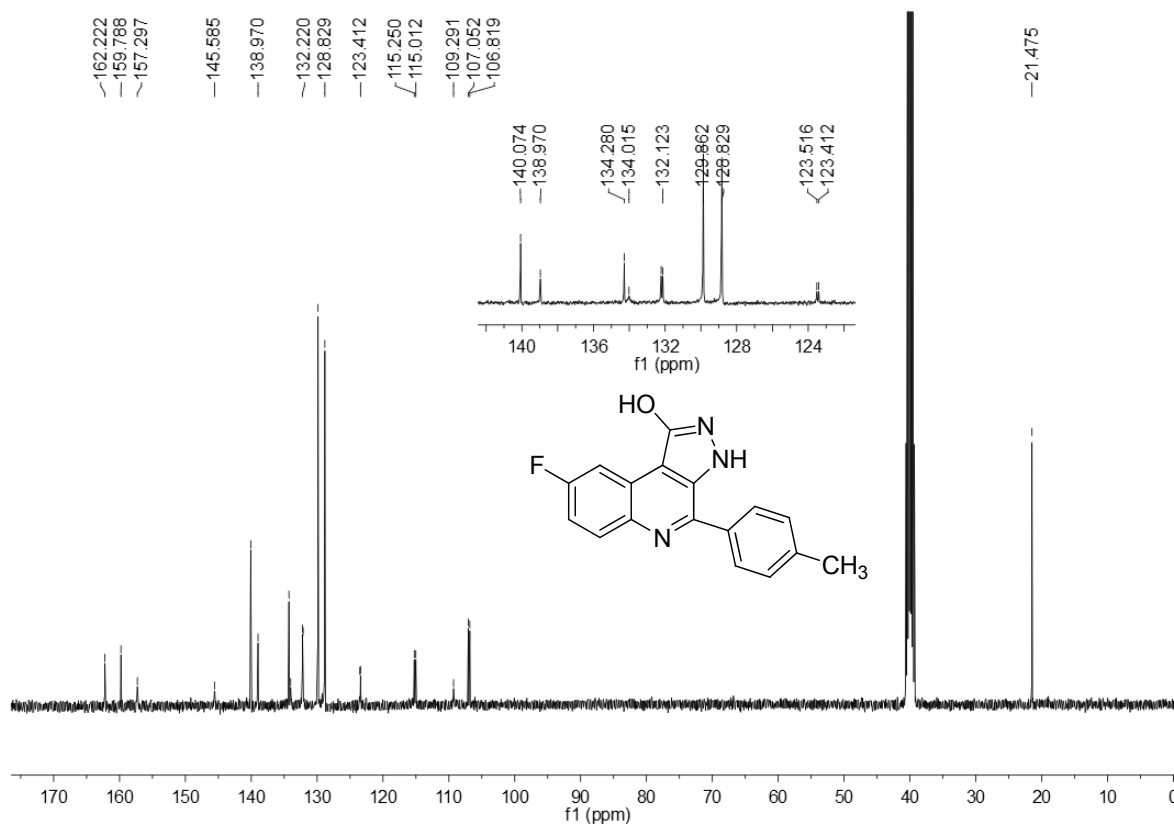
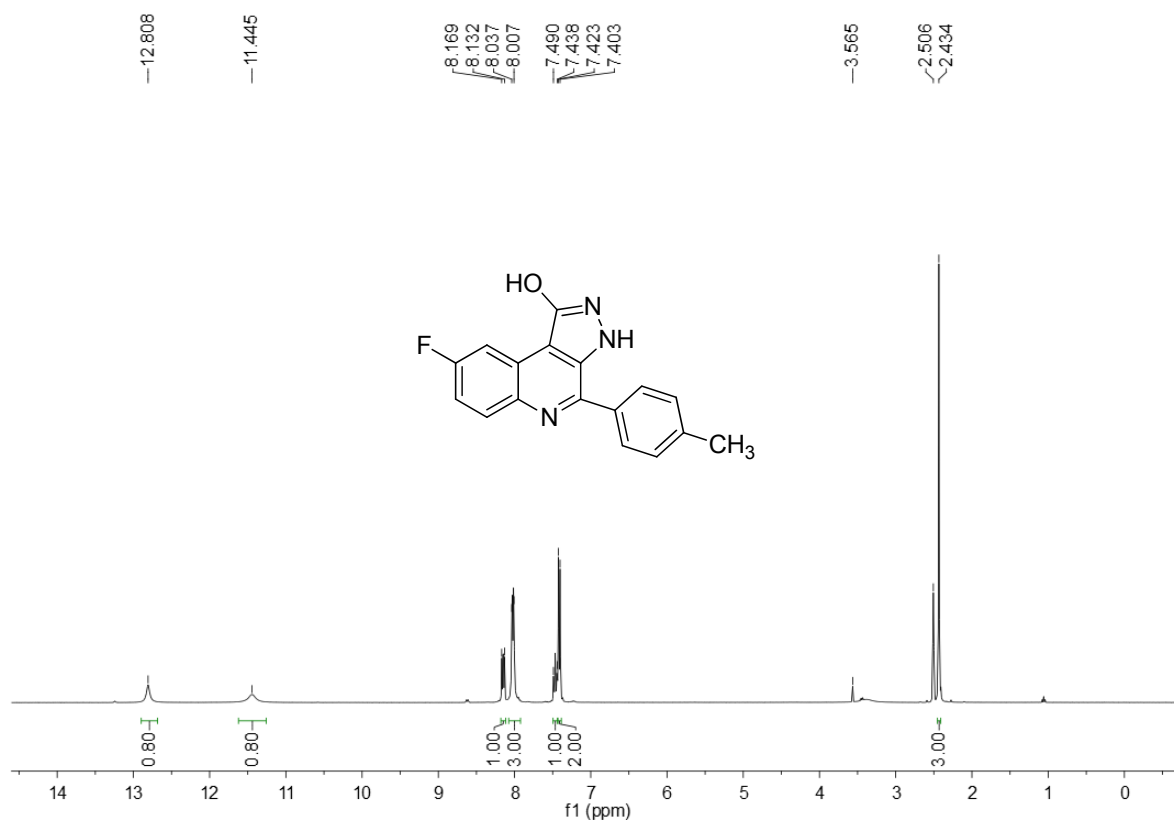
¹H NMR Spectrum of Compound 3k



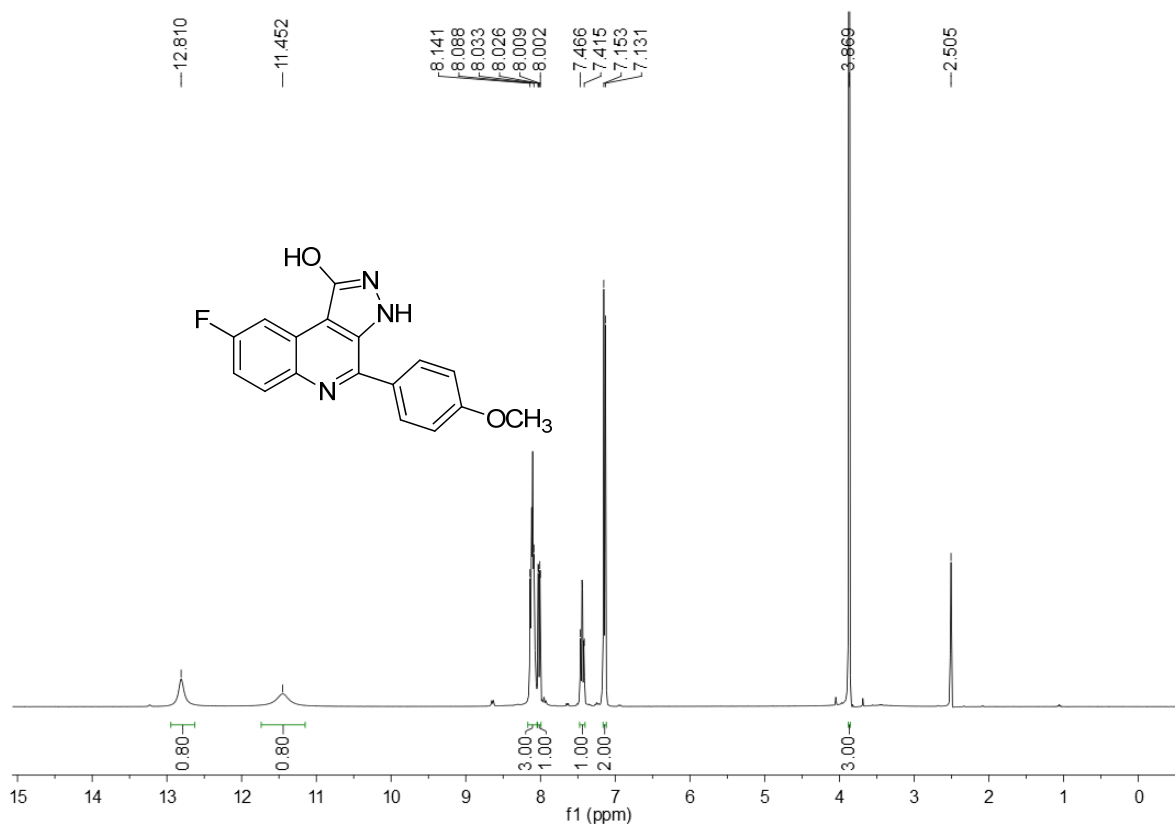
¹³C NMR Spectrum of Compound 3k



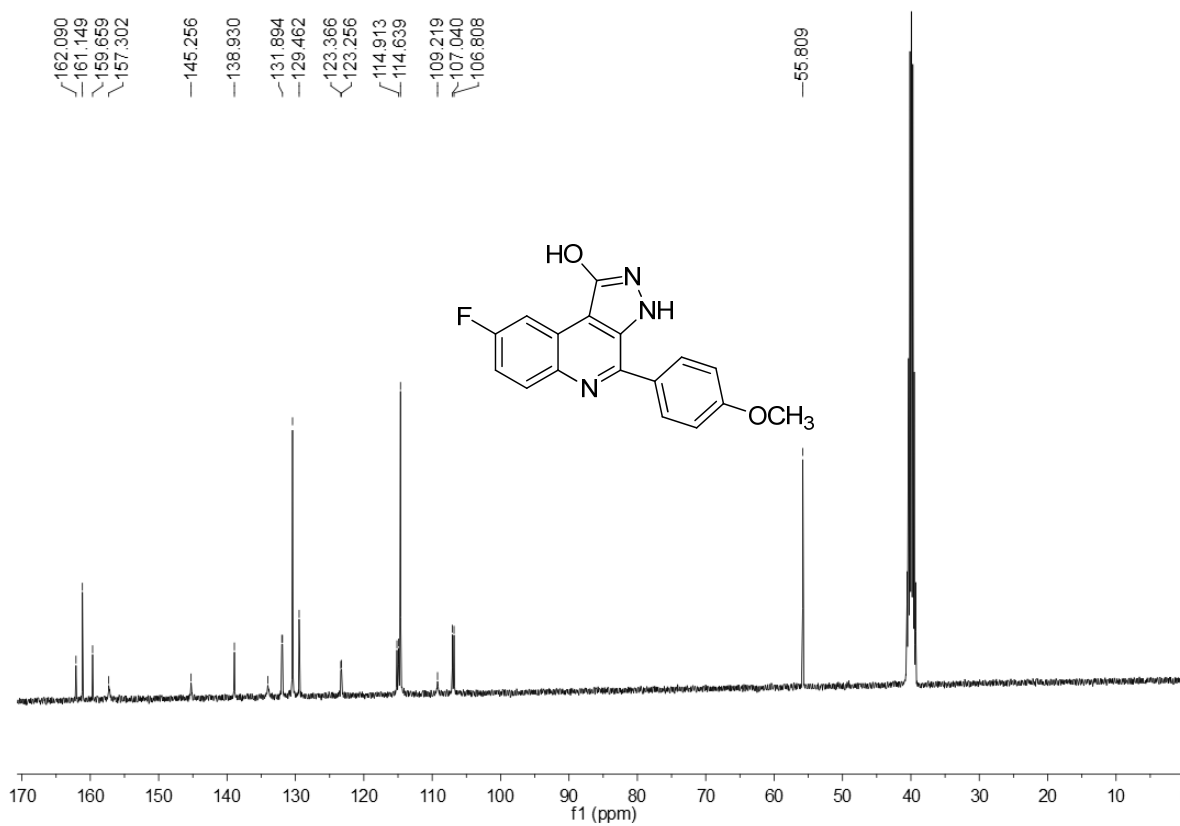
¹³C NMR Spectrum of Compound 3l



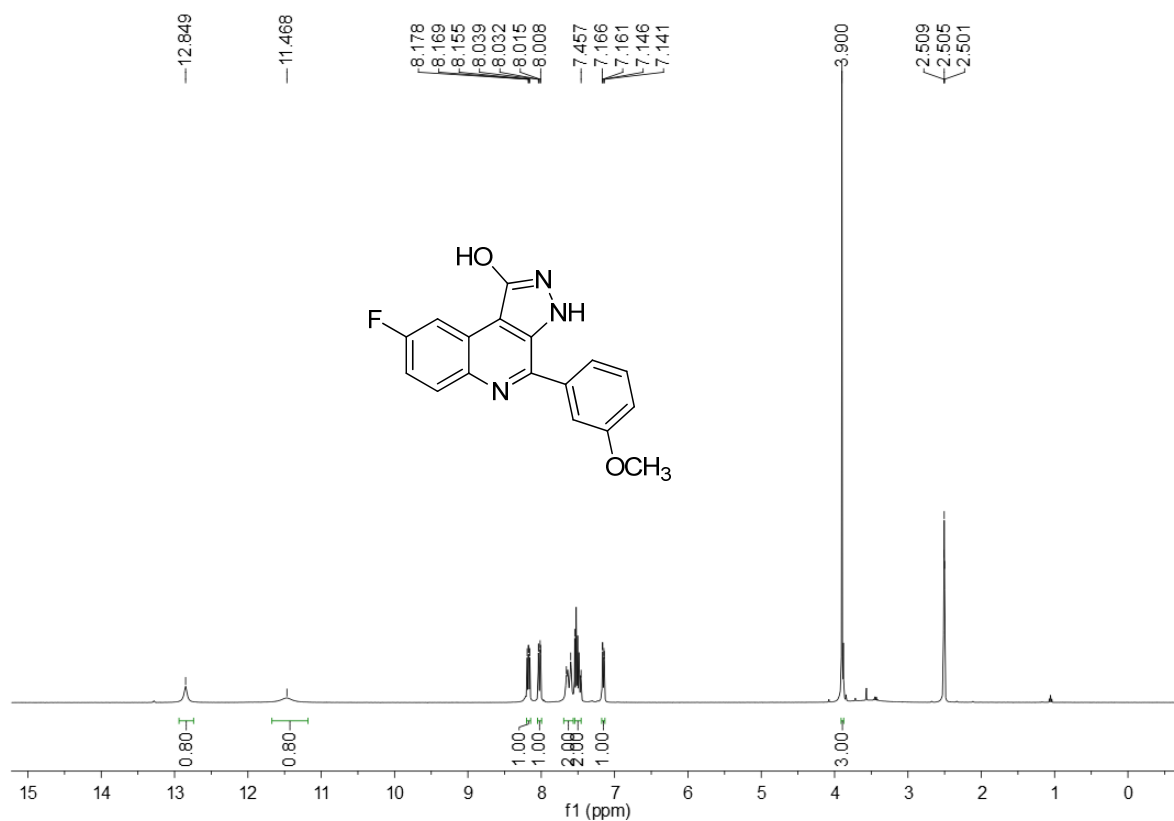
¹³C NMR Spectrum of Compound 3m



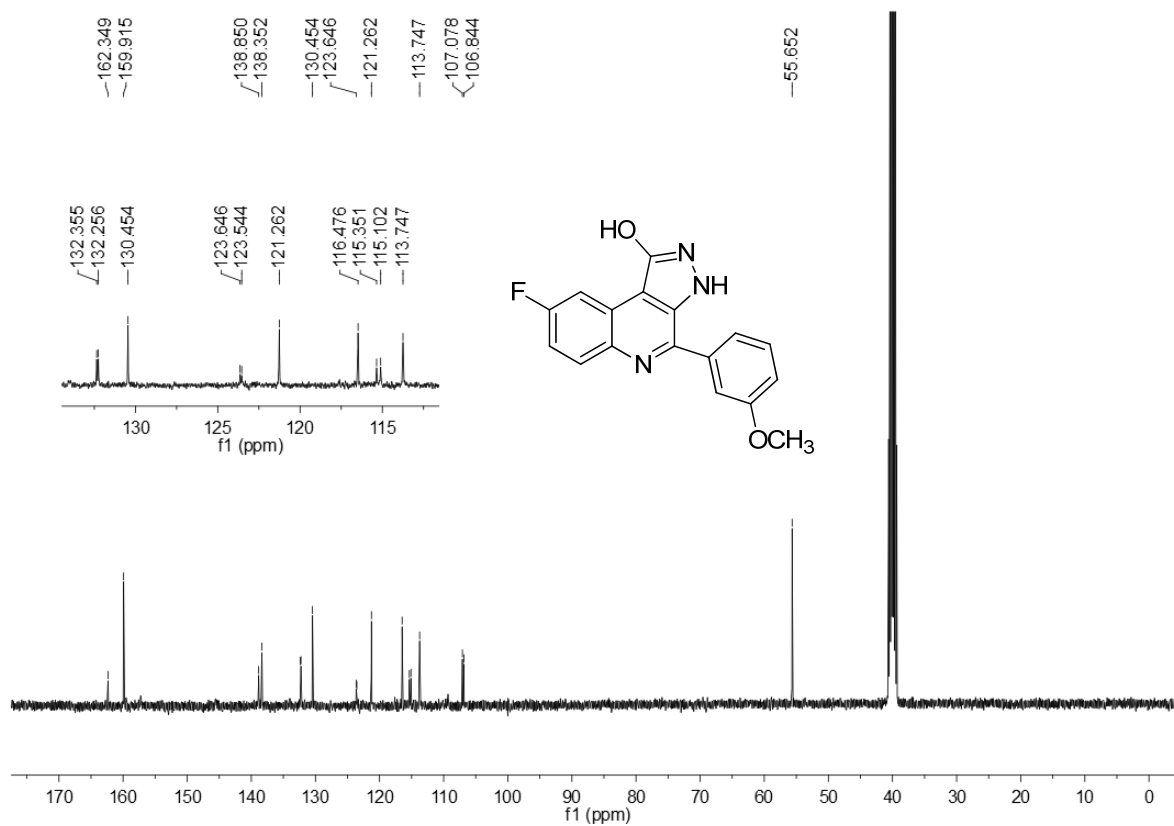
¹H NMR Spectrum of Compound 3n



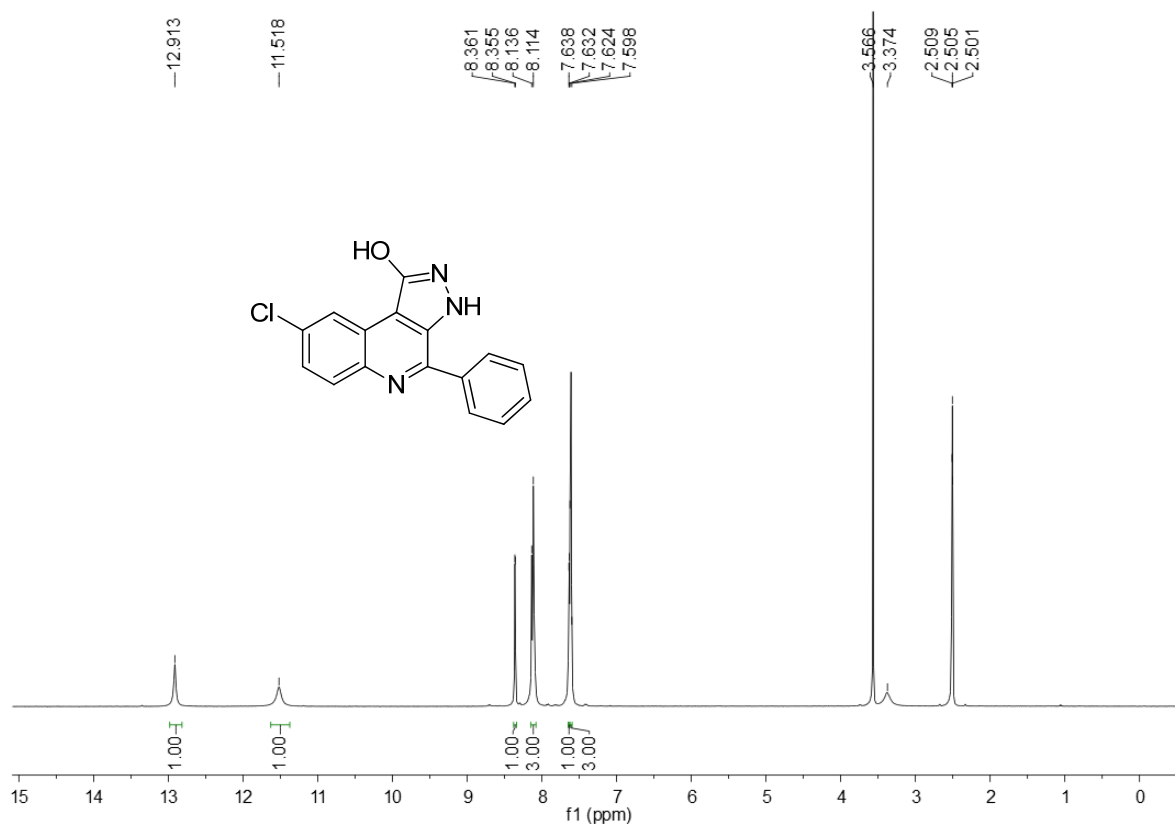
¹³C NMR Spectrum of Compound 3n



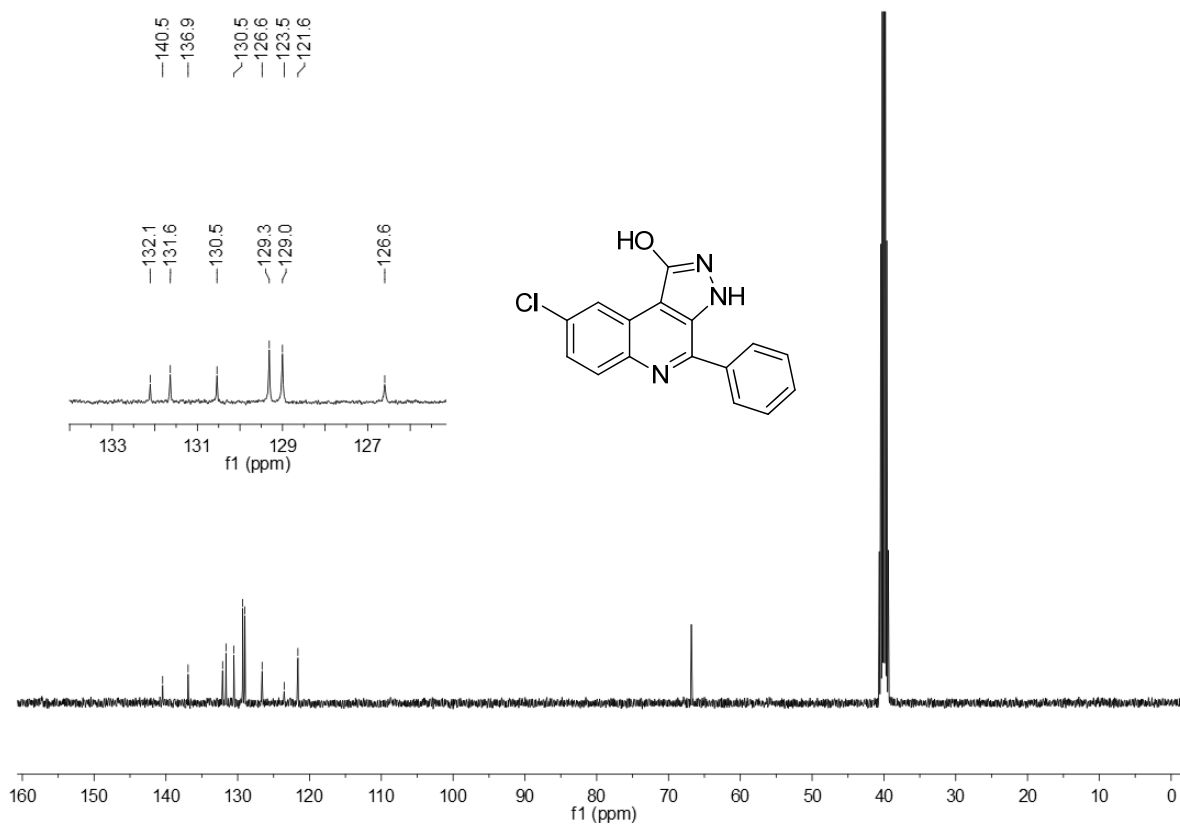
¹H NMR Spectrum of Compound 3o



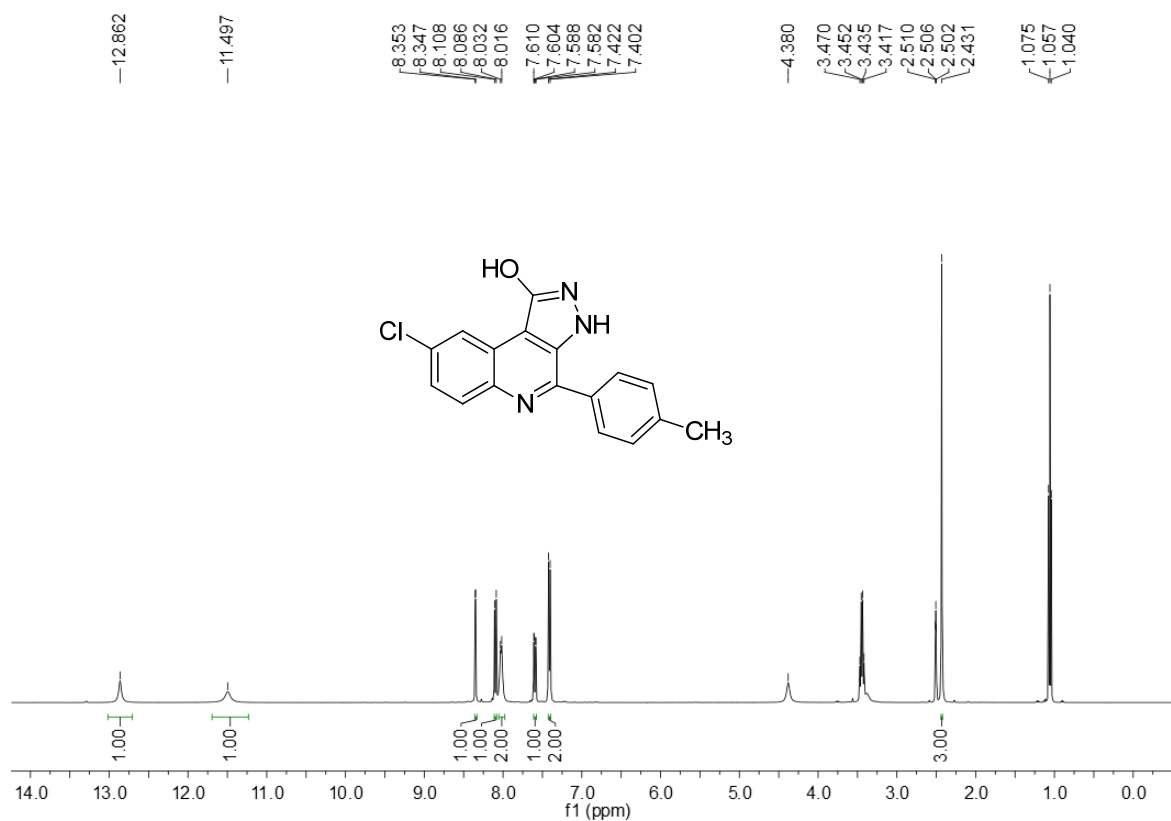
¹³C NMR Spectrum of Compound 3o



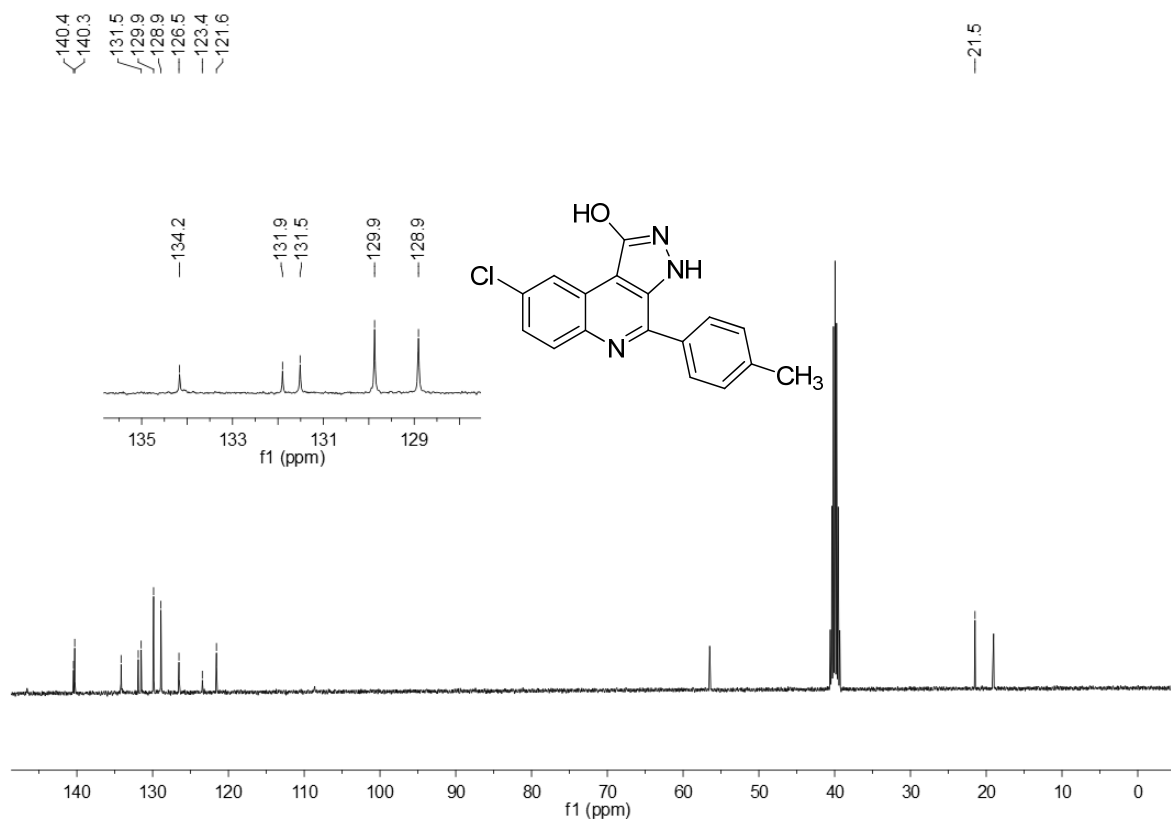
¹H NMR Spectrum of Compound 3p



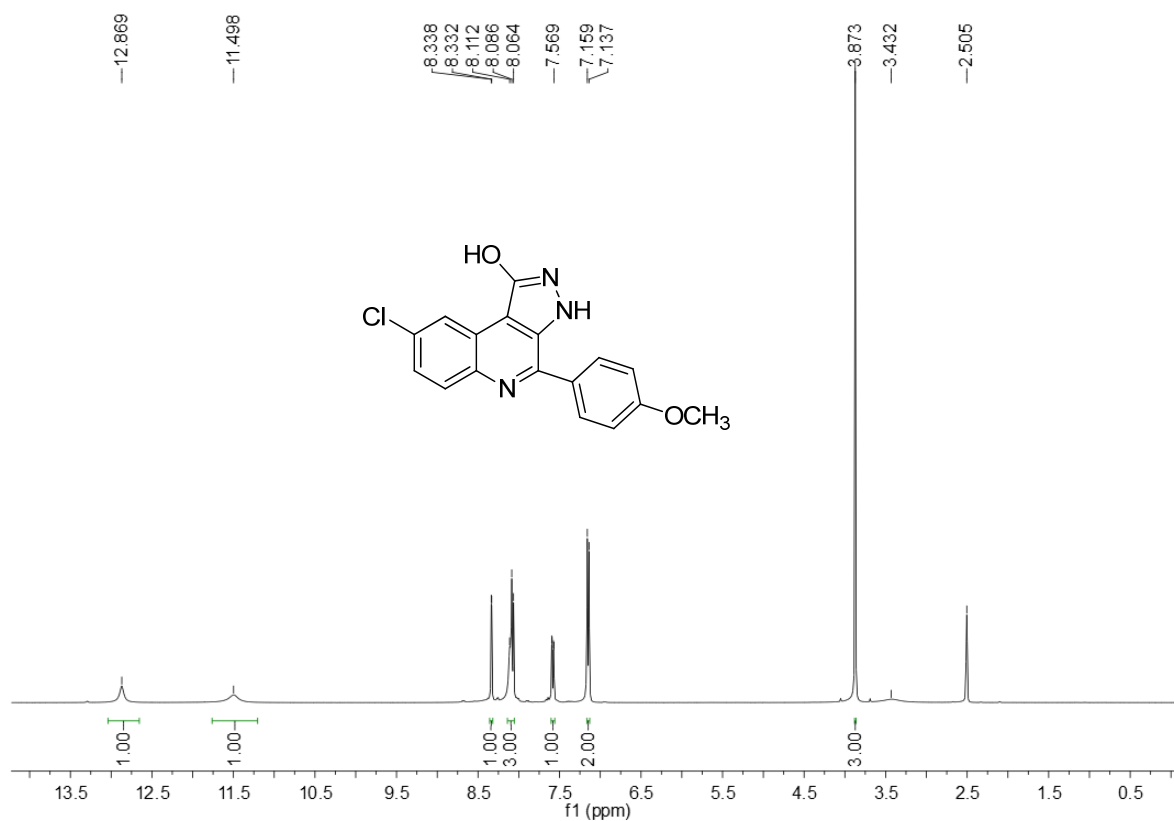
¹³C NMR Spectrum of Compound 3p



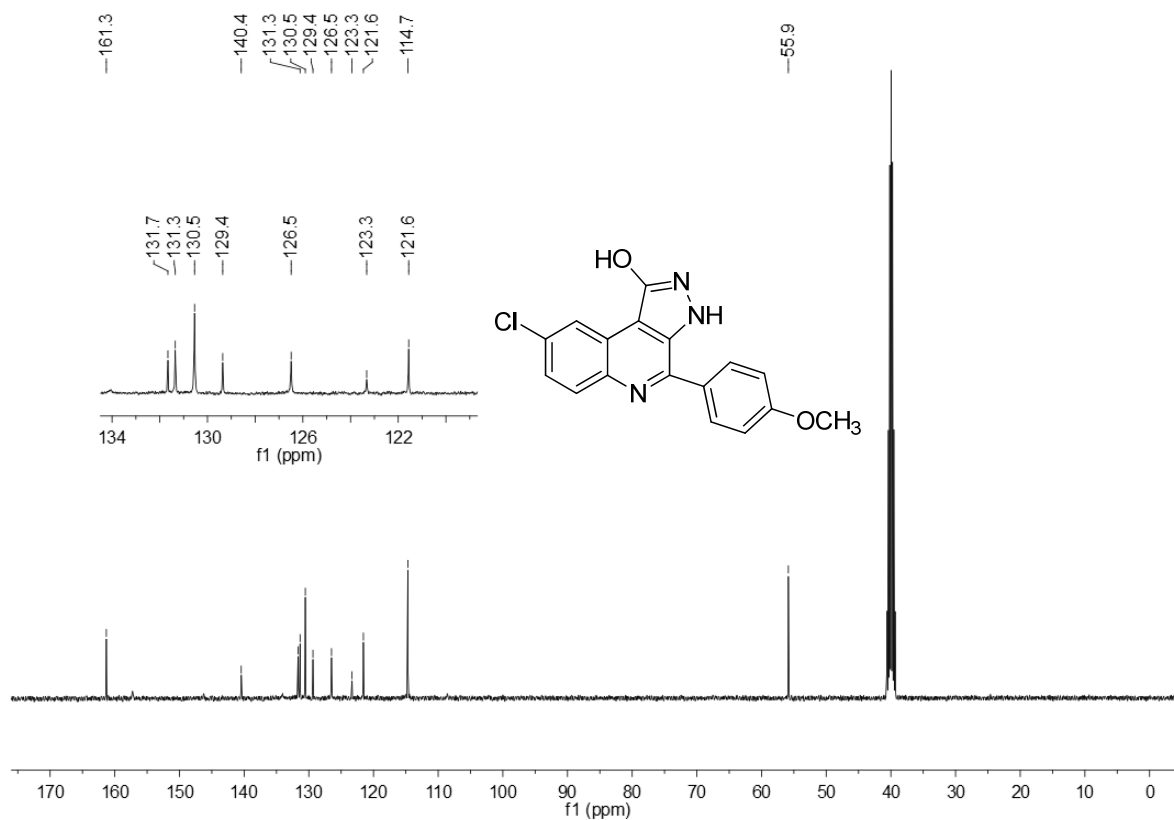
¹H NMR Spectrum of Compound 3q



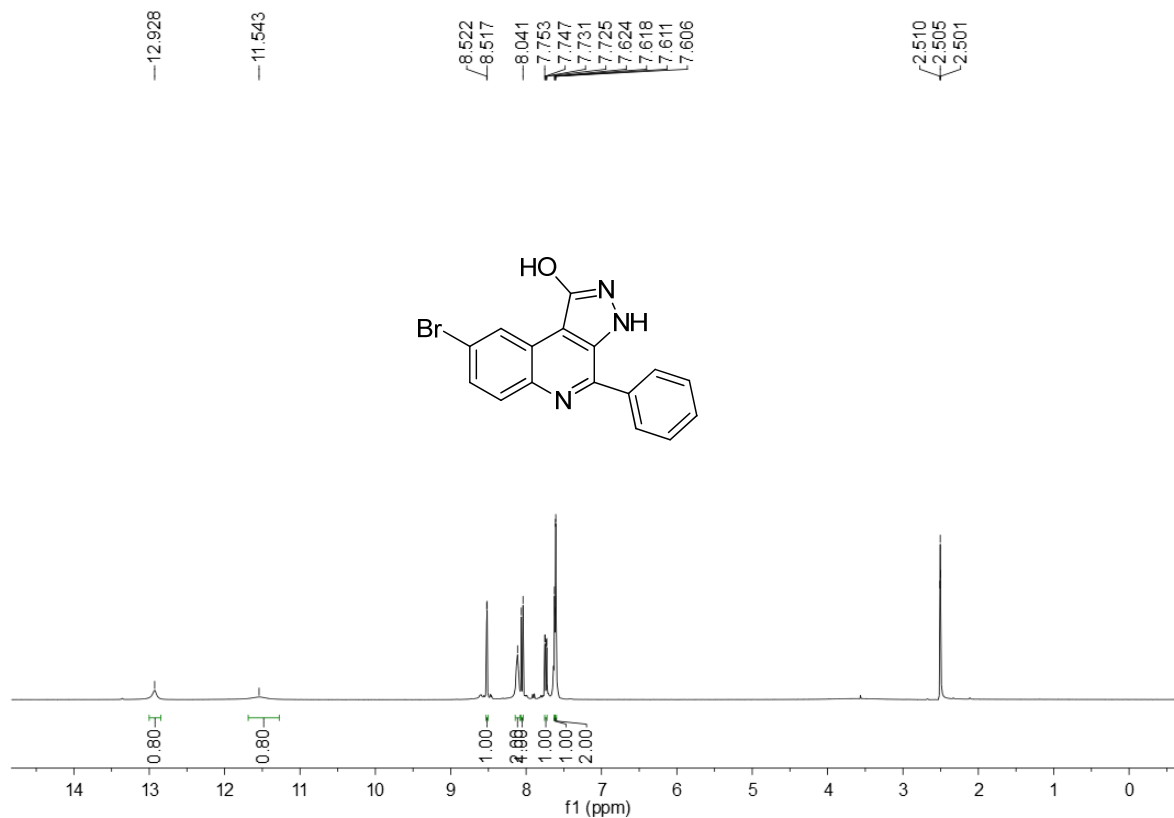
¹³C NMR Spectrum of Compound 3q



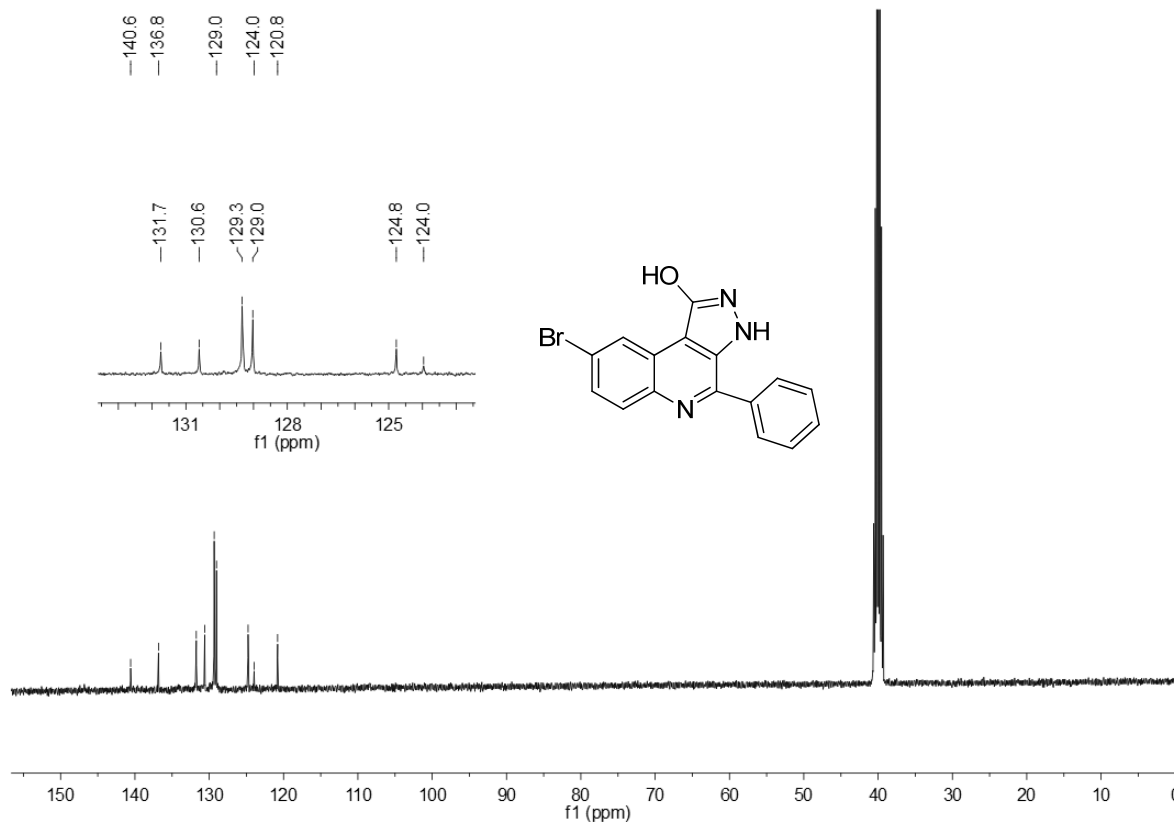
¹H NMR Spectrum of Compound 3r



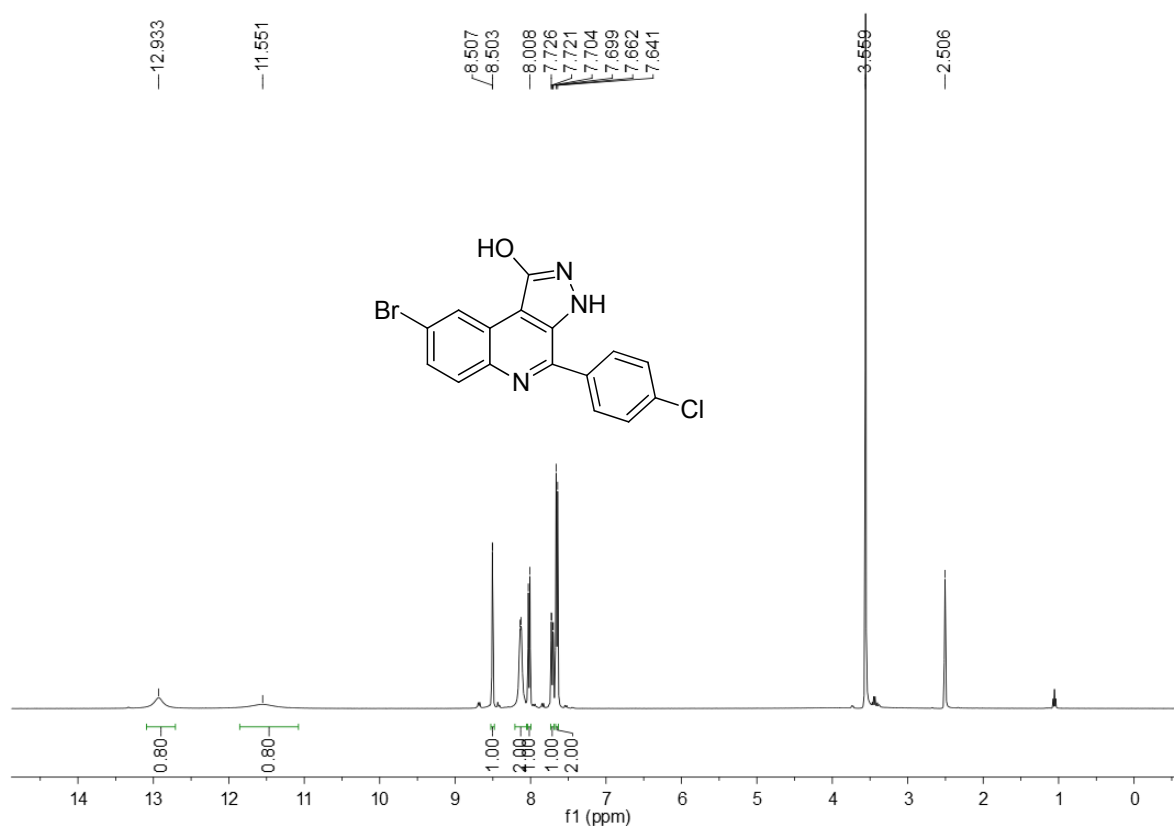
¹³C NMR Spectrum of Compound 3r



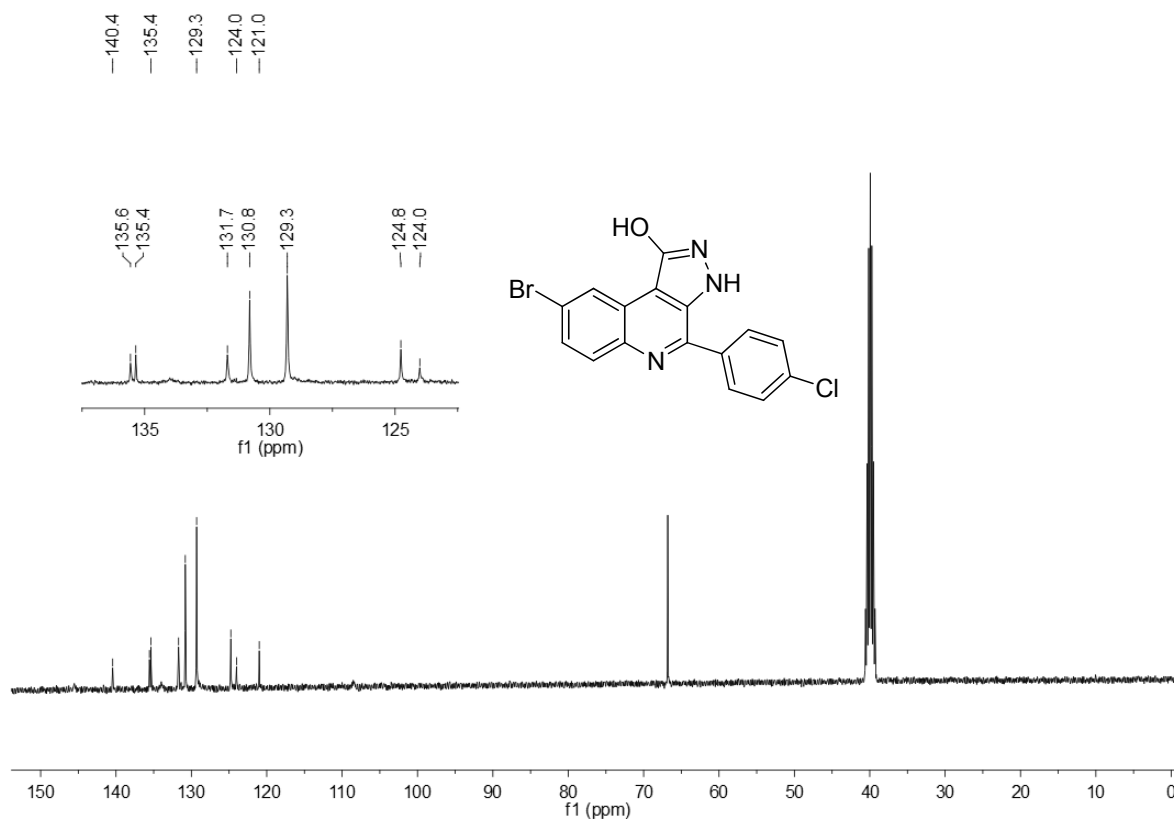
¹H NMR Spectrum of Compound 3s



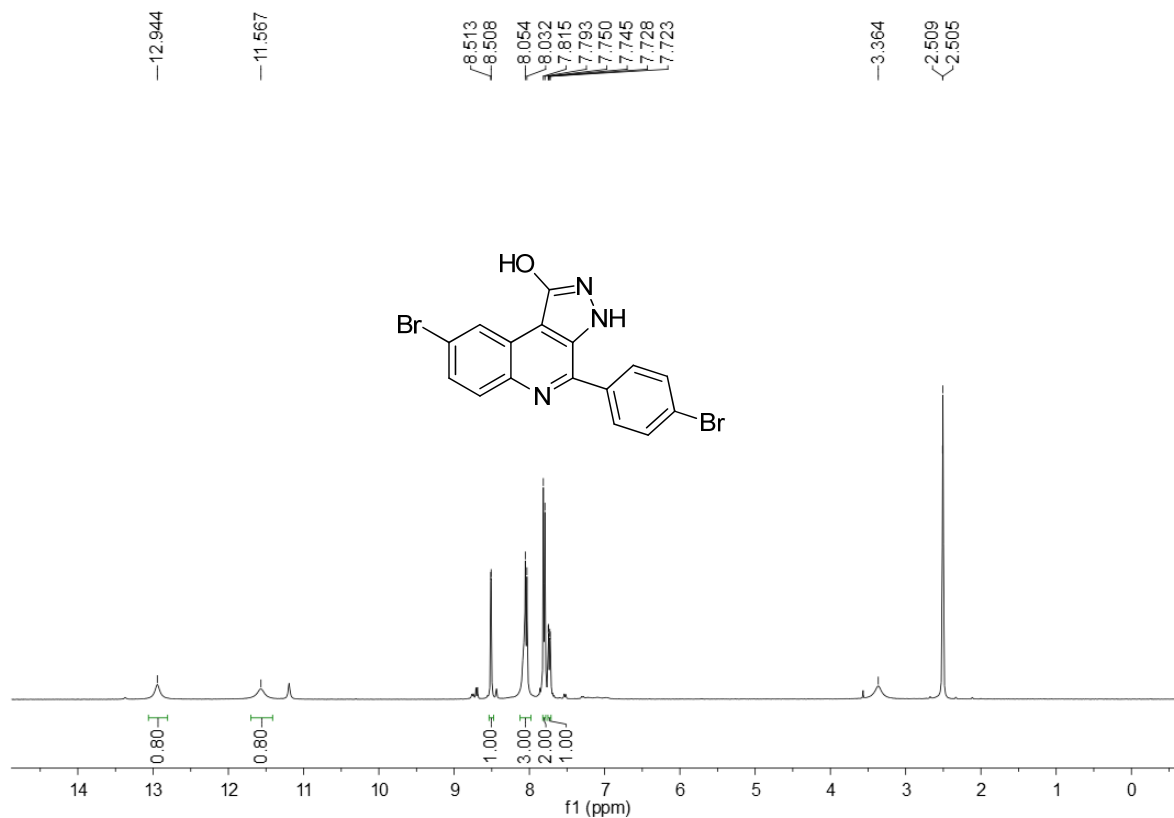
¹³C NMR Spectrum of Compound 3s



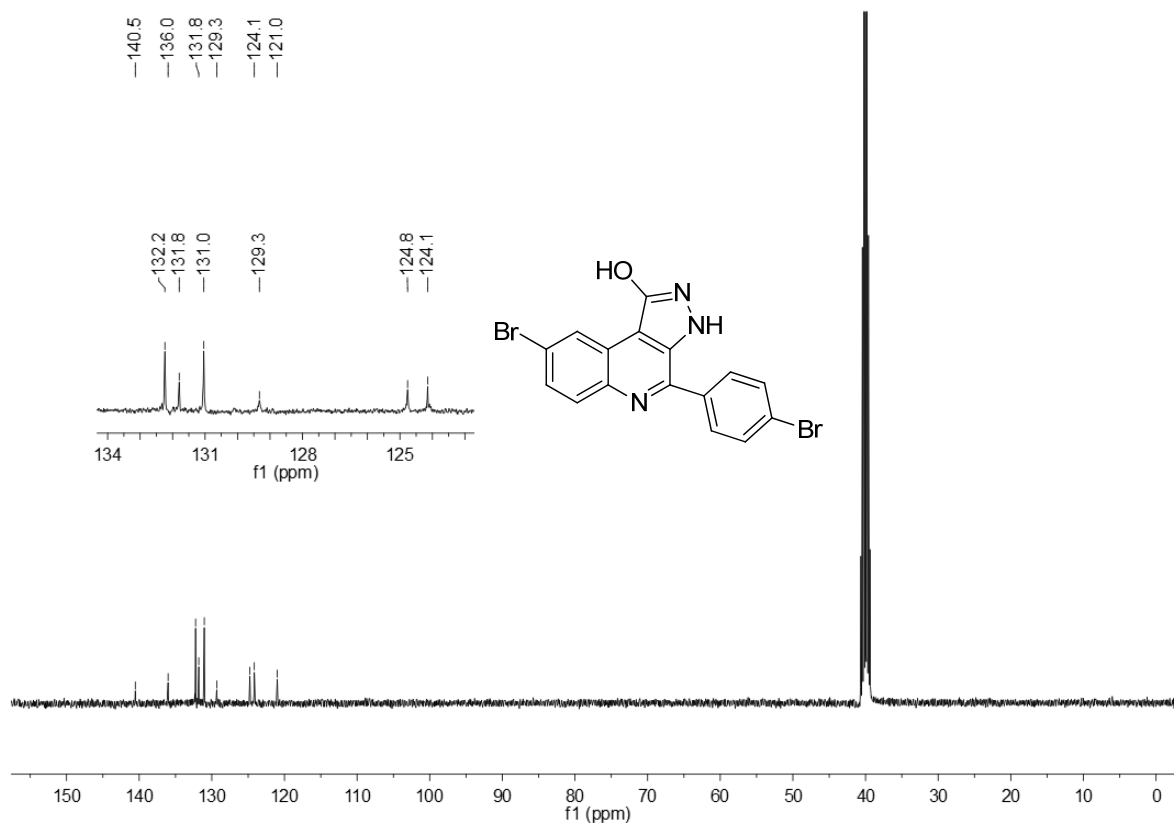
¹H NMR Spectrum of Compound 3t



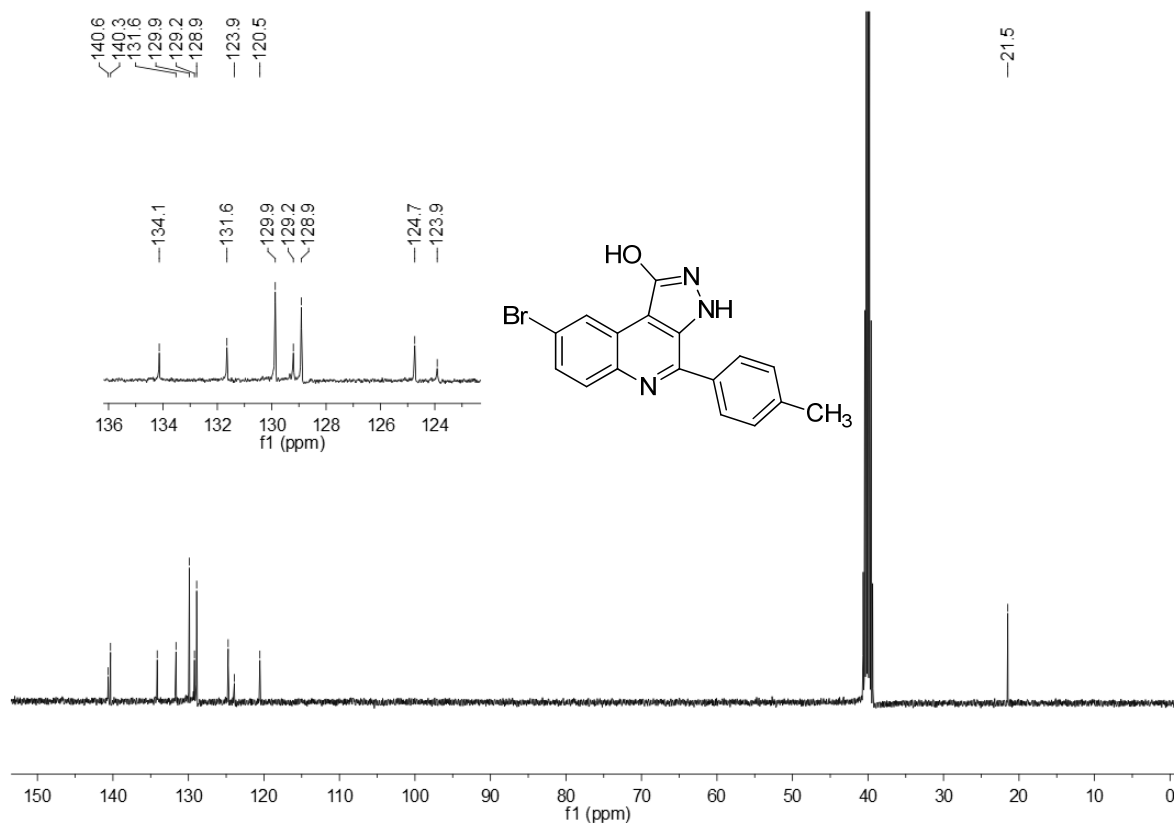
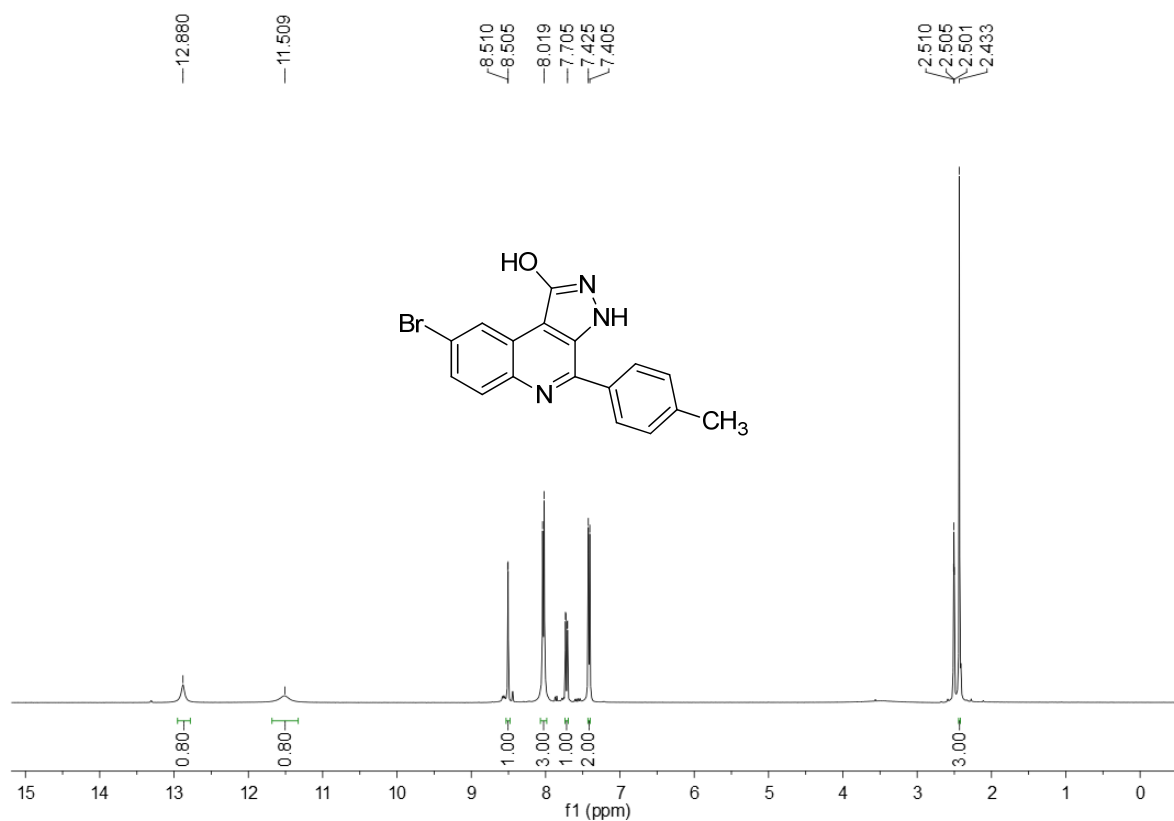
¹³C NMR Spectrum of Compound 3t

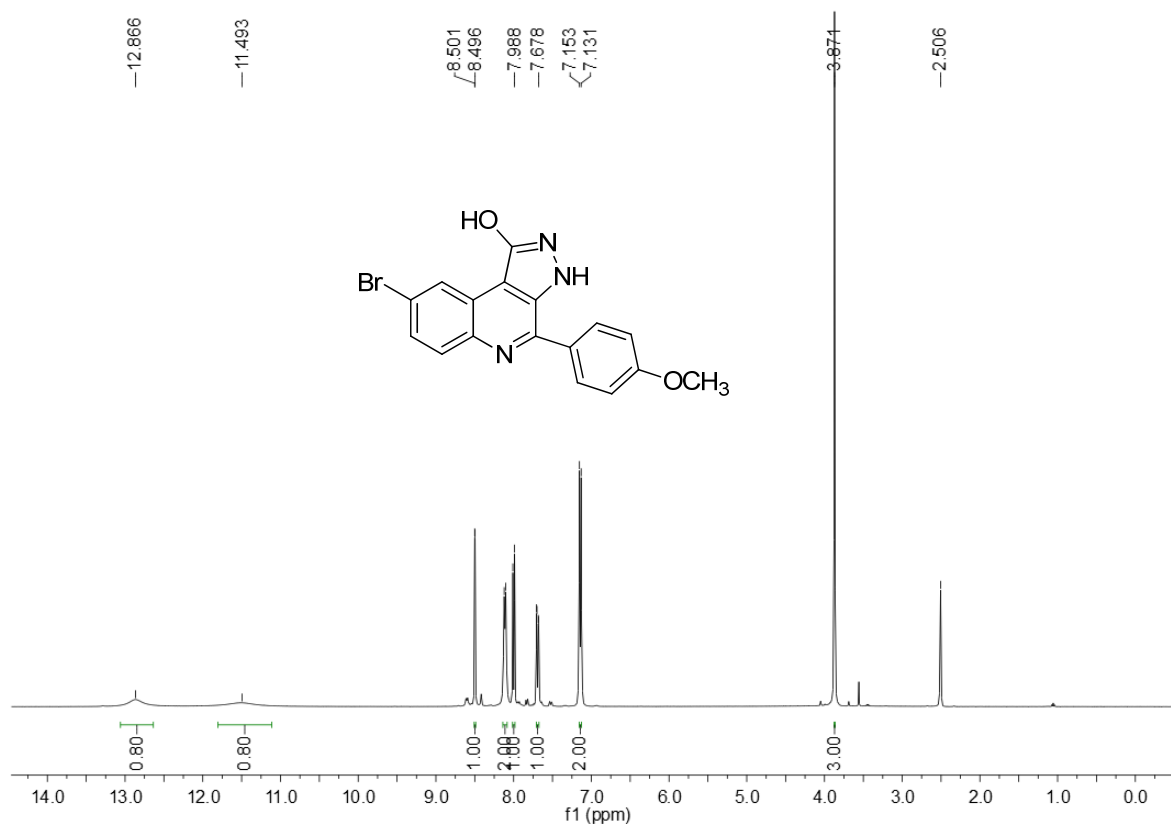


¹H NMR Spectrum of Compound 3u

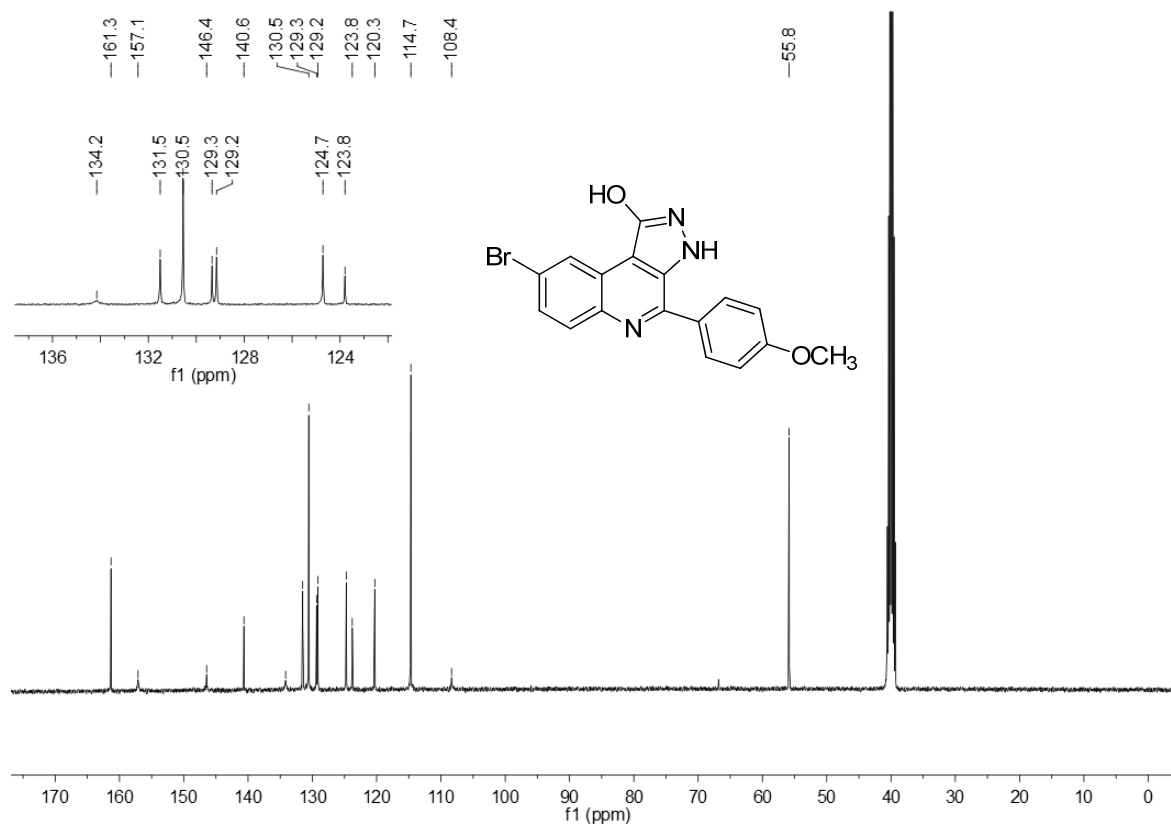


¹³C NMR Spectrum of Compound 3u

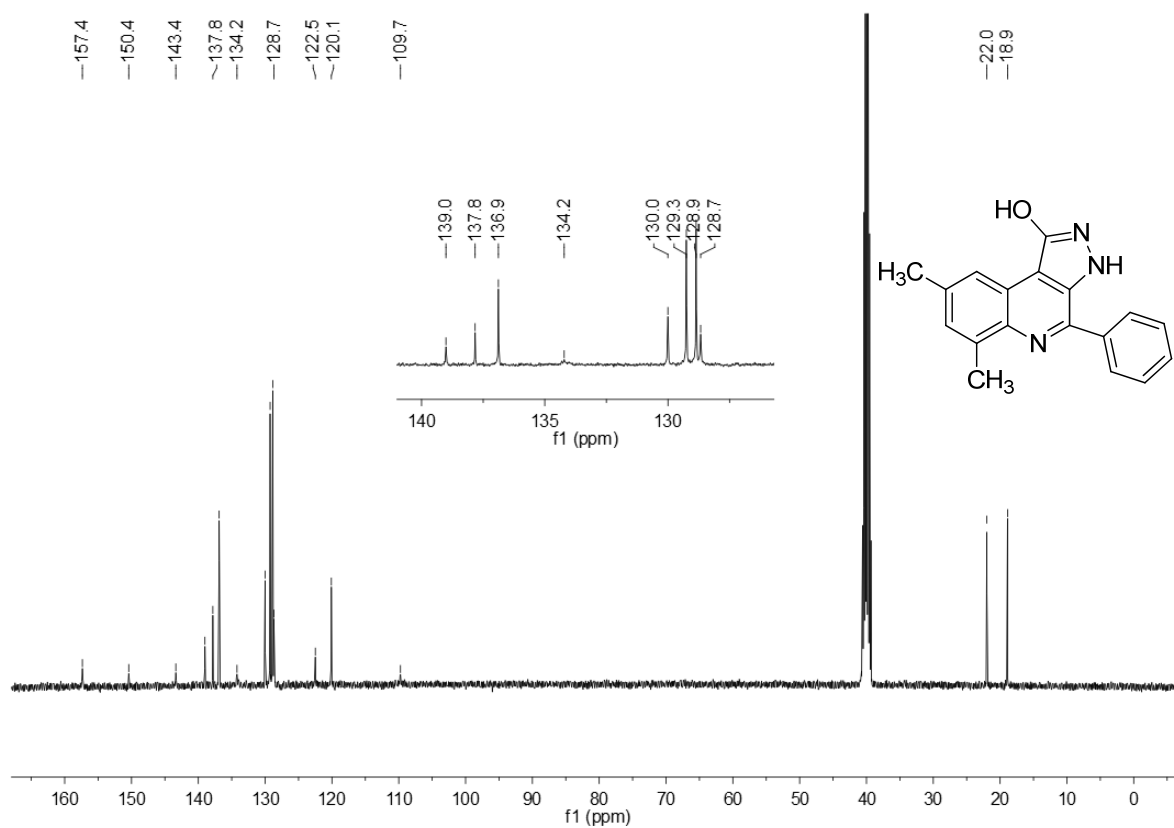
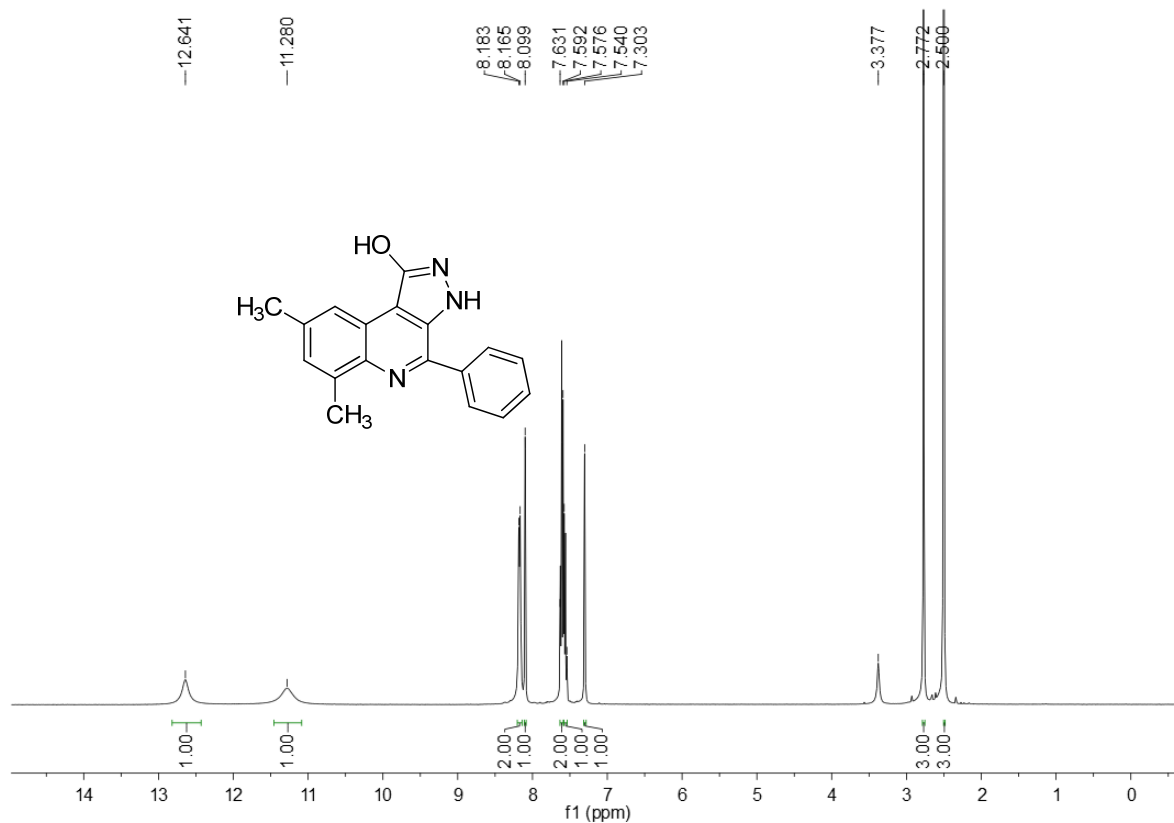




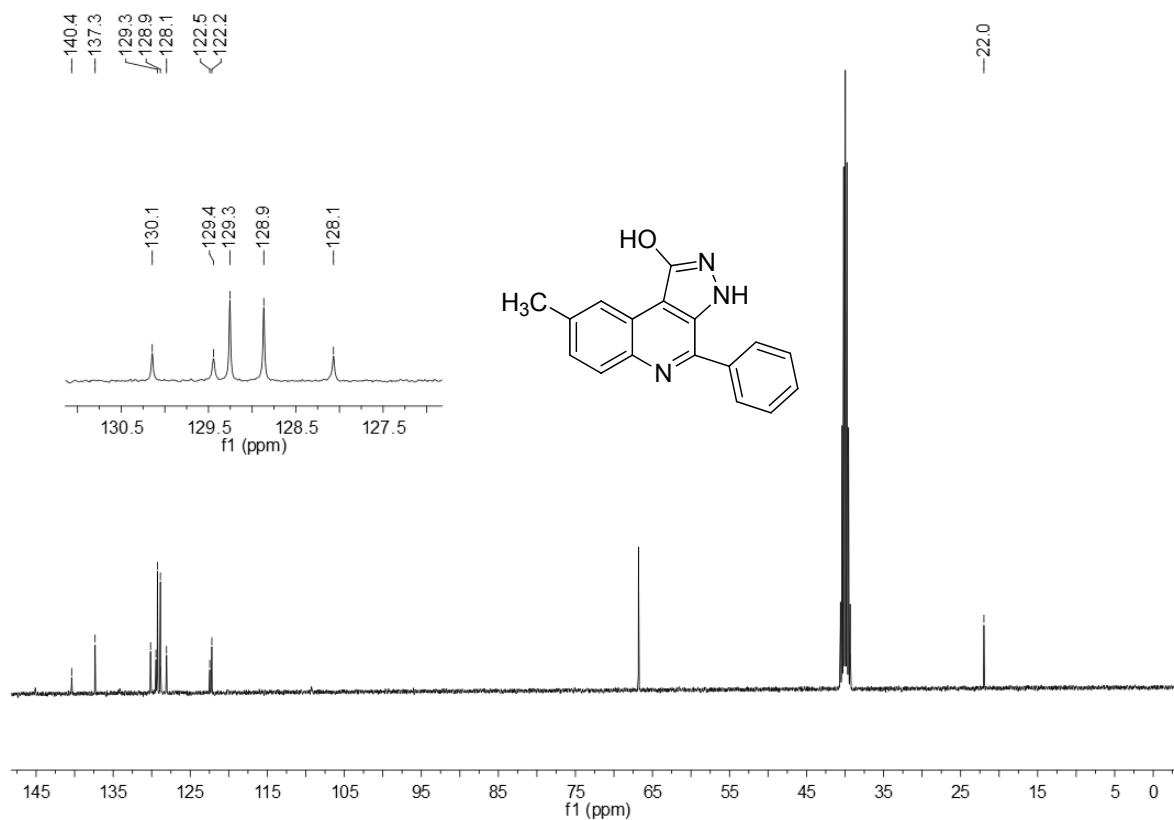
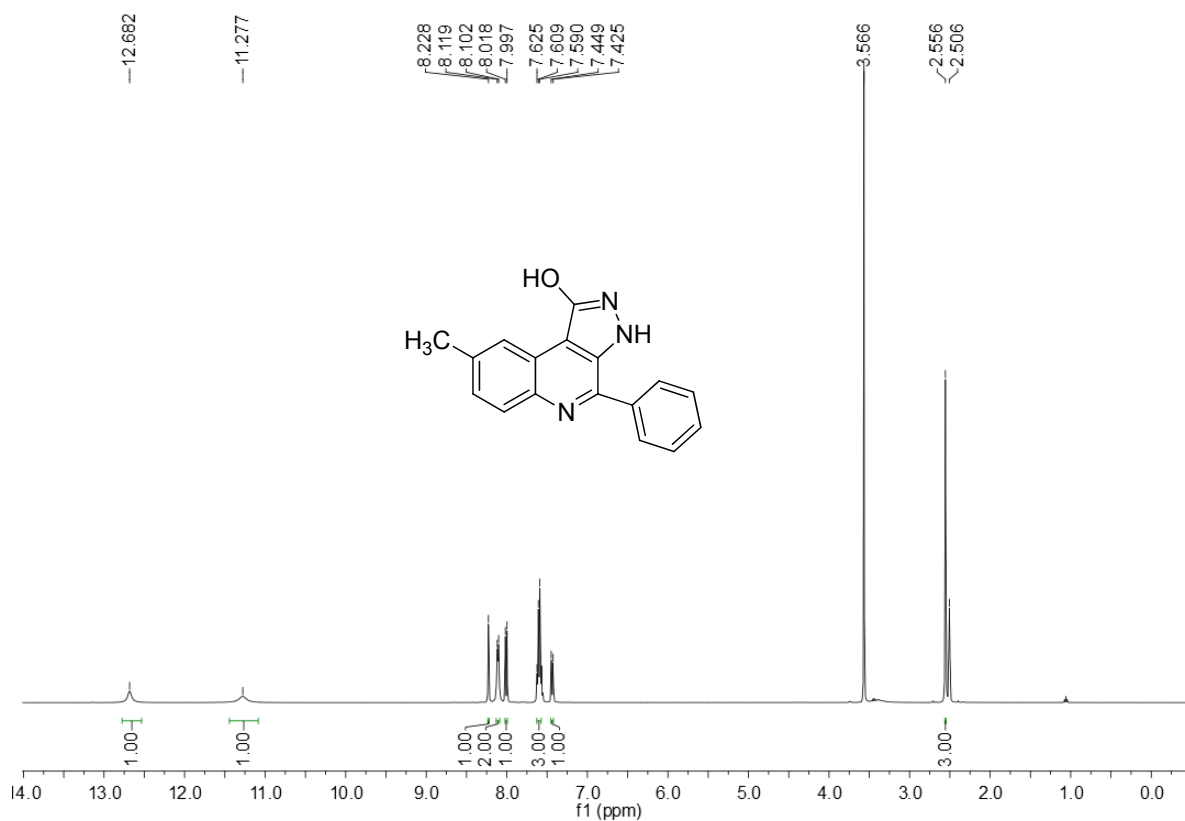
¹H NMR Spectrum of Compound 3w



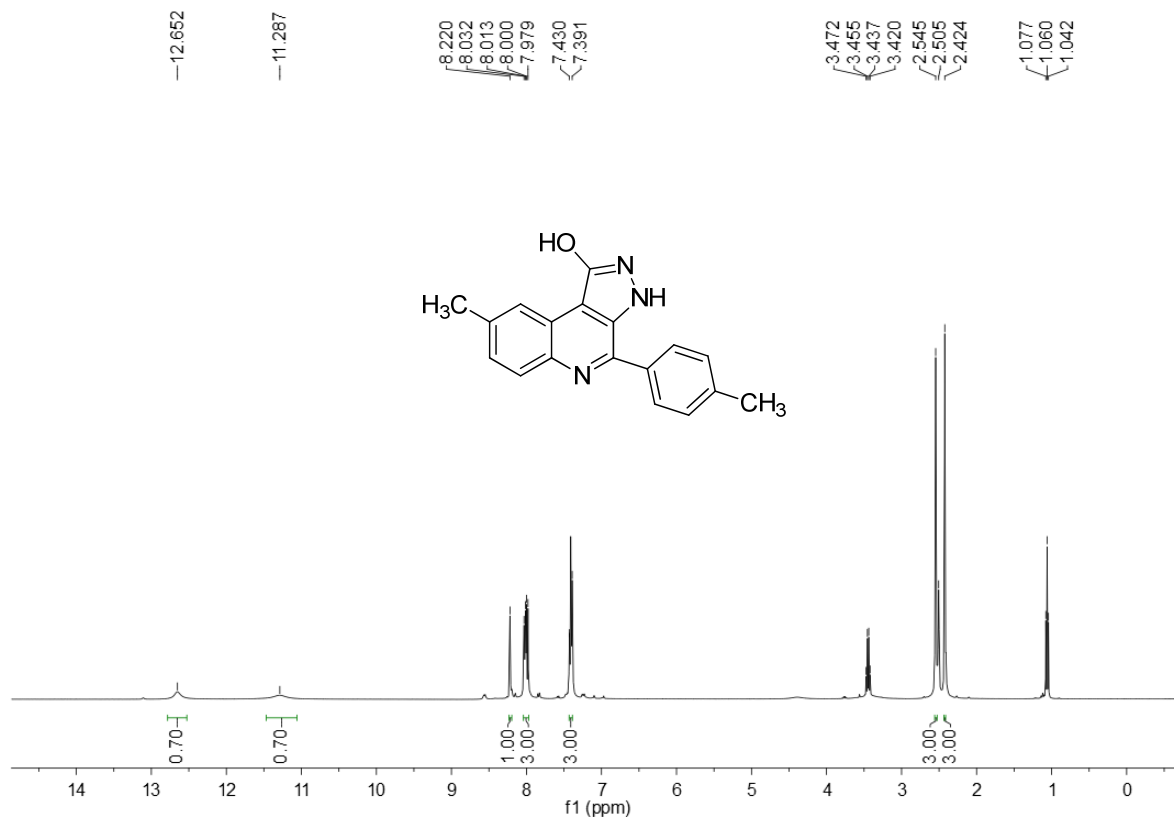
¹³C NMR Spectrum of Compound 3w



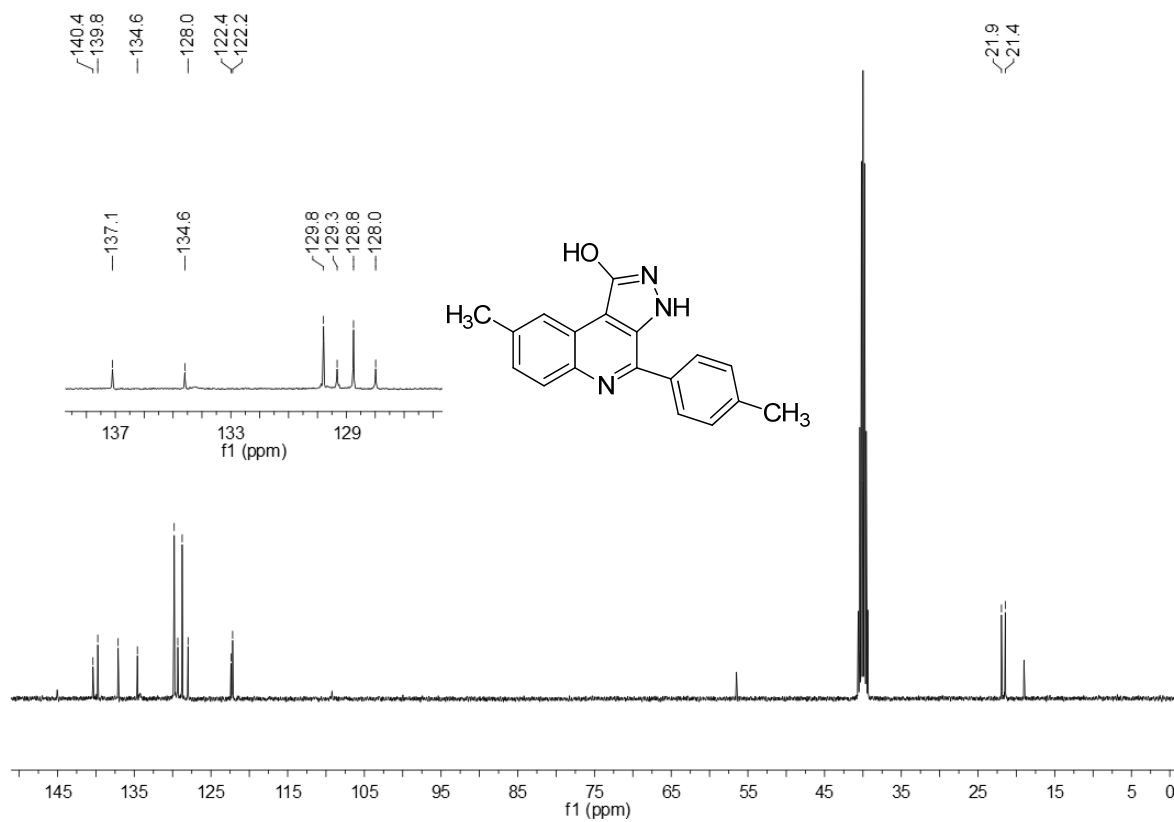
¹³C NMR Spectrum of Compound 3x



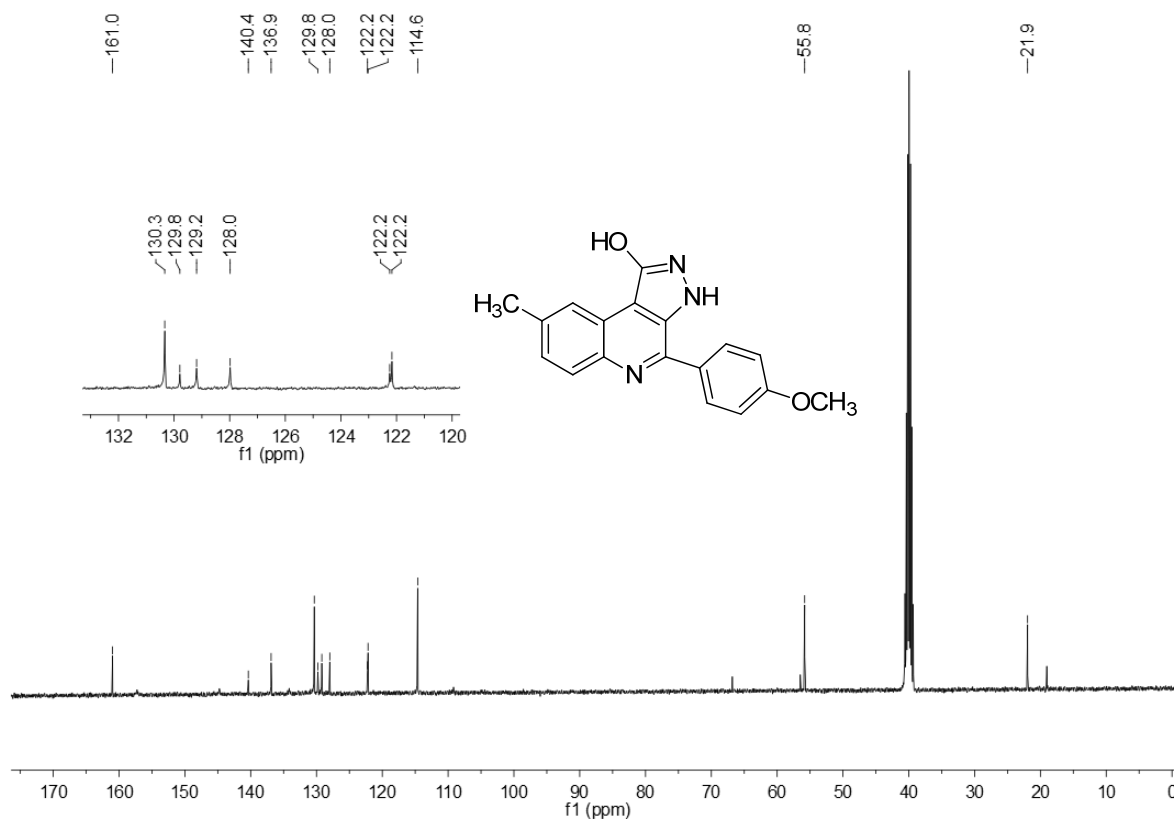
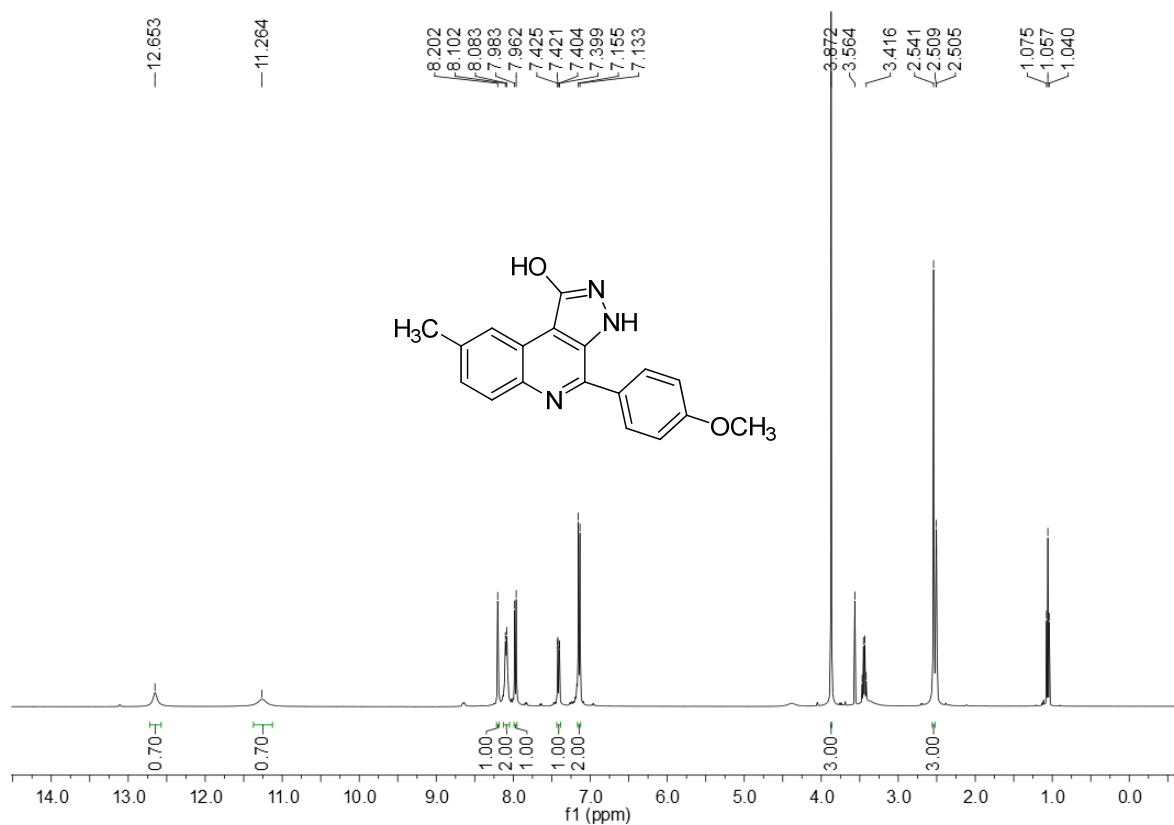
¹³C NMR Spectrum of Compound 3y

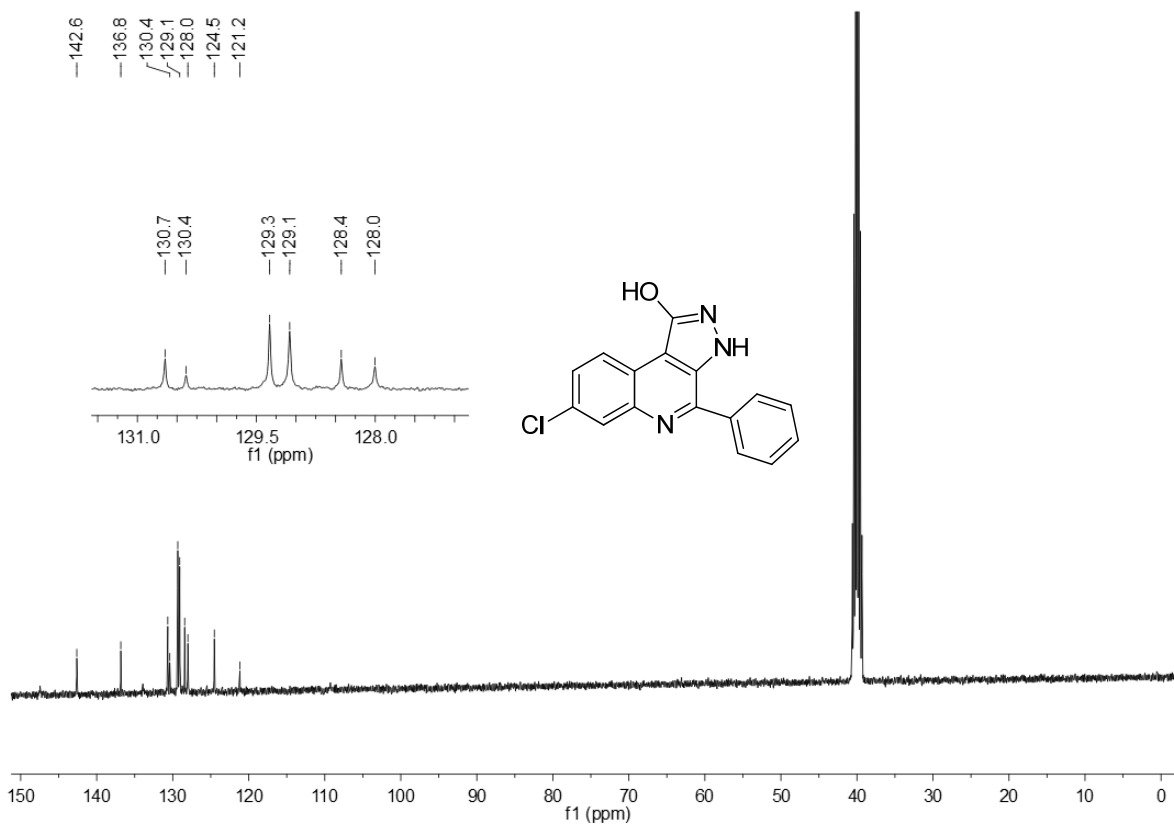
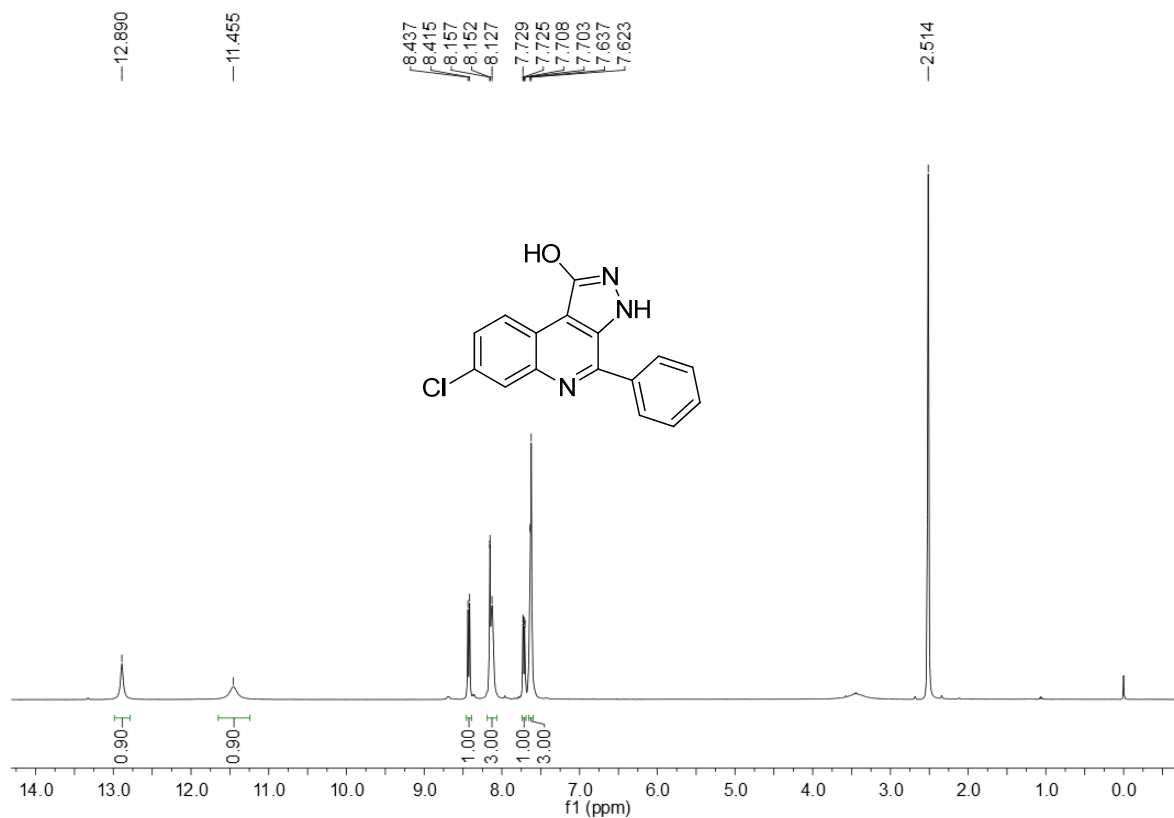


¹H NMR Spectrum of Compound 3z

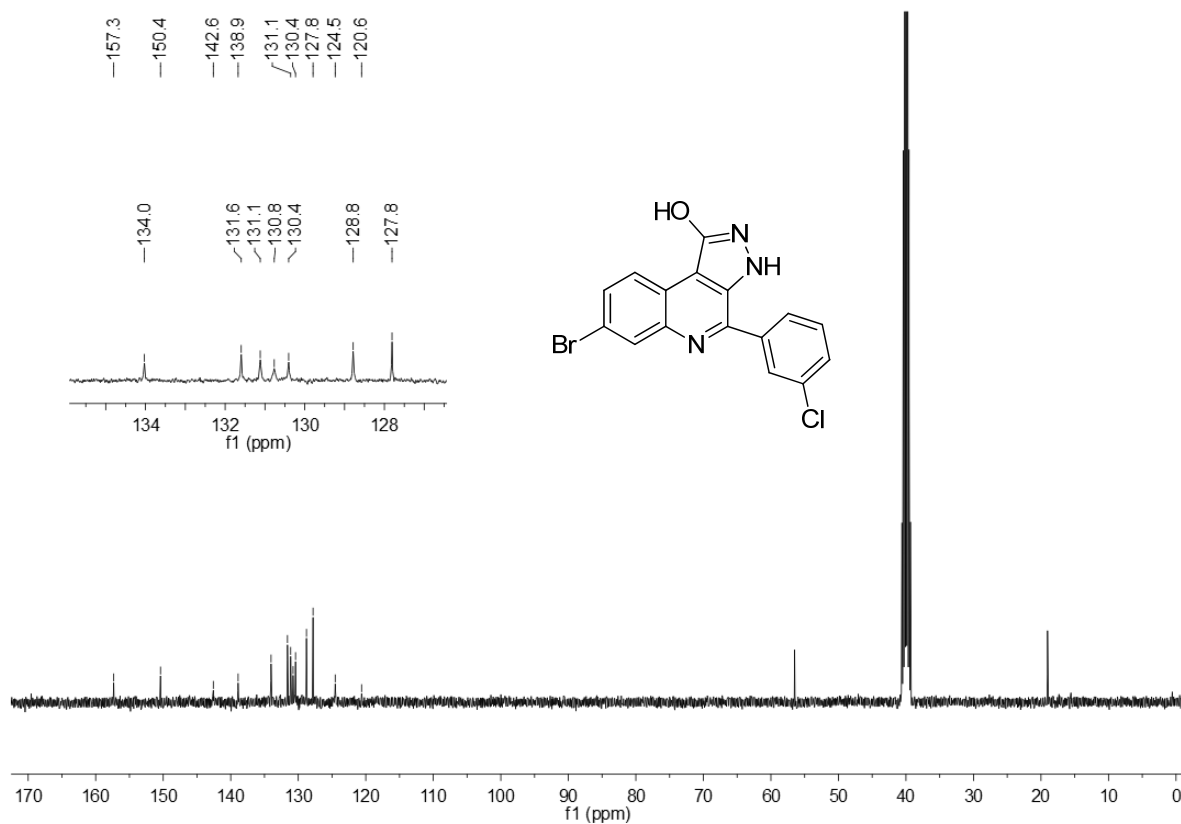
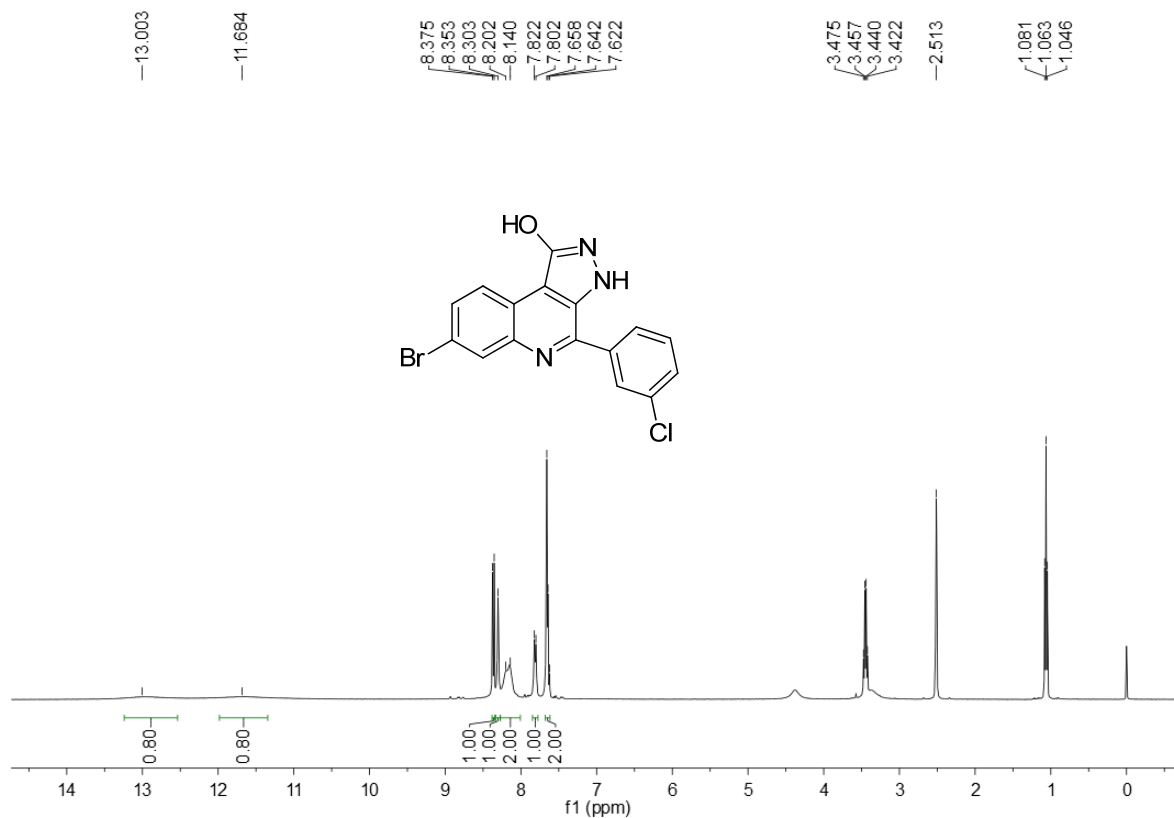


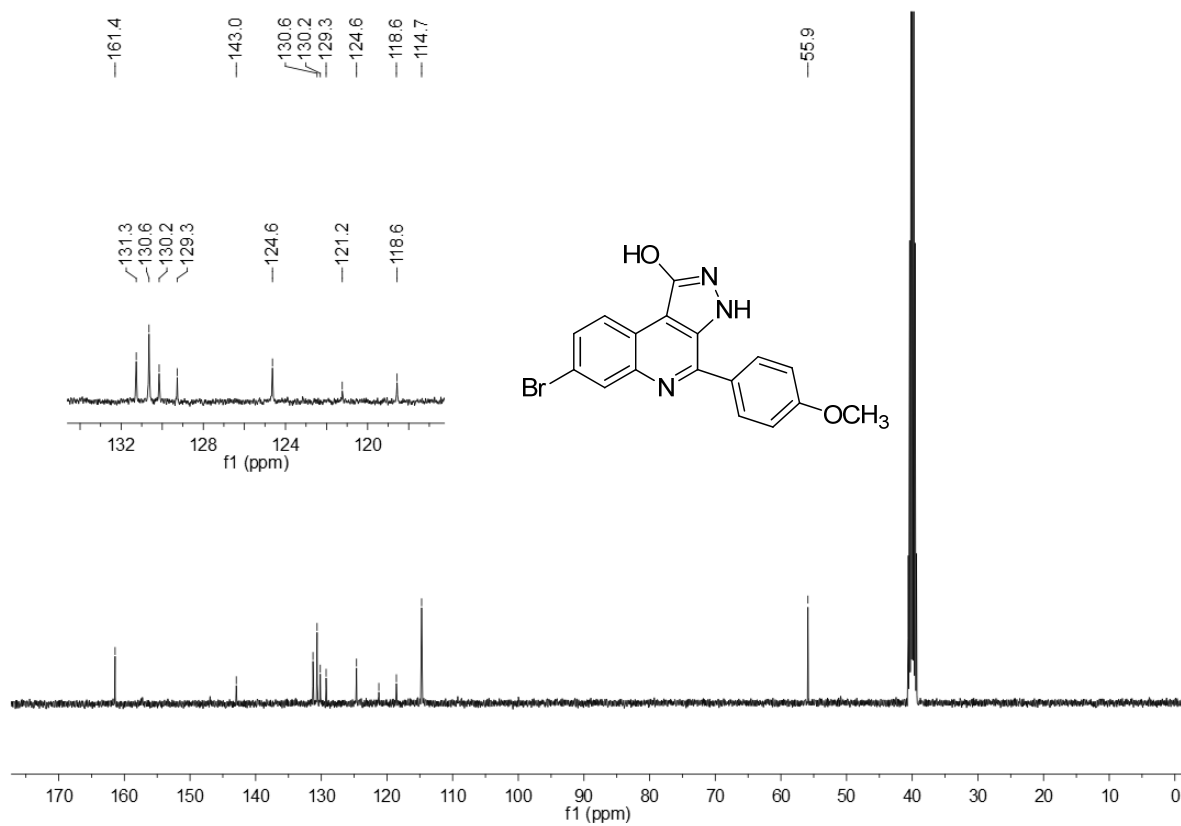
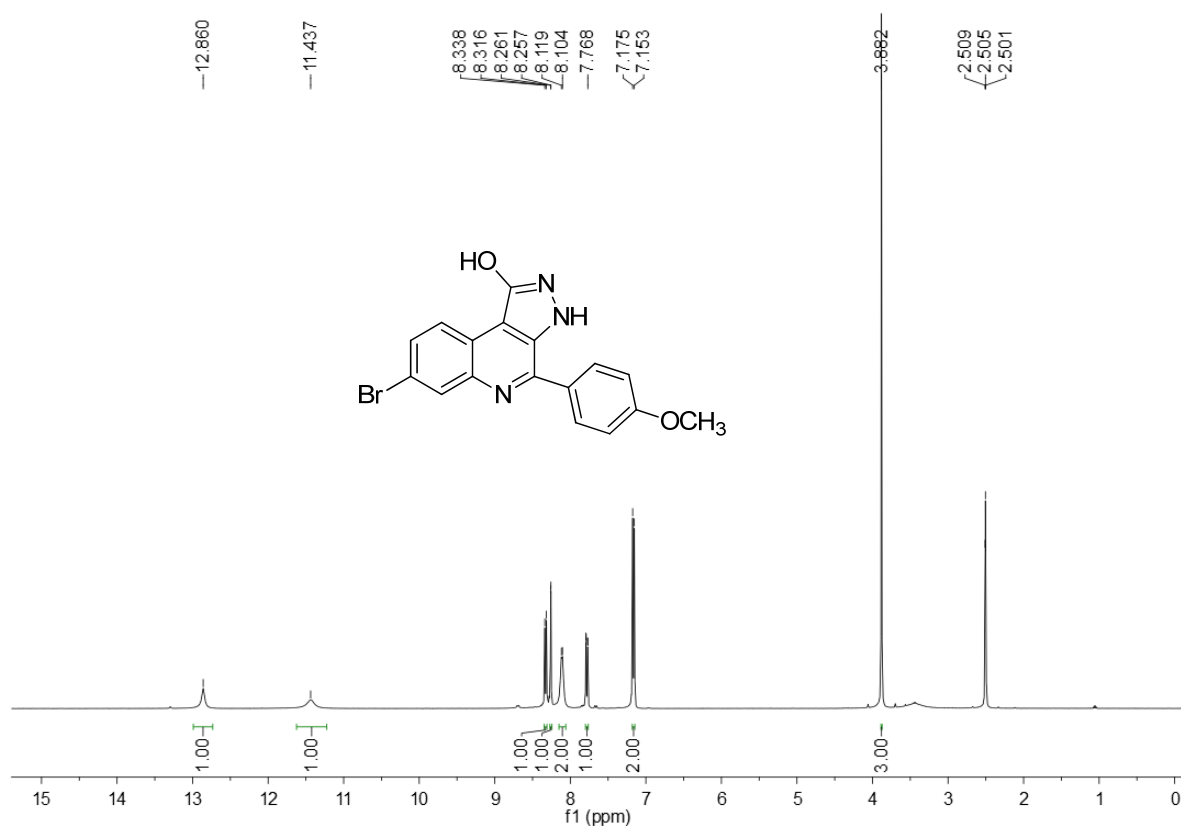
¹³C NMR Spectrum of Compound 3z

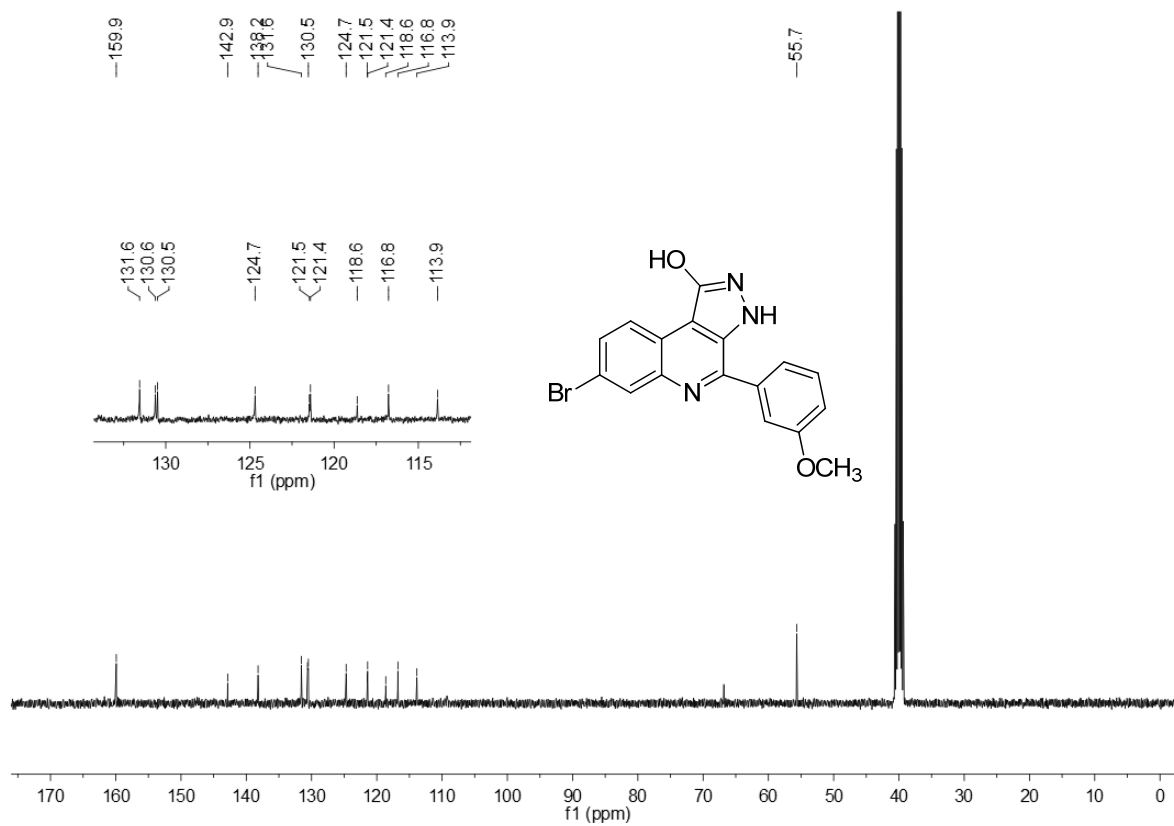
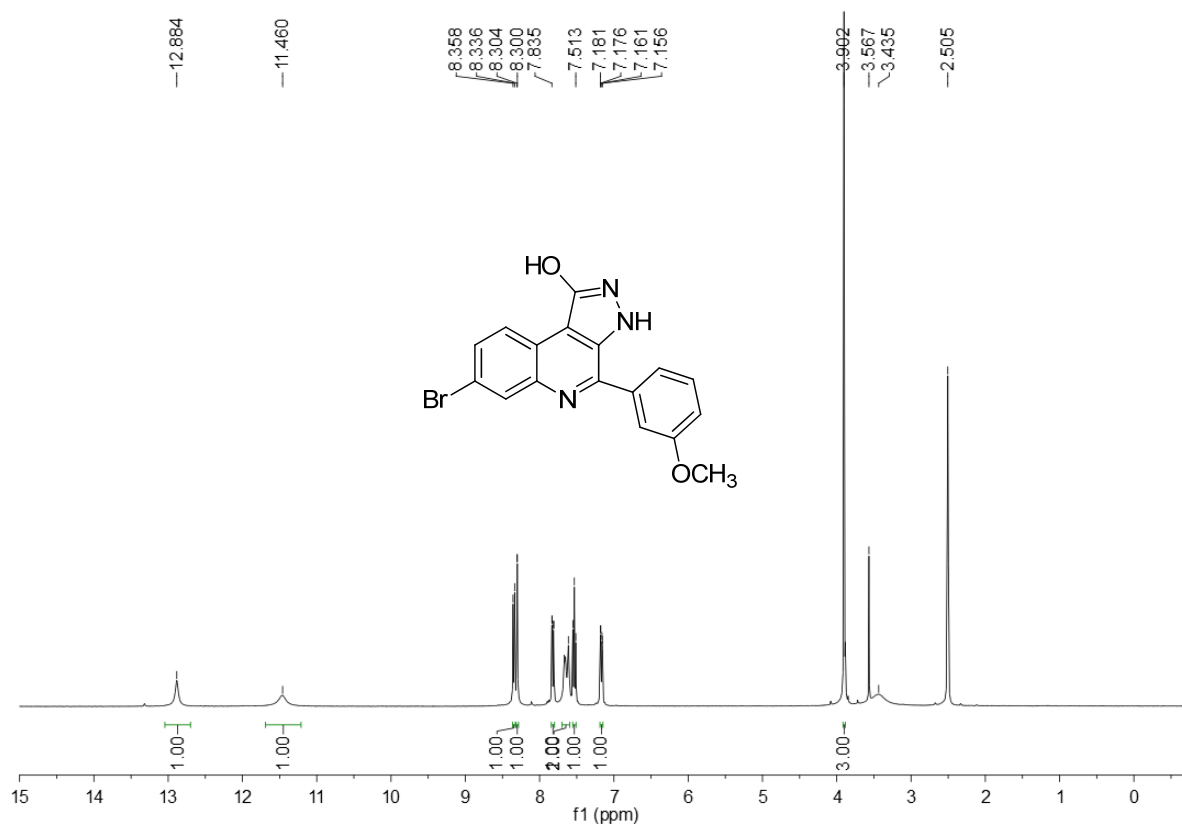




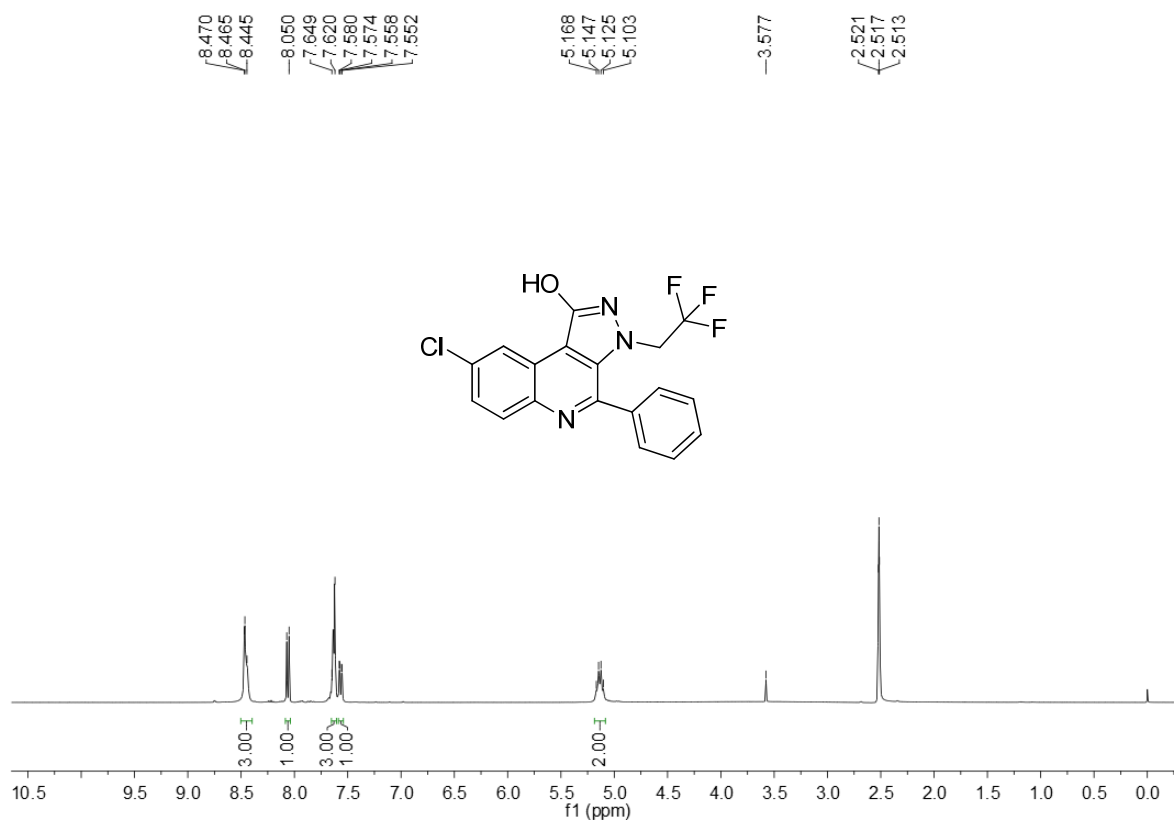
¹³C NMR Spectrum of Compound 3bb



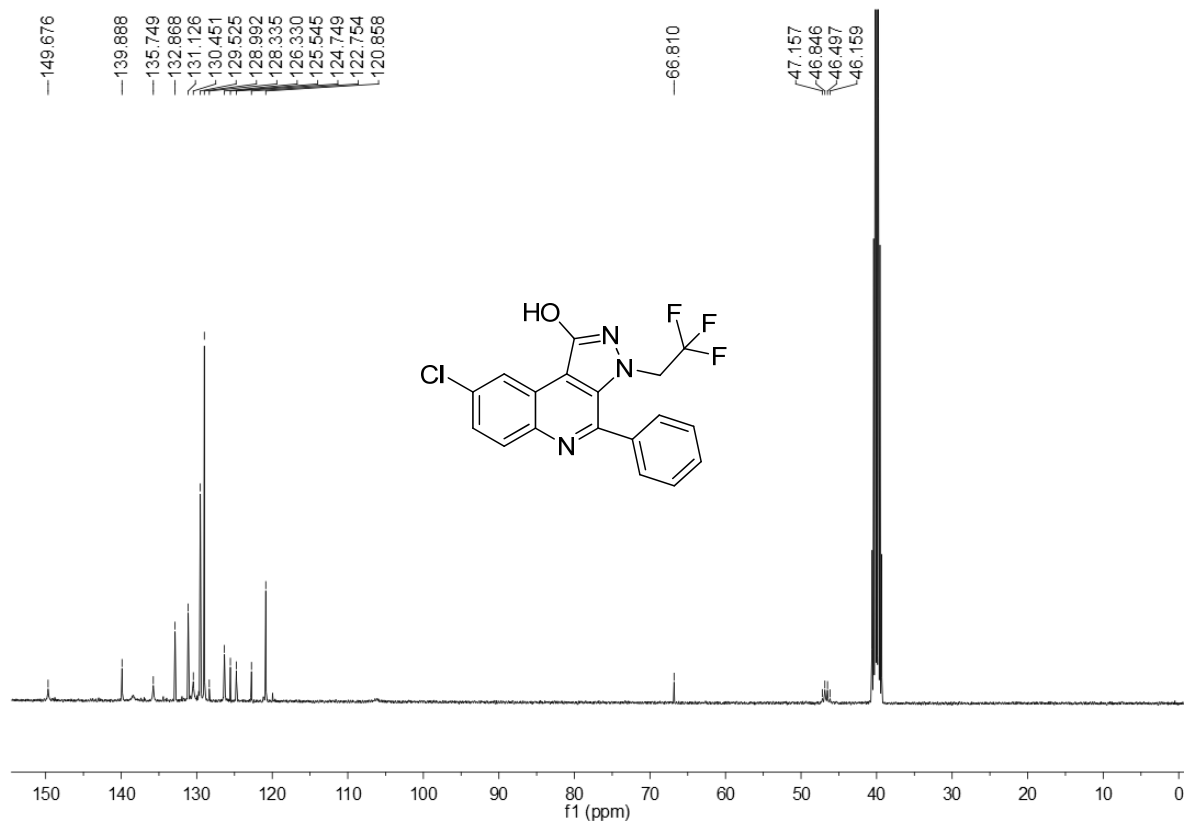




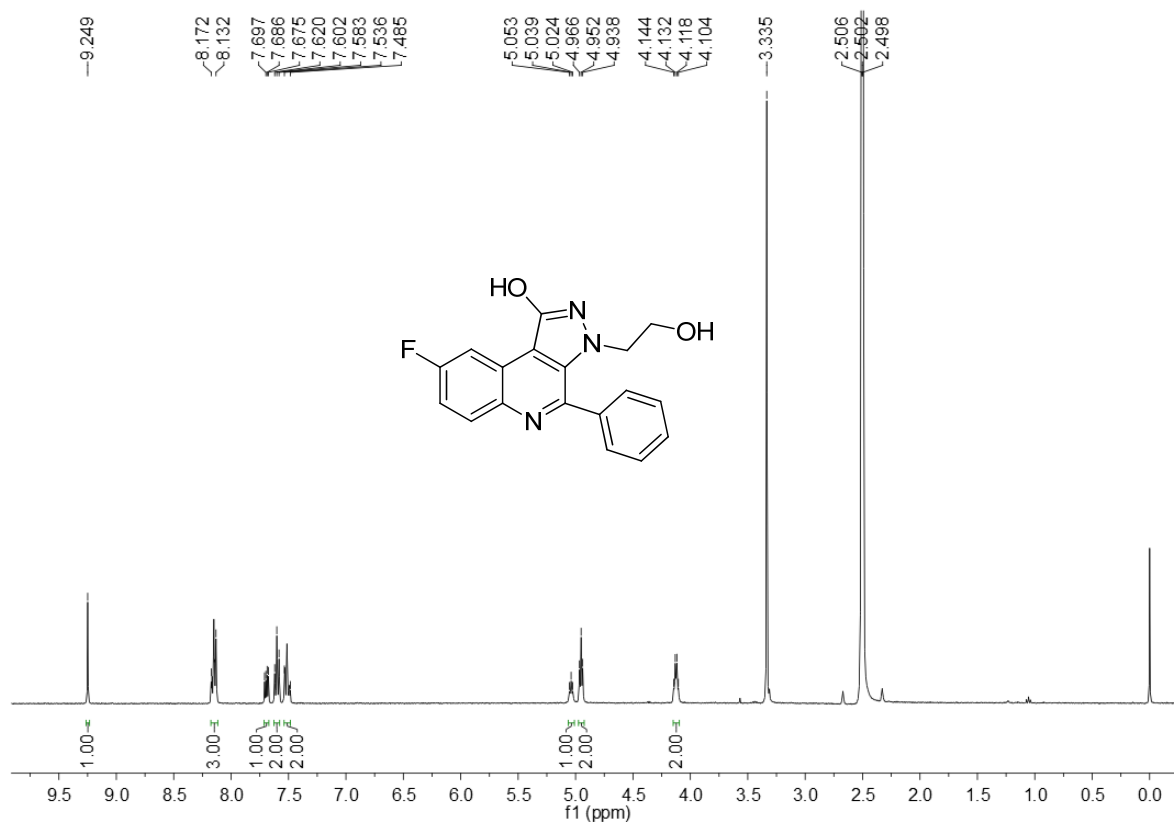
¹³C NMR Spectrum of Compound 3ee



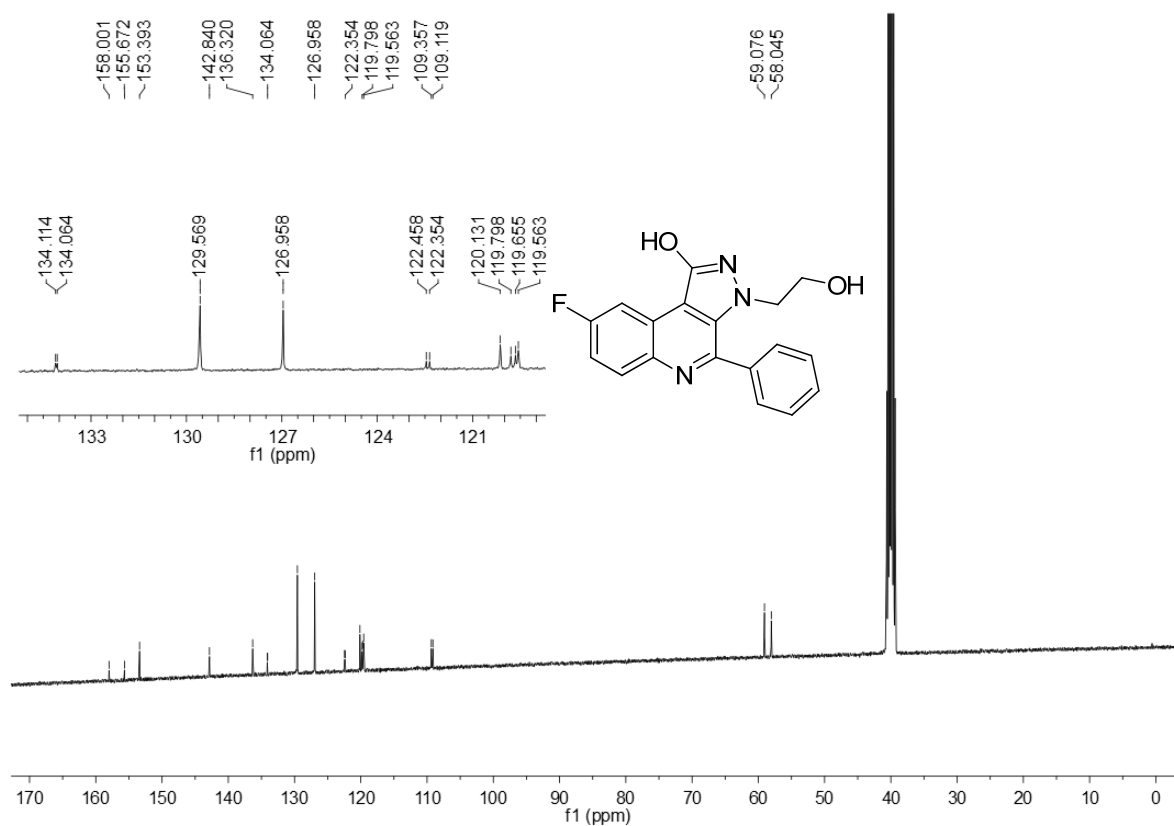
¹H NMR Spectrum of Compound 3ff



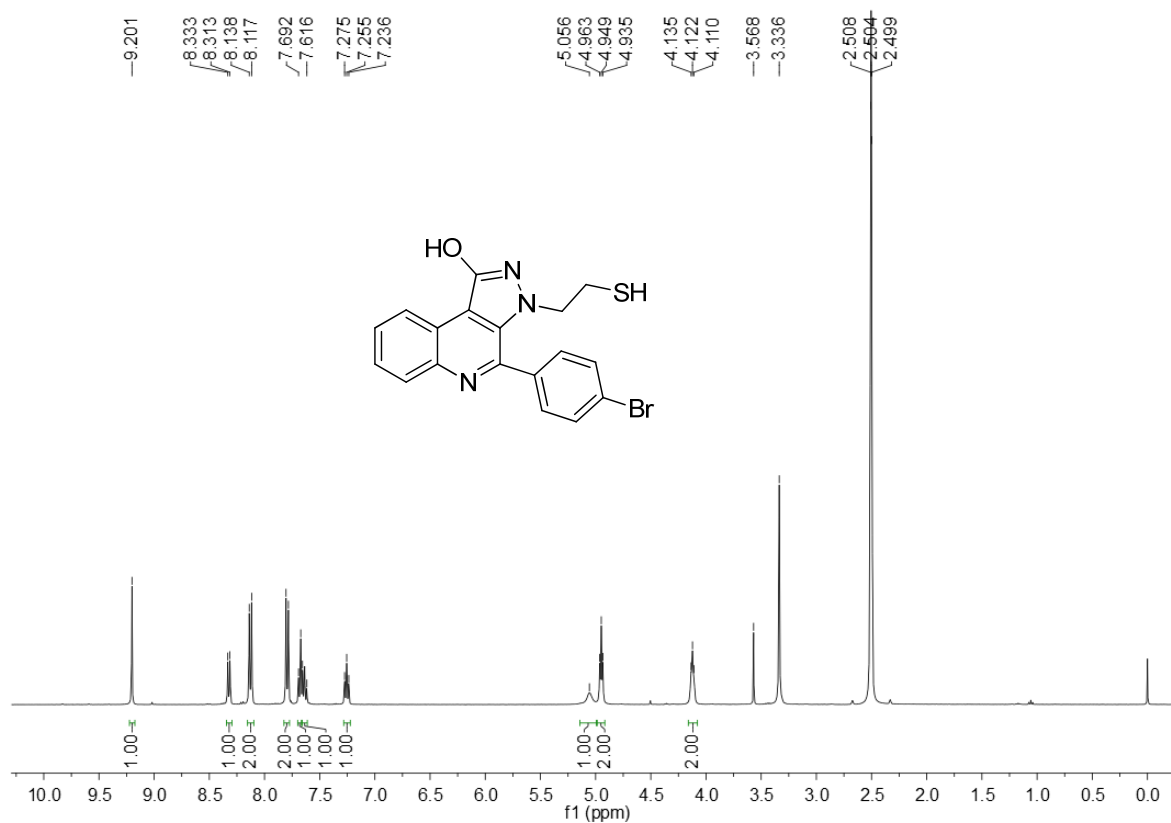
¹³C NMR Spectrum of Compound 3ff



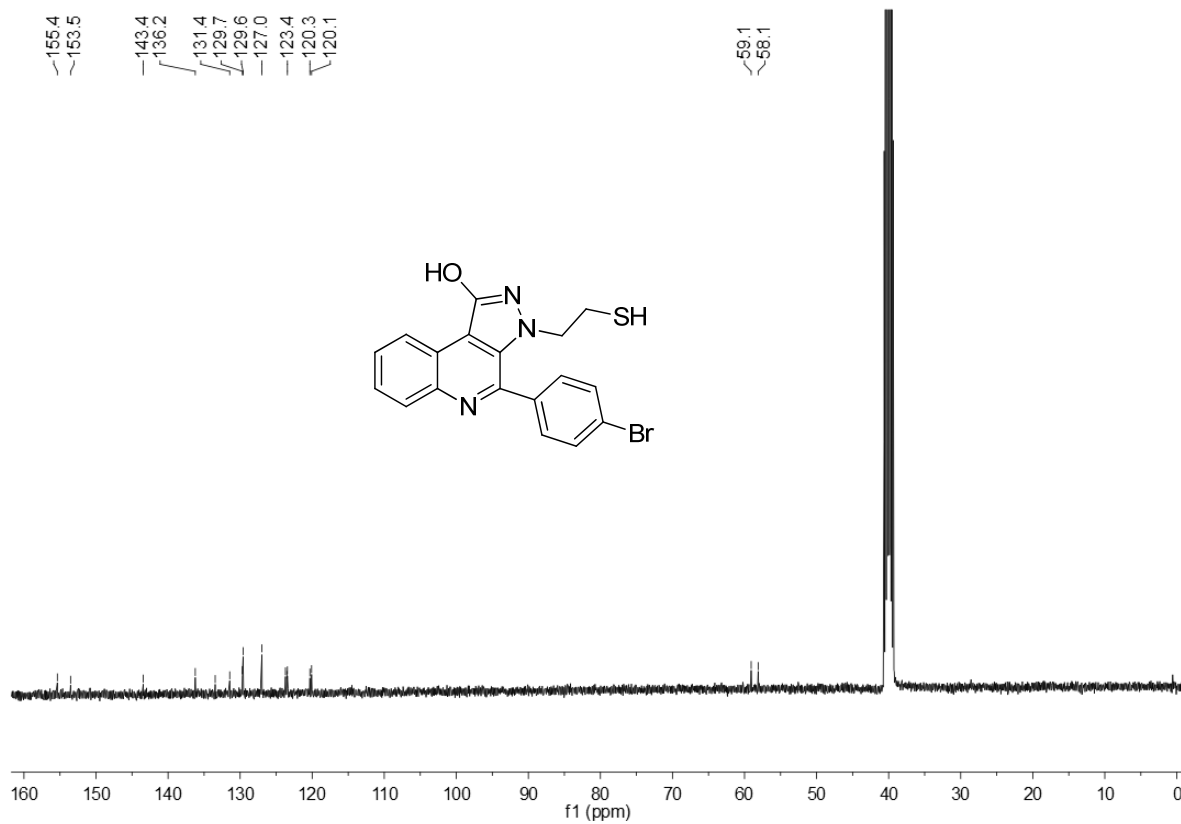
¹H NMR Spectrum of Compound 3gg



¹³C NMR Spectrum of Compound 3gg



¹H NMR Spectrum of Compound 3hh



¹³C NMR Spectrum of Compound 3hh