

Meglumine catalyzed one-pot, three-component combinatorial synthesis of pyrazoles bearing a coumarin unit

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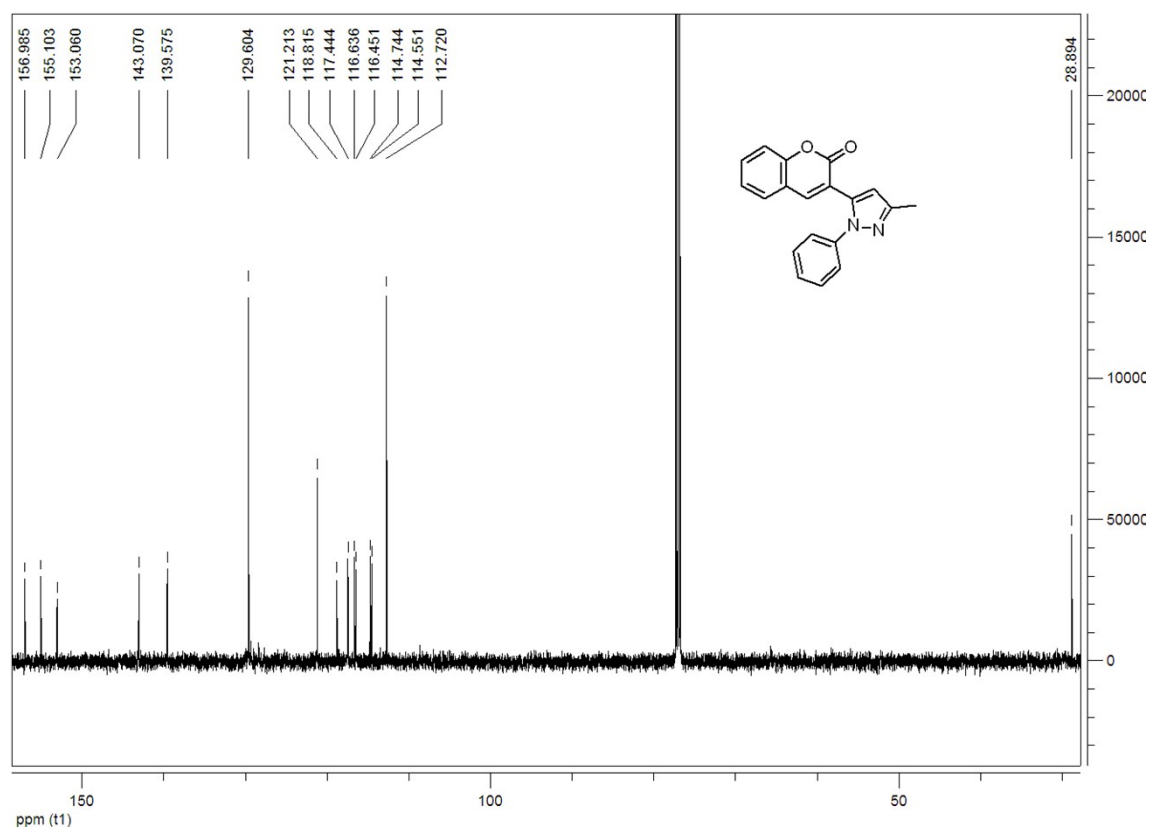
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Copies of NMR spectra for produ 4a-4ae	S2-S32
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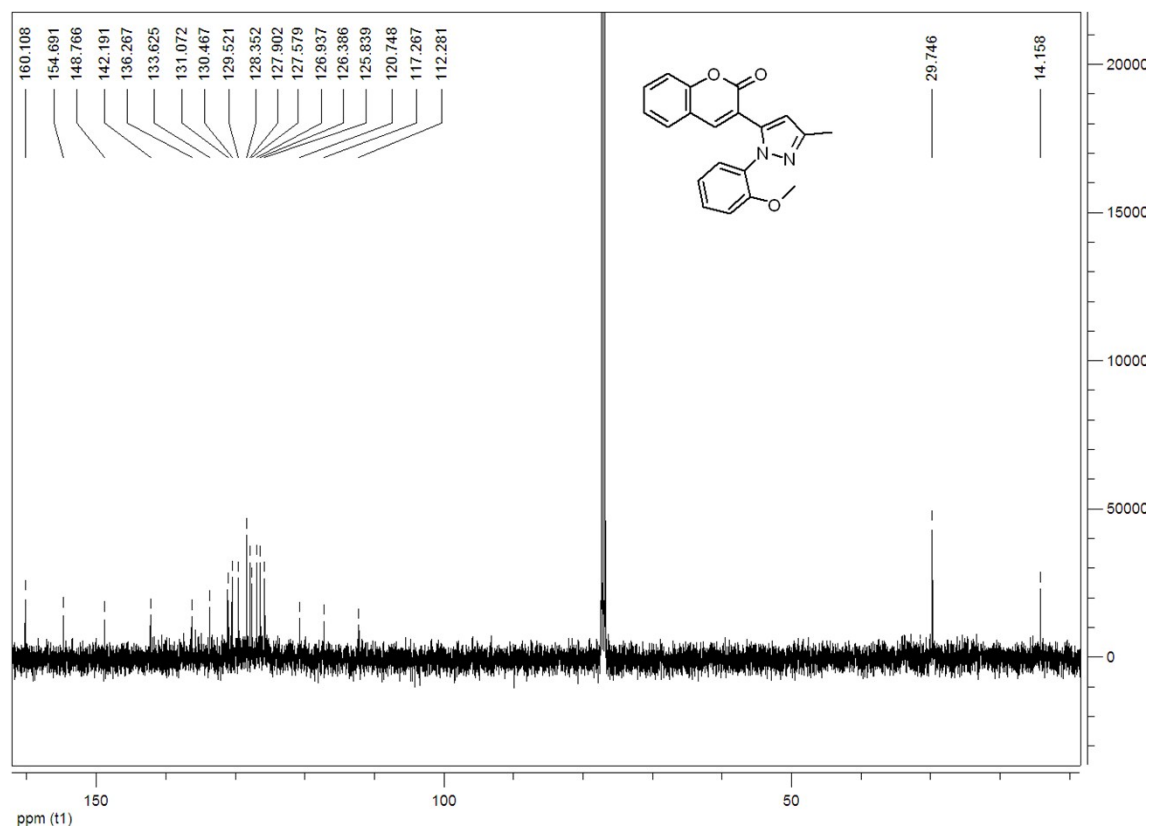
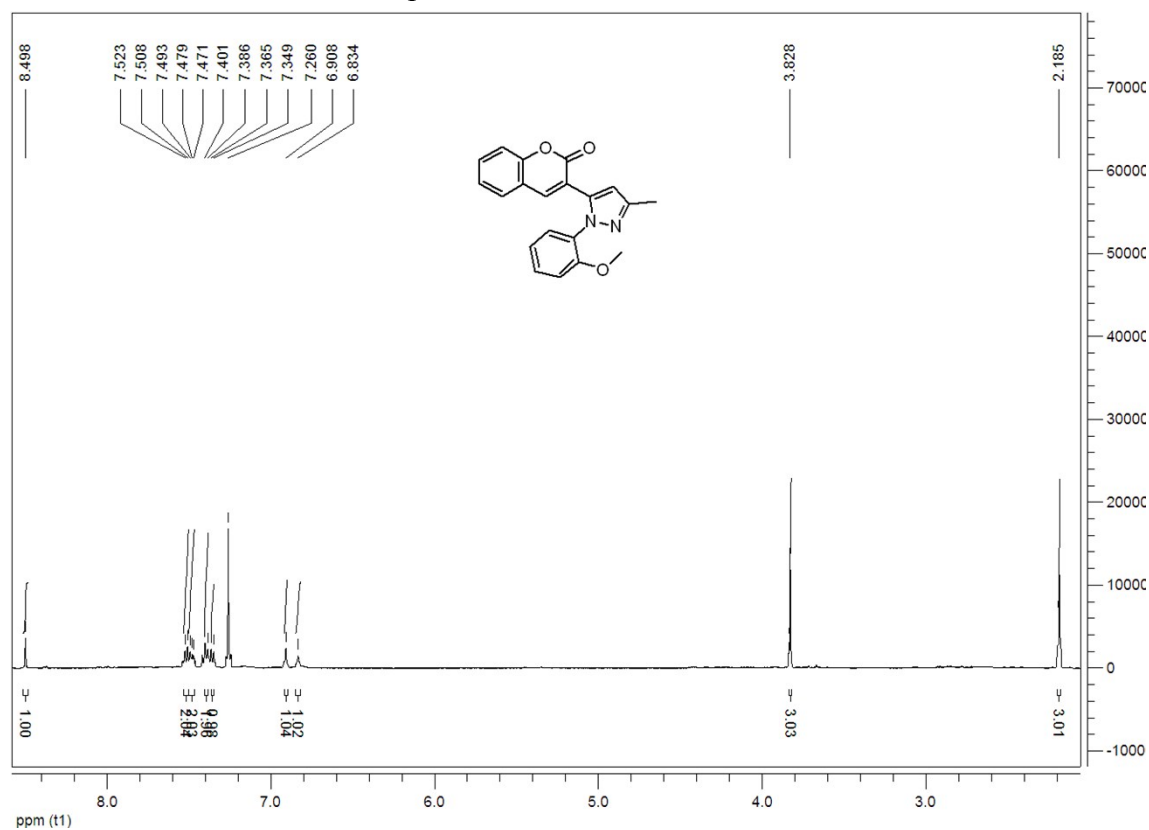
Chemical structure of 2-(4-methyl-1-phenyl-1H-imidazol-2-yl)-2H-chromene is shown above the spectrum.

¹H NMR spectrum (ppm (t1)) showing peaks and integration values:

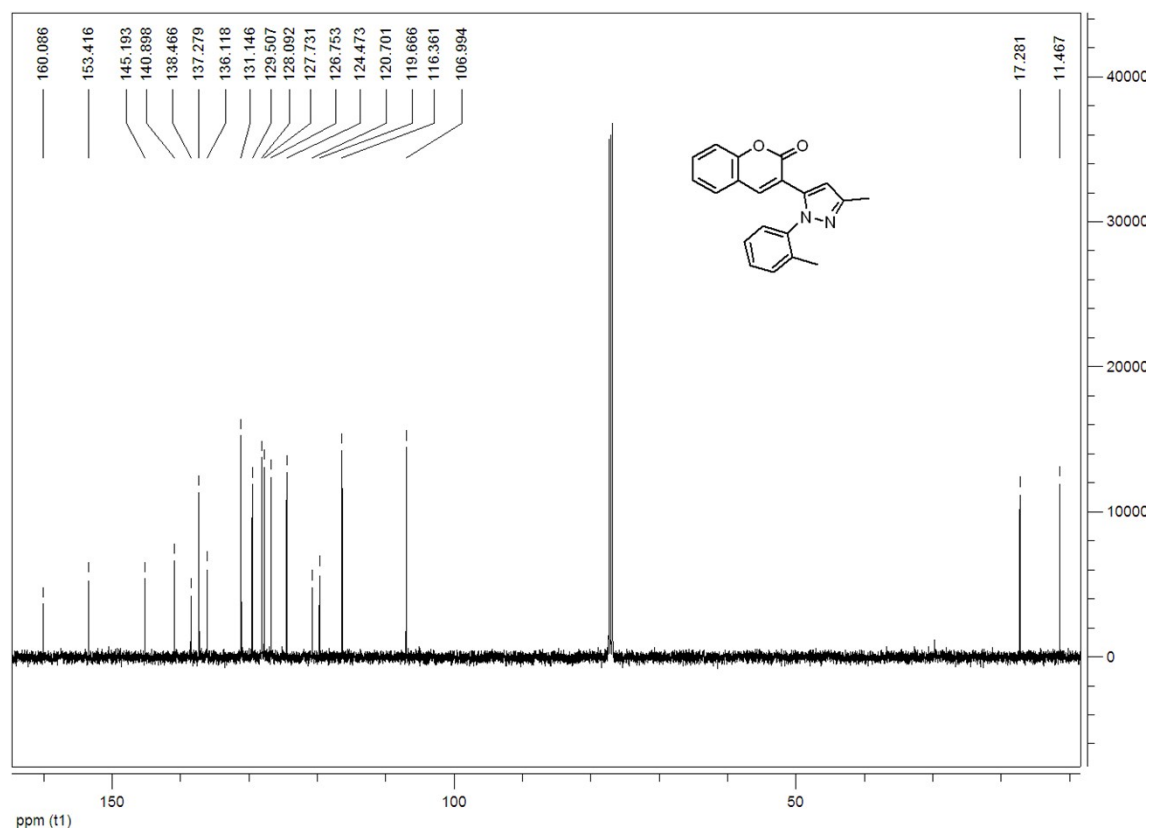
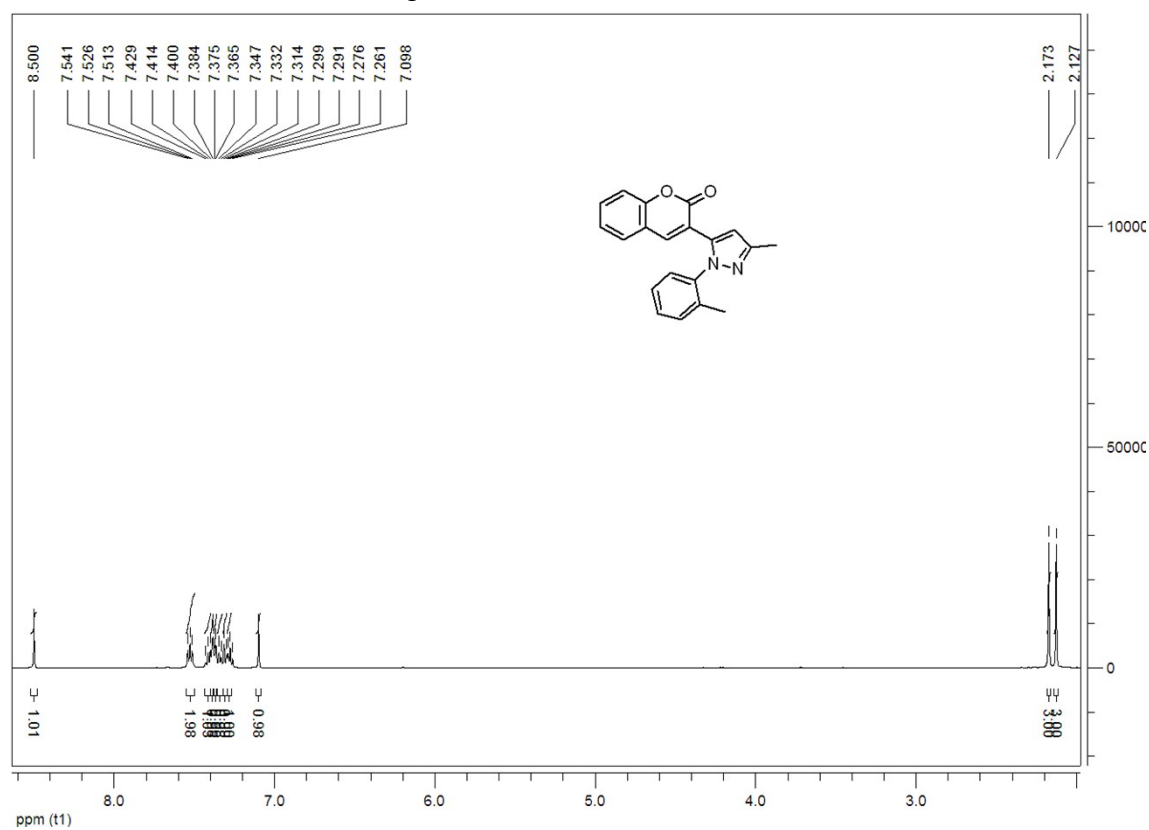
Chemical Shift (ppm)	Integration
7.550	0.96
7.547	0.96
7.533	0.96
7.519	0.96
7.516	0.96
7.462	0.96
7.417	0.96
7.413	0.96
7.399	0.96
7.396	0.96
7.380	0.96
7.339	0.96
7.330	0.96
7.327	0.96
7.322	0.96
7.312	0.96
7.260	0.96
7.250	0.96
7.235	0.96
6.610	0.96
2.397	3.00



^1H NMR and ^{13}C NMR of compound **4b**



^1H NMR and ^{13}C NMR of compound **4c**

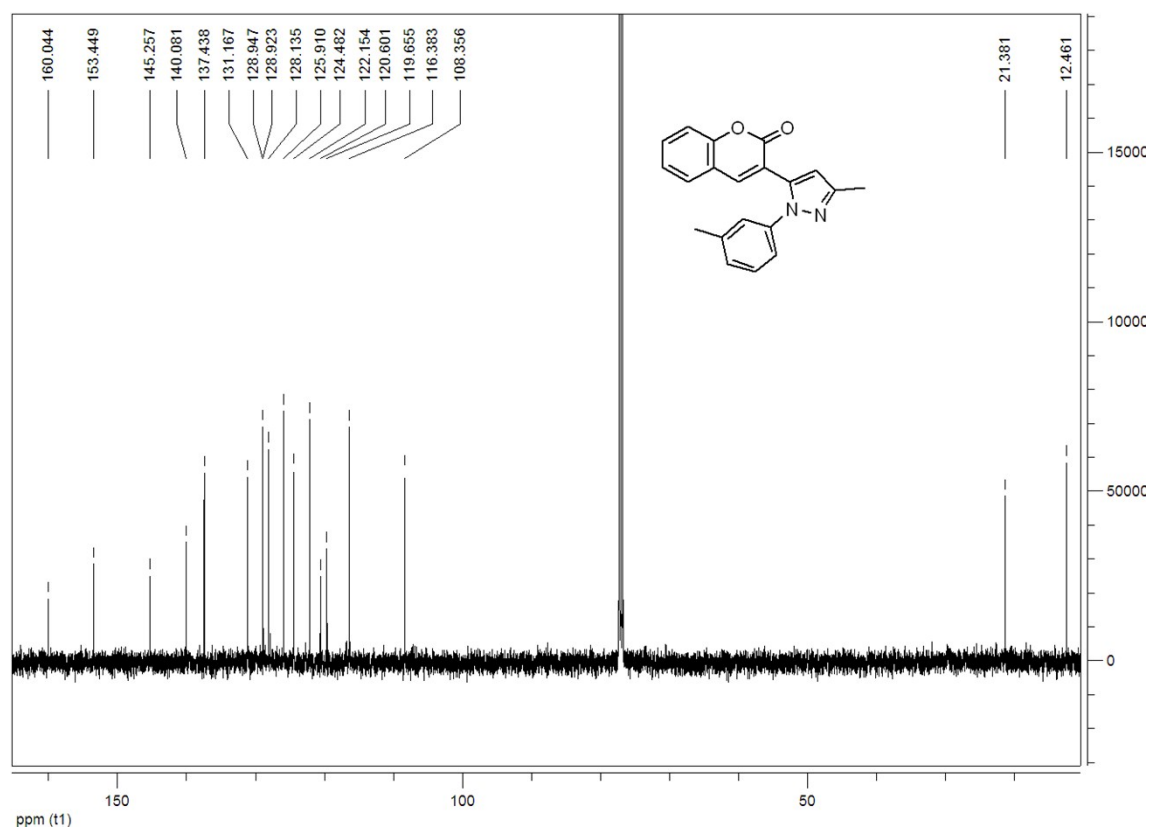


Chemical structure: Cc1ccc(cc1)n2nc(C)cc2C3=CC(=O)OC4=CC=CC=C34

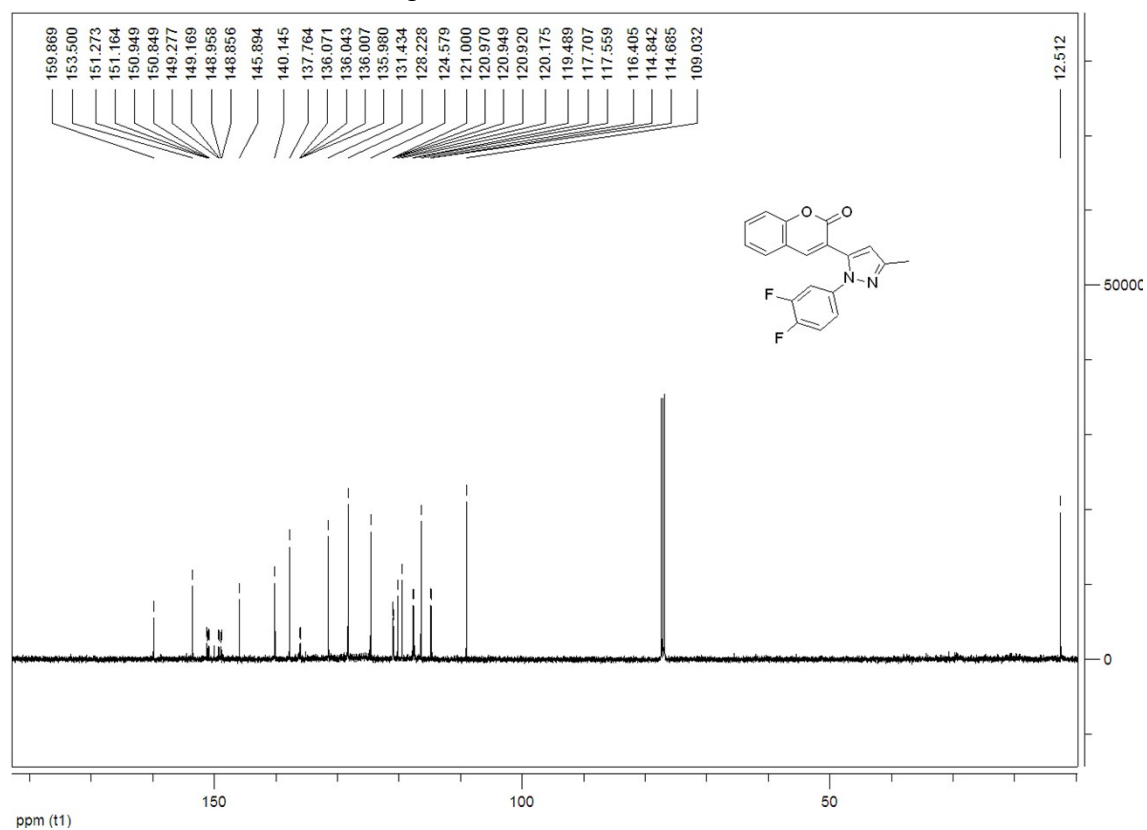
¹H NMR spectrum (ppm (t1)):

- 8.512
- 7.556
- 7.541
- 7.522
- 7.506
- 7.491
- 7.399
- 7.384
- 7.369
- 7.354
- 7.336
- 7.290
- 7.275
- 7.260
- 7.247
- 7.232
- 7.064
- 2.444
- 2.370

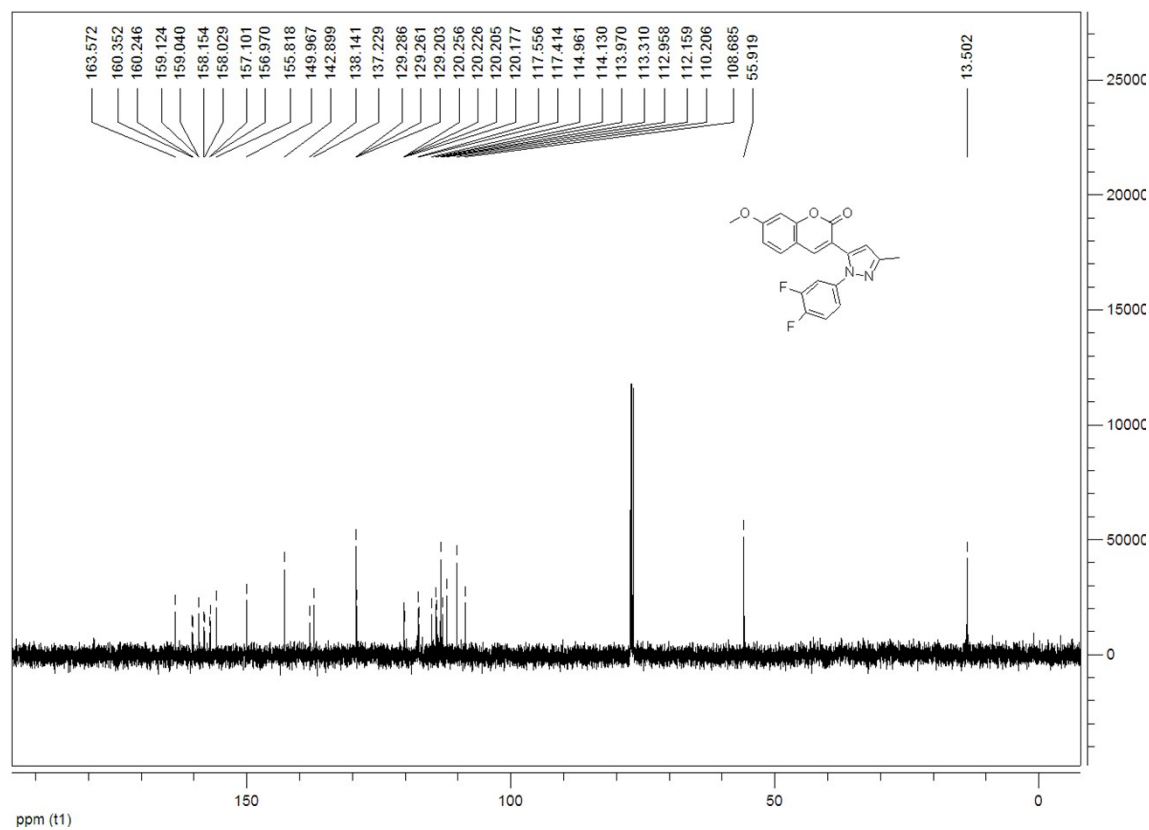
Integration values: 96.0, 68.6, 98.7, 98.6, 96.0, 96.7, 100.6.



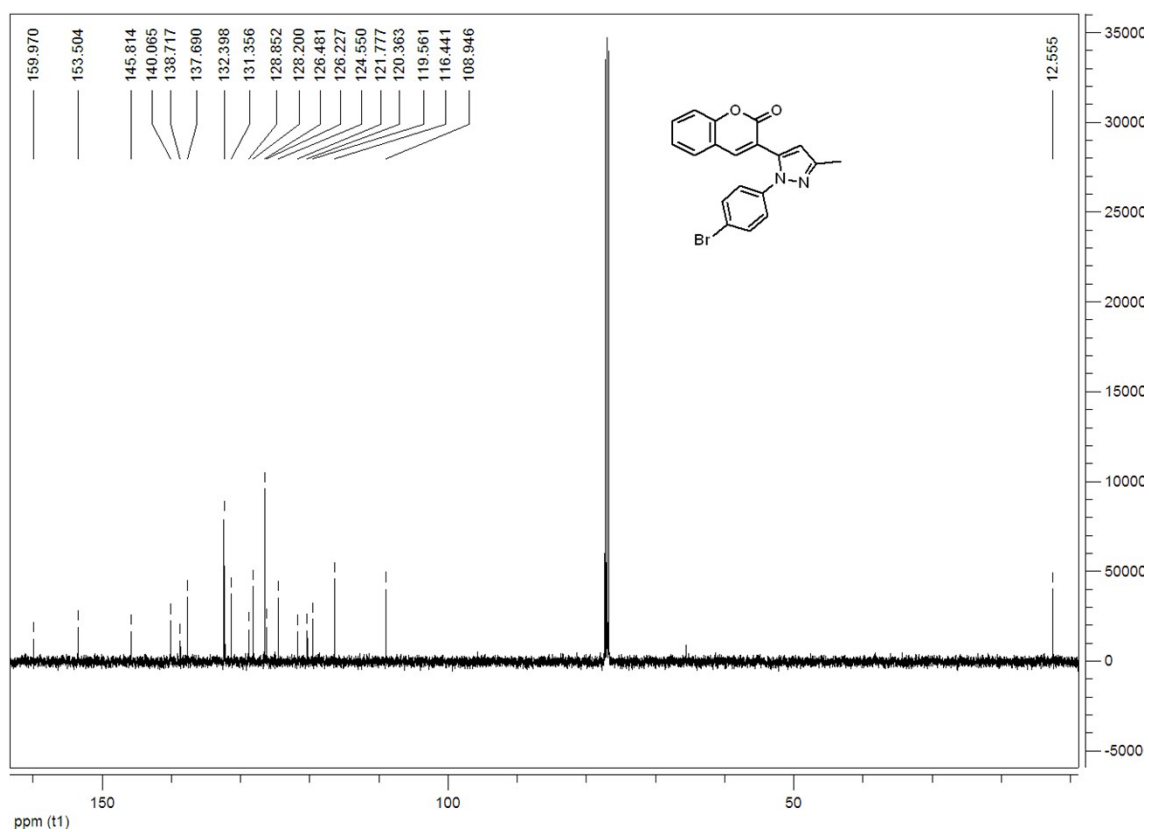
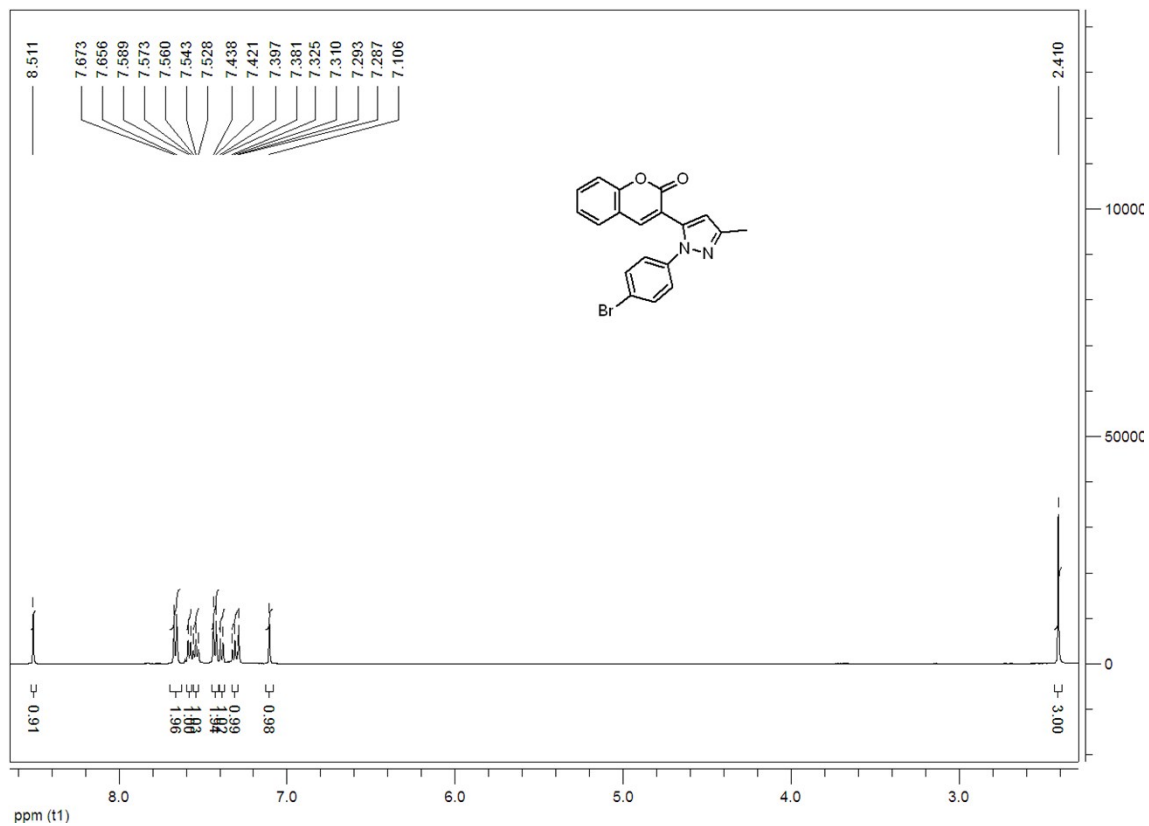
^1H NMR and ^{13}C NMR of compound 4e



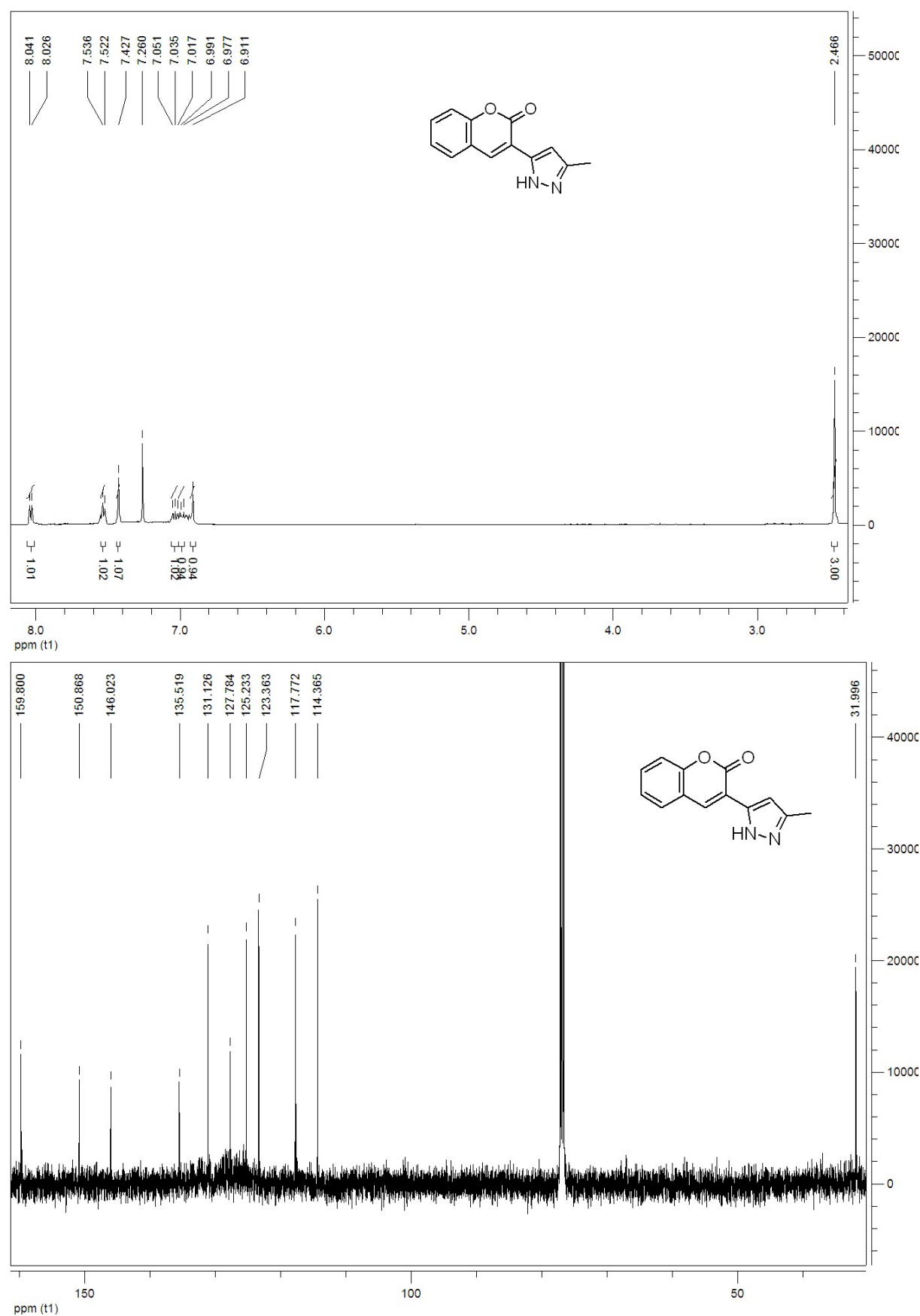
4l



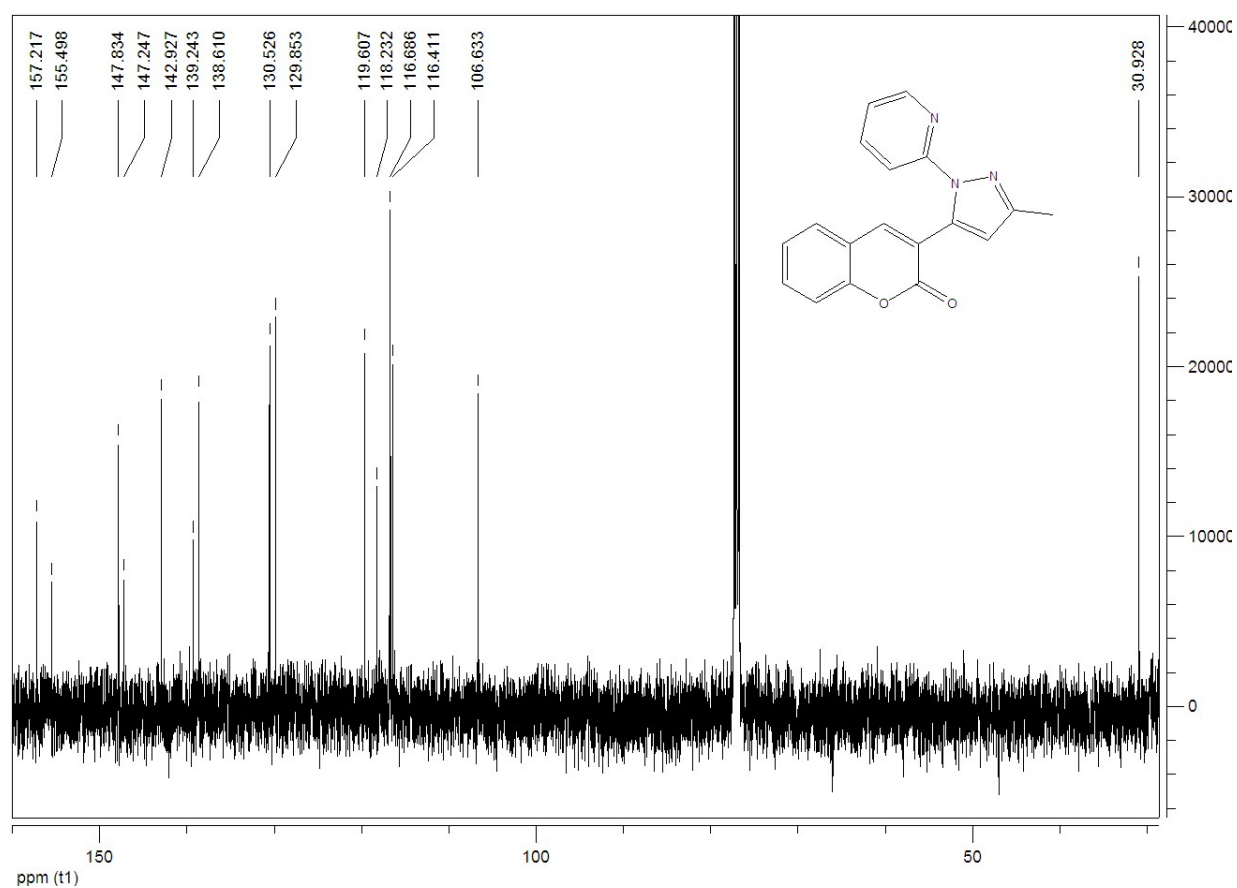
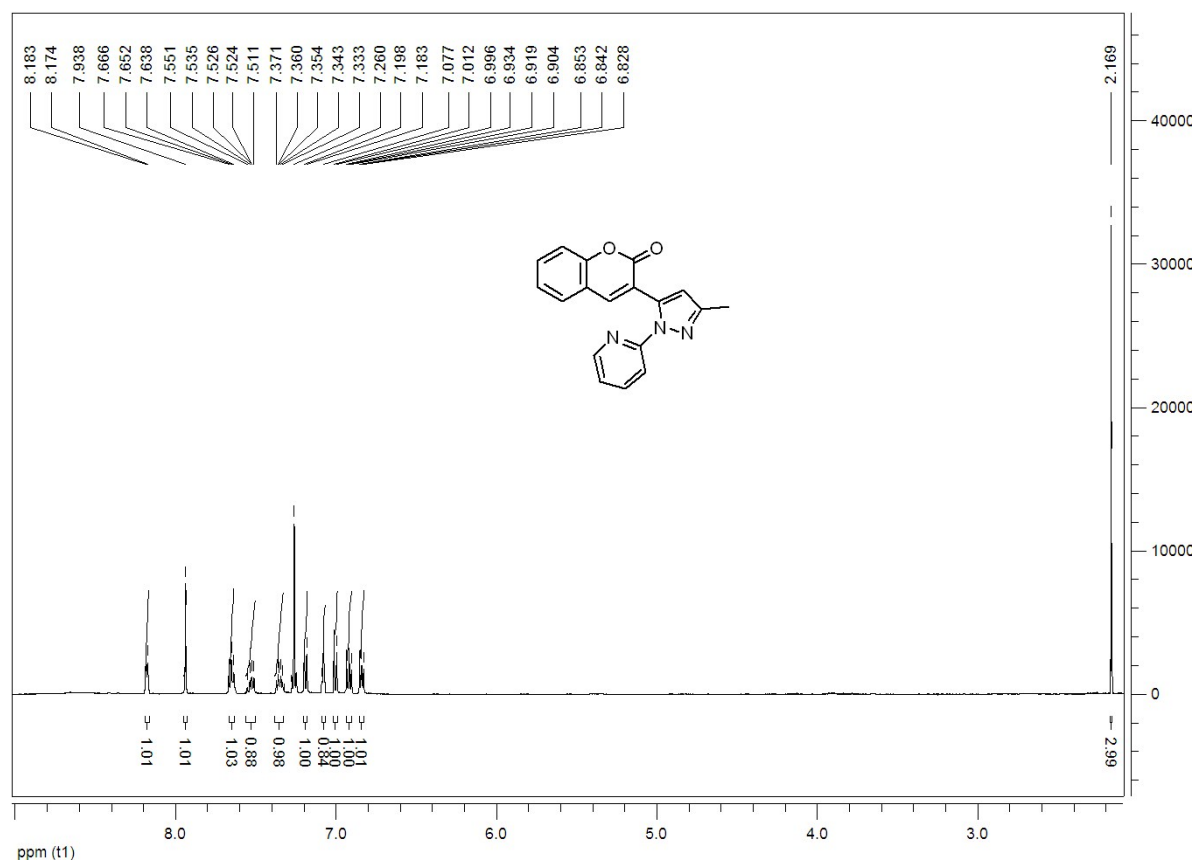
^1H NMR and ^{13}C NMR of compound 4f



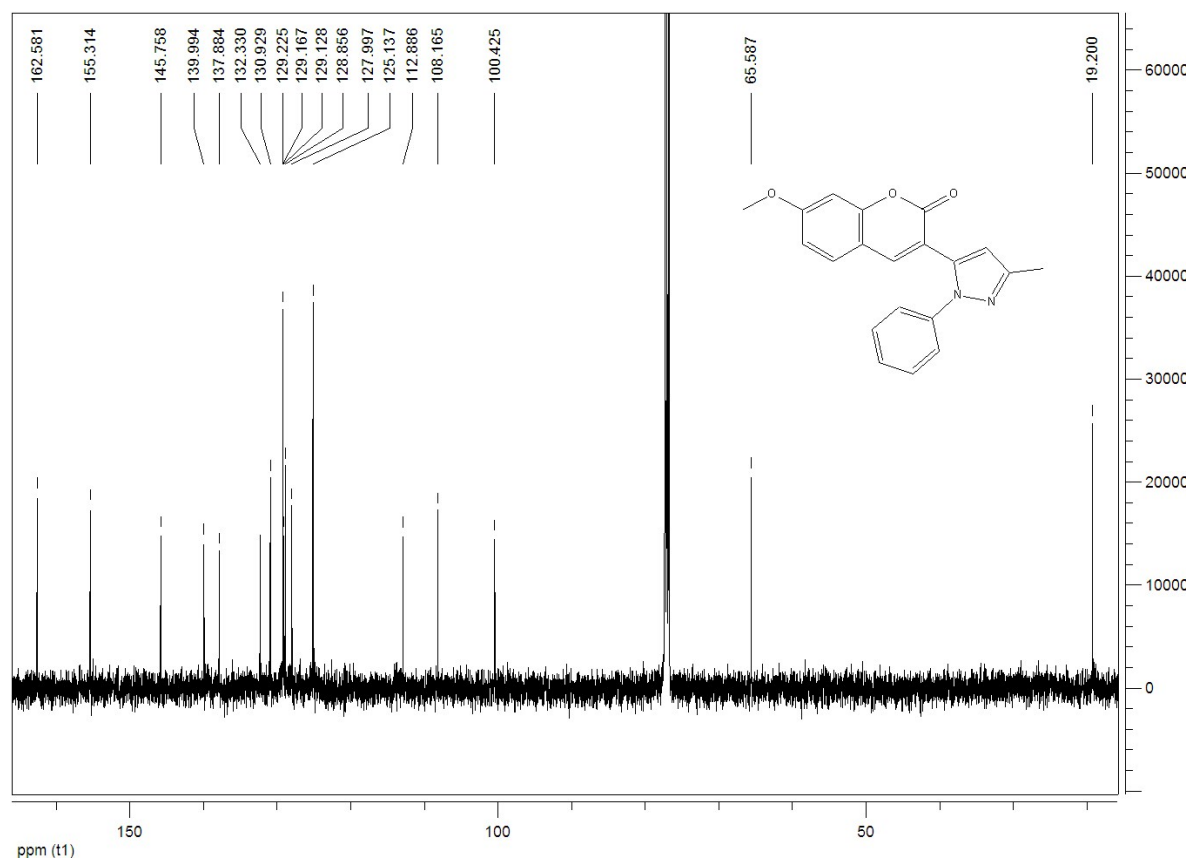
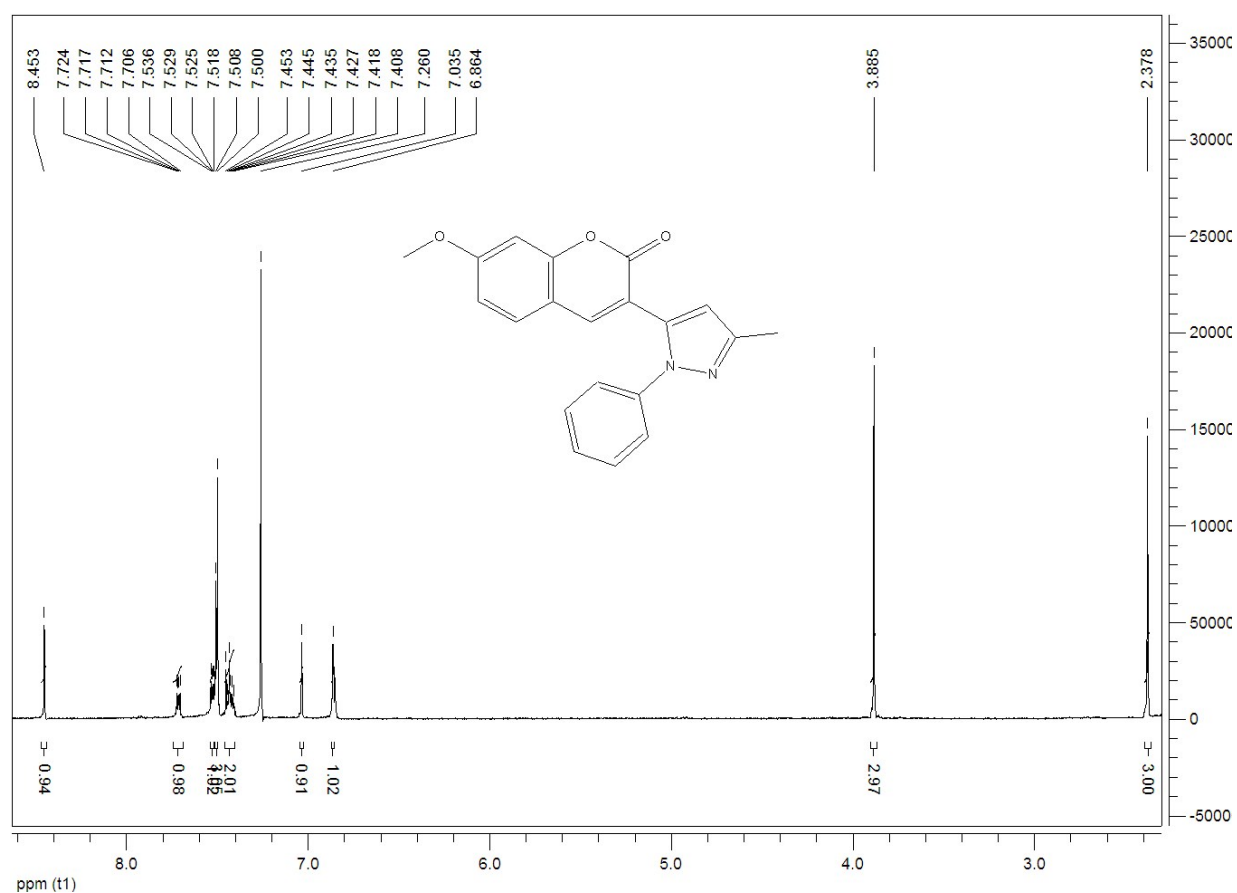
^1H NMR and ^{13}C NMR of compound **4g**



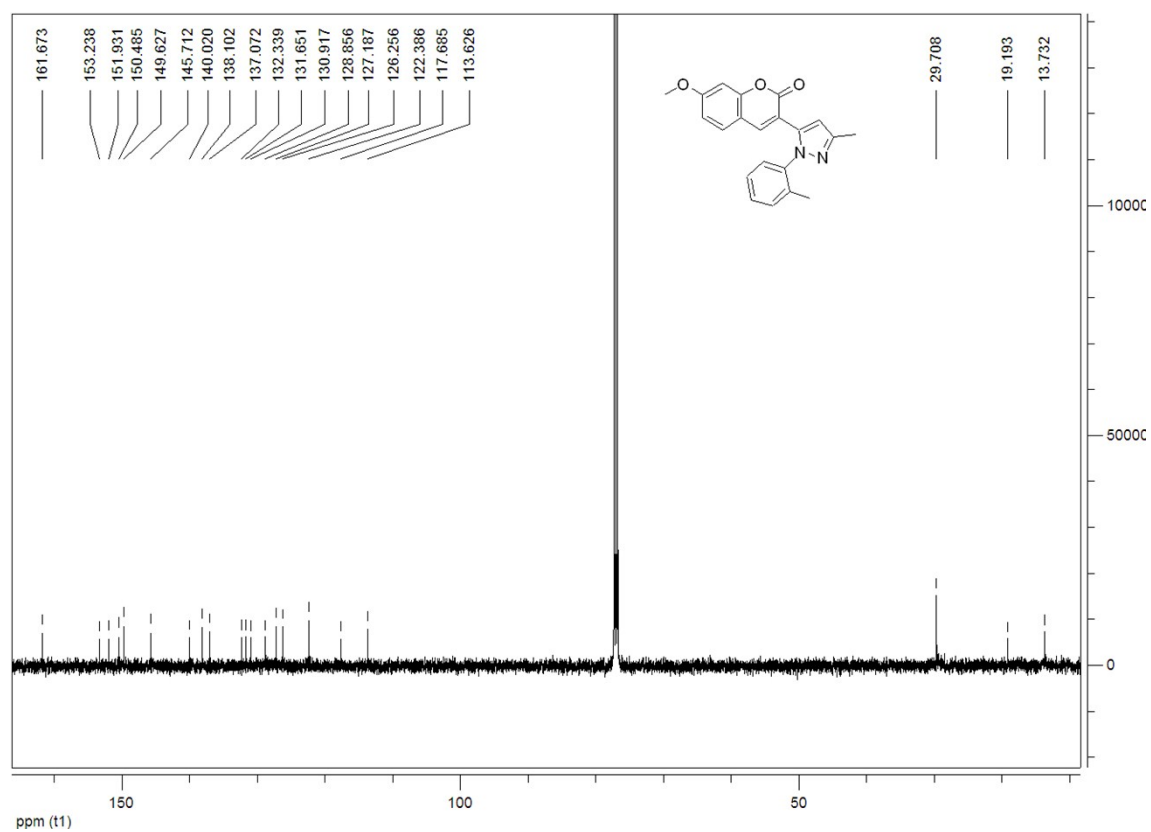
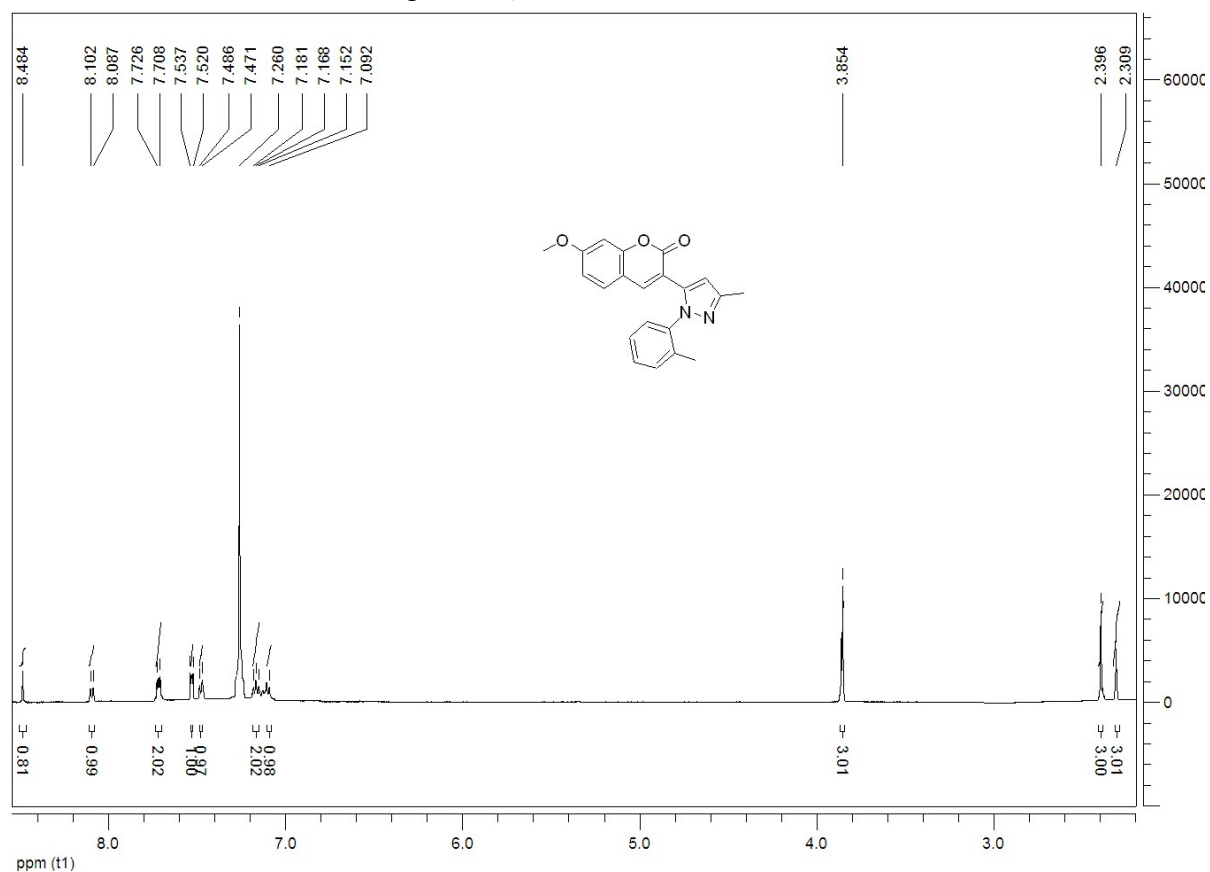
¹H NMR and ¹³C NMR of compound 4h



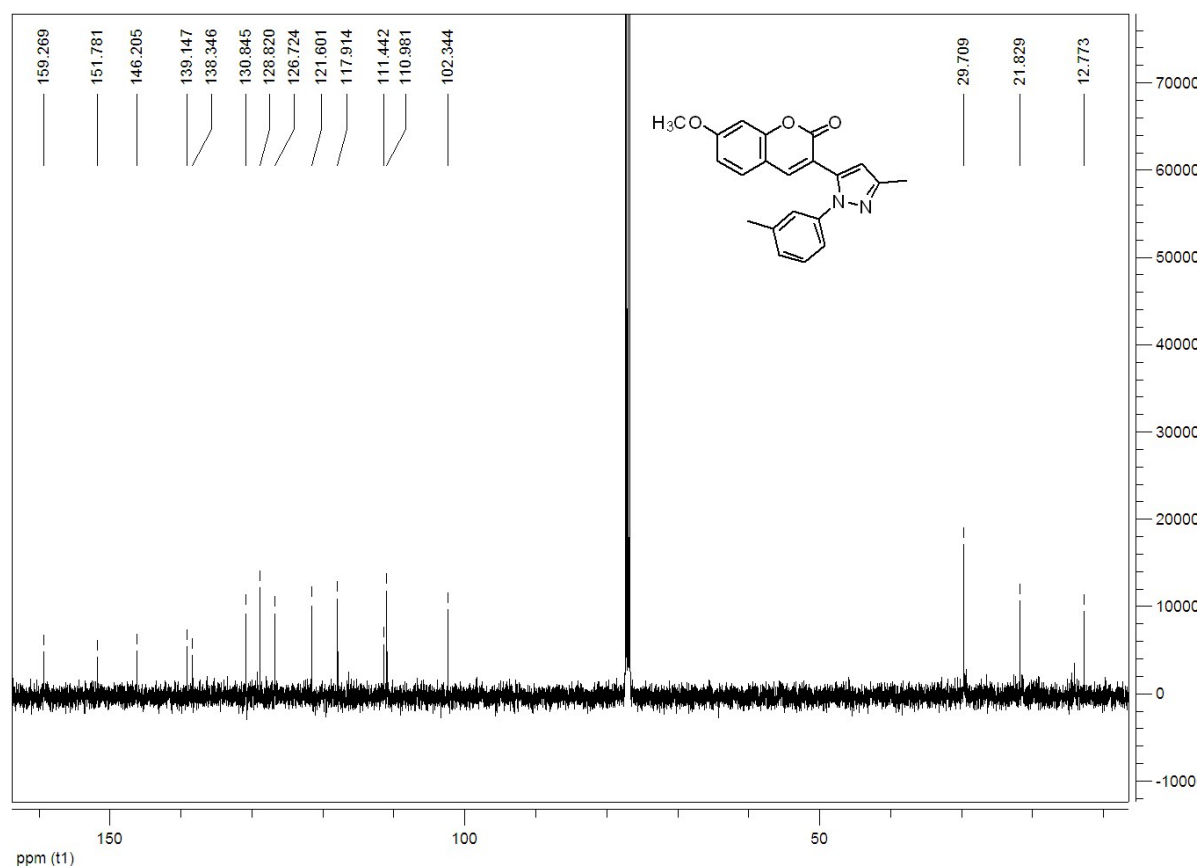
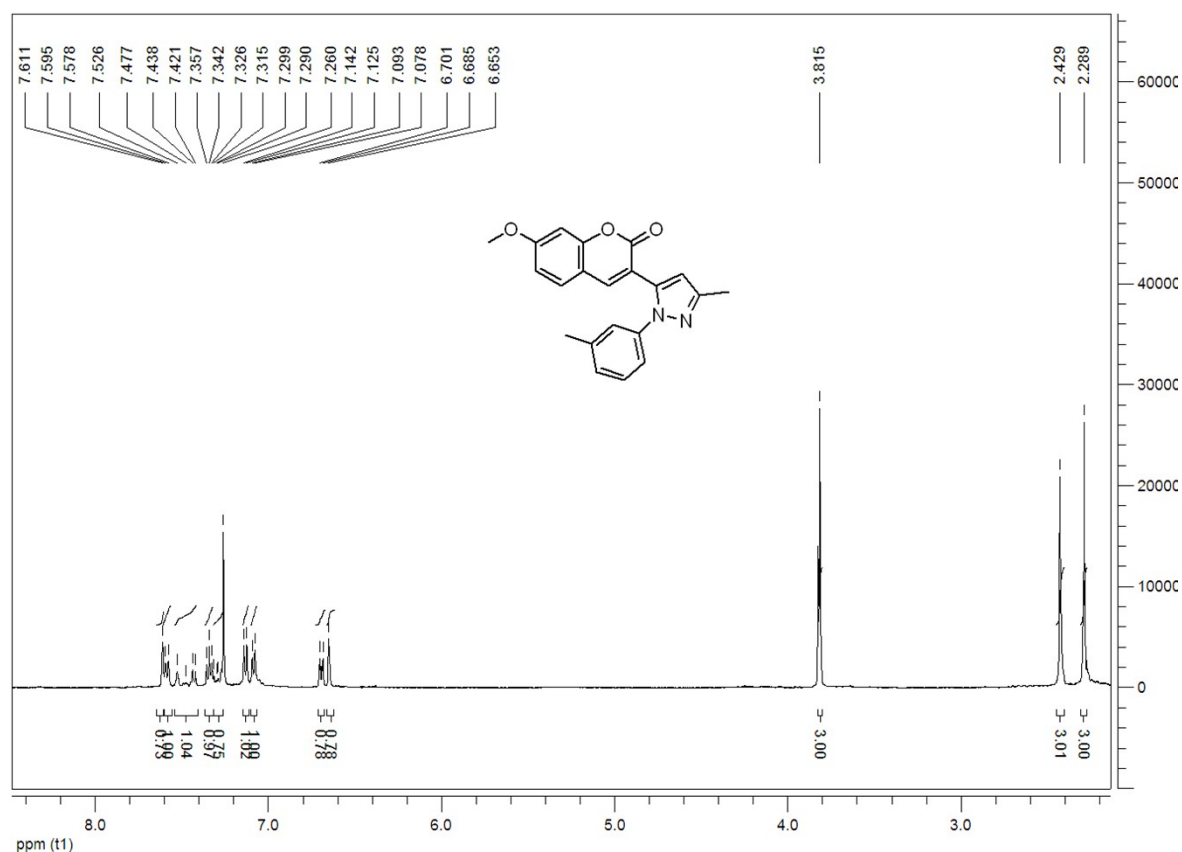
^1H NMR and ^{13}C NMR of compound 4i



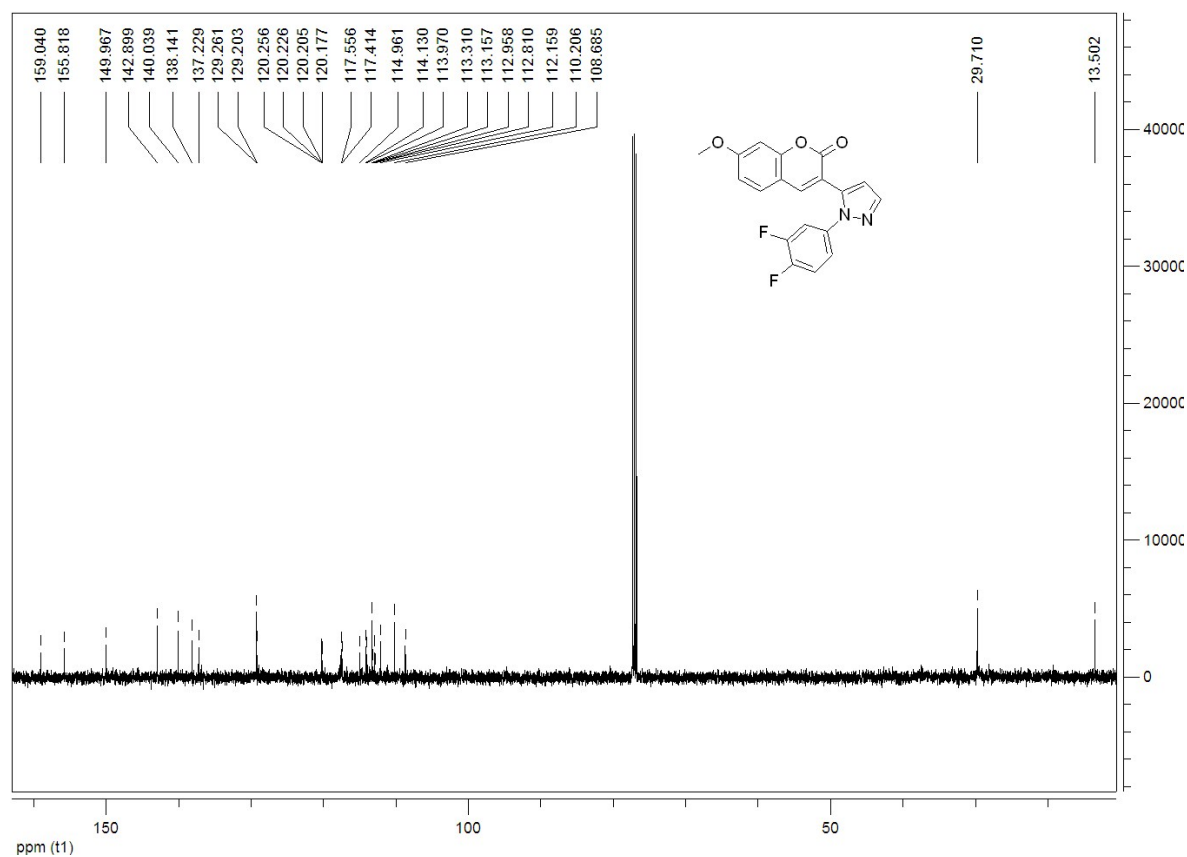
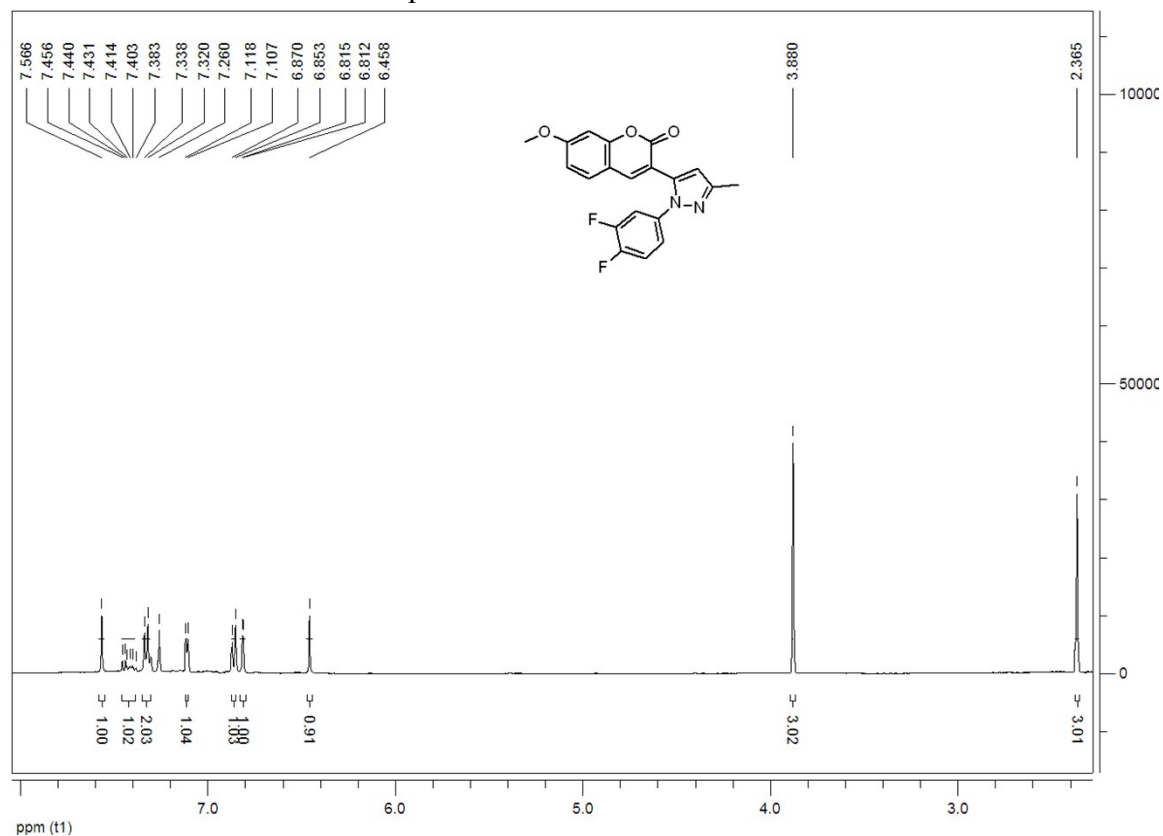
^1H NMR and ^{13}C NMR of compound **4j**



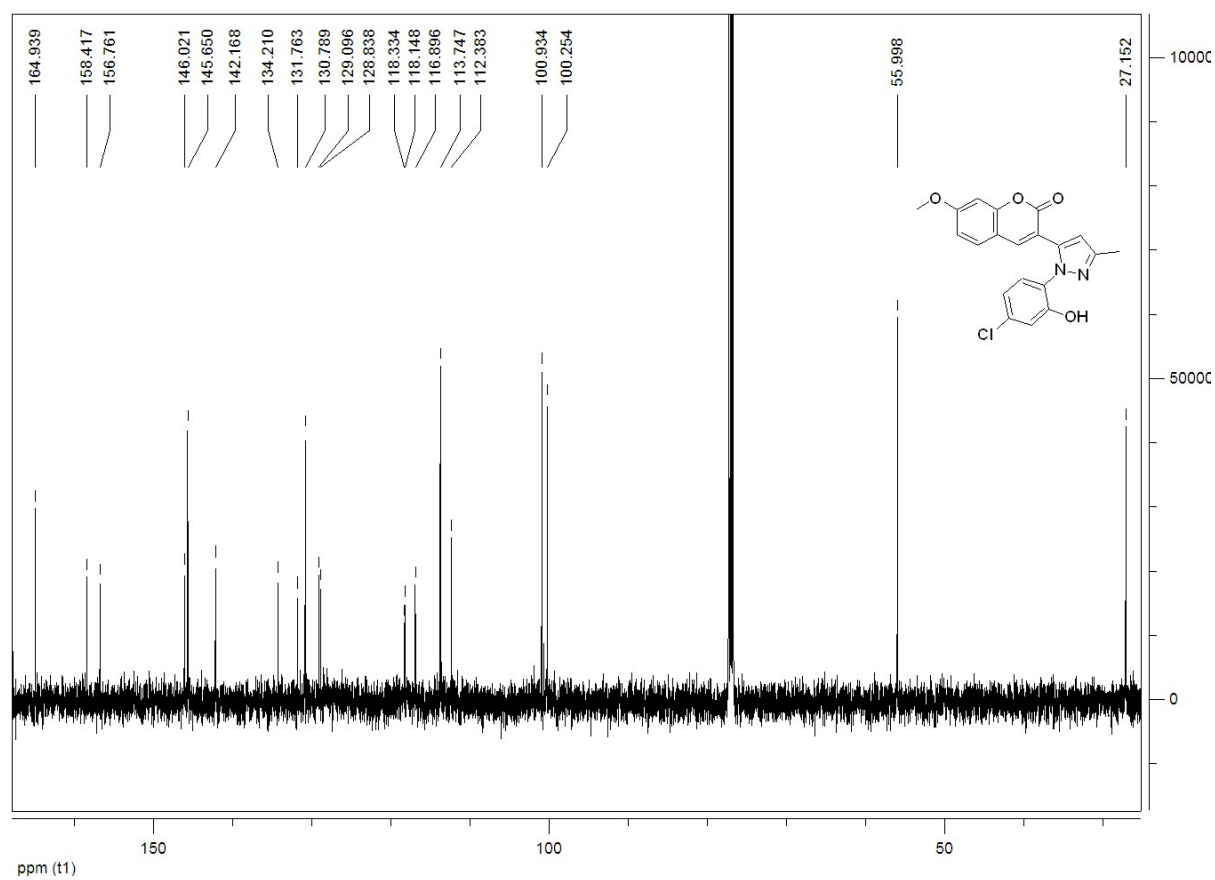
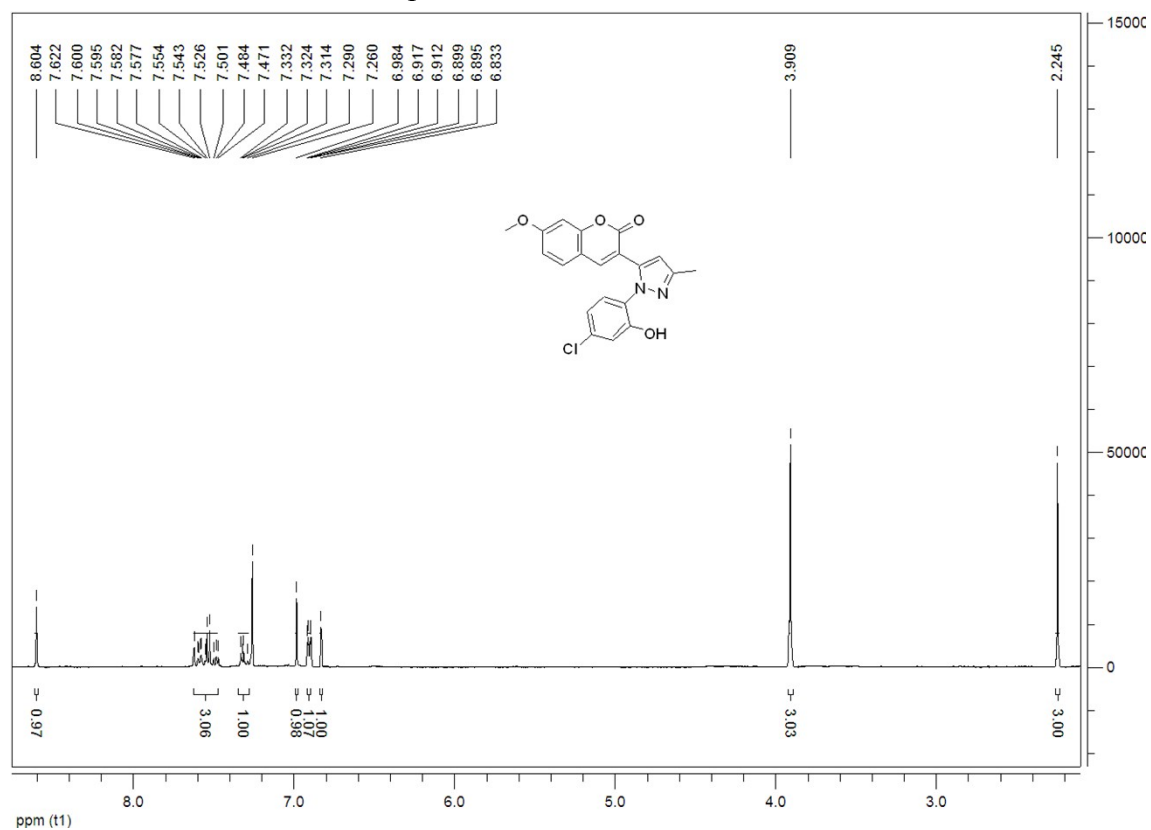
¹H NMR and ¹³C NMR of compound 4k



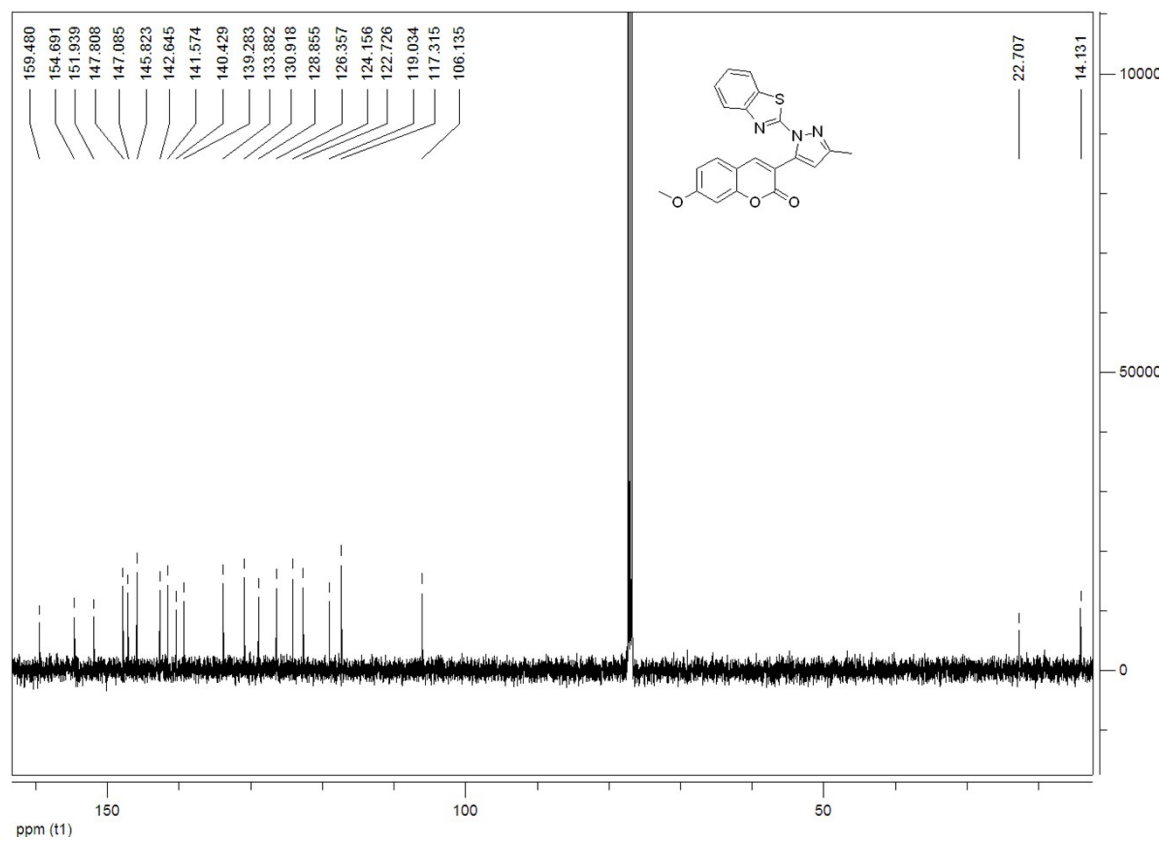
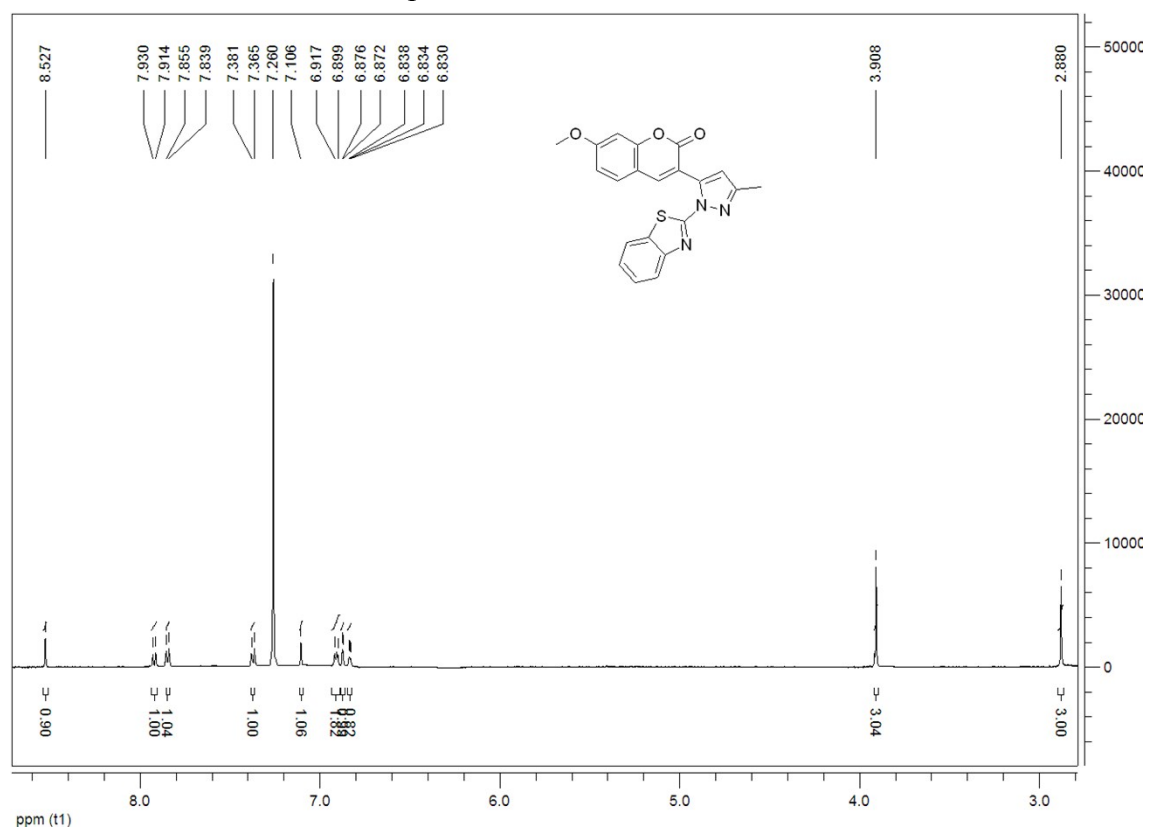
^1H NMR and ^{13}C NMR of compound 41



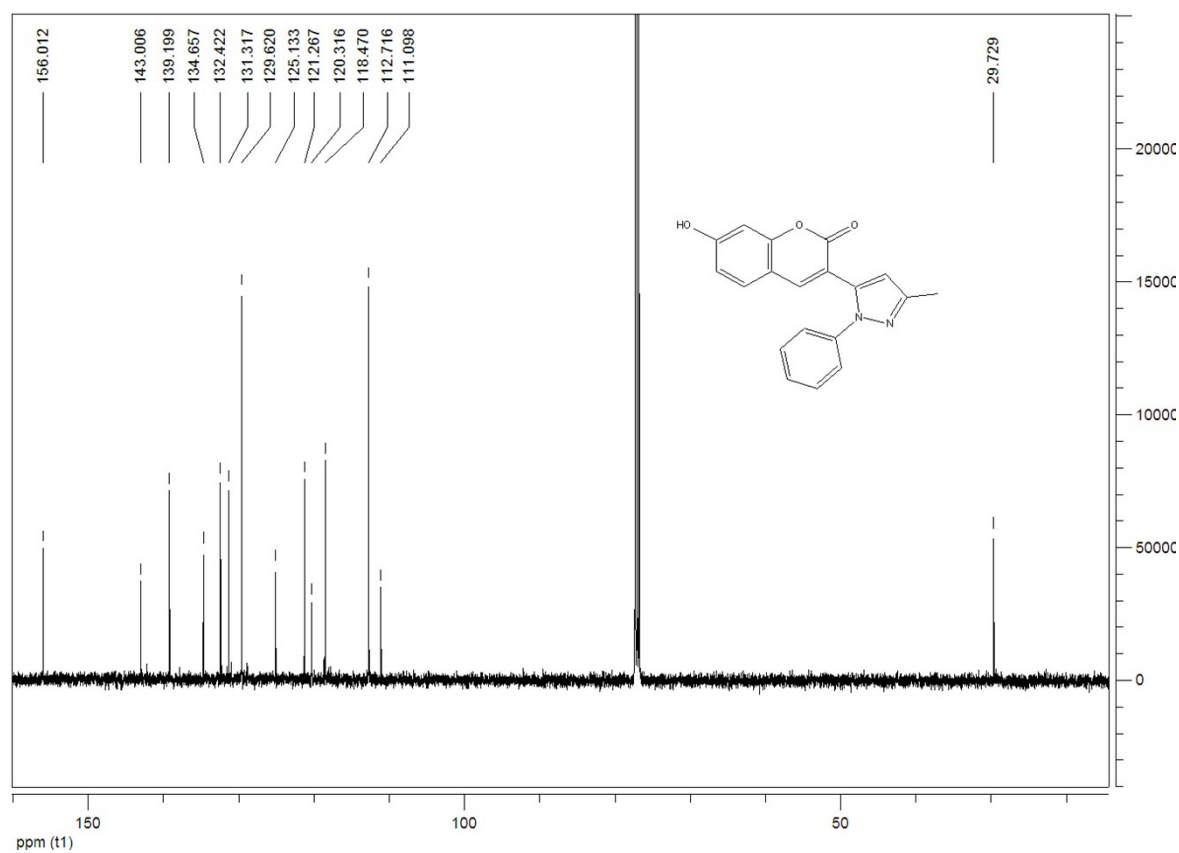
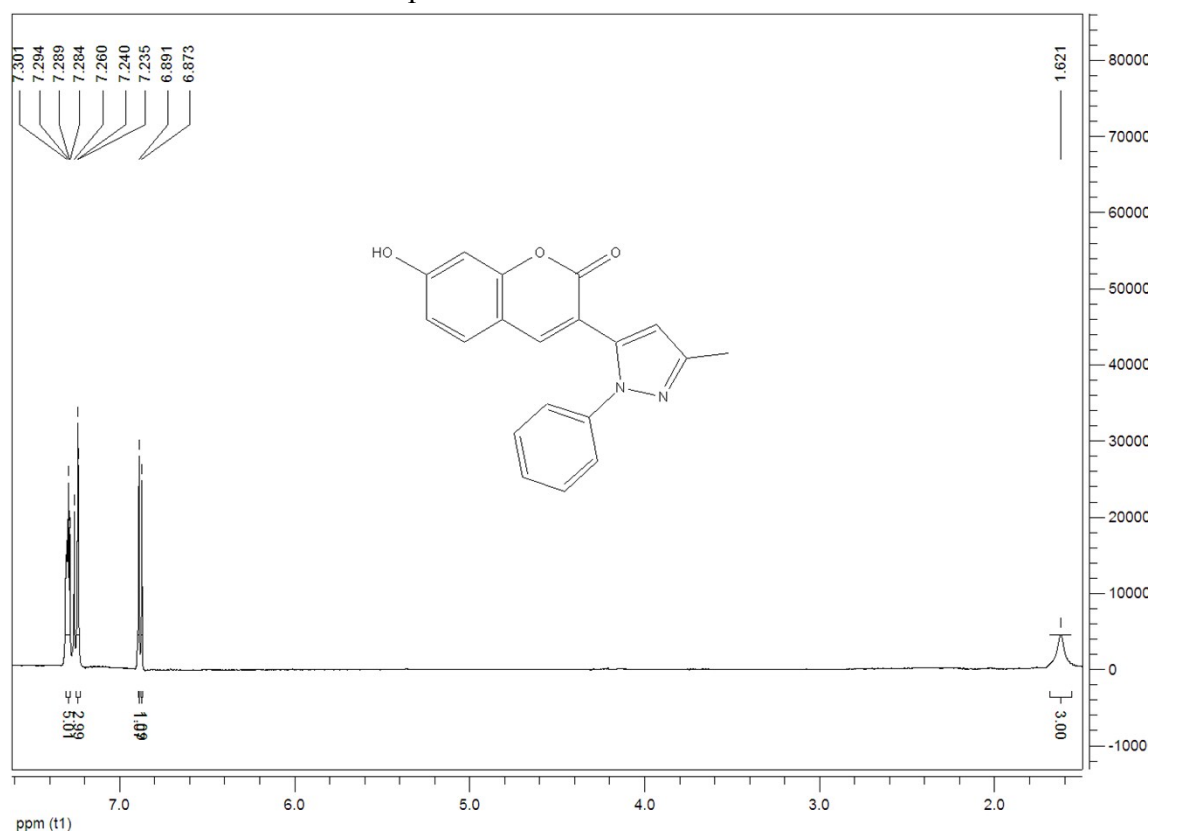
^1H NMR and ^{13}C NMR of compound **4m**



^1H NMR and ^{13}C NMR of compound 4n



¹H NMR and ¹³C NMR of compound **4o**

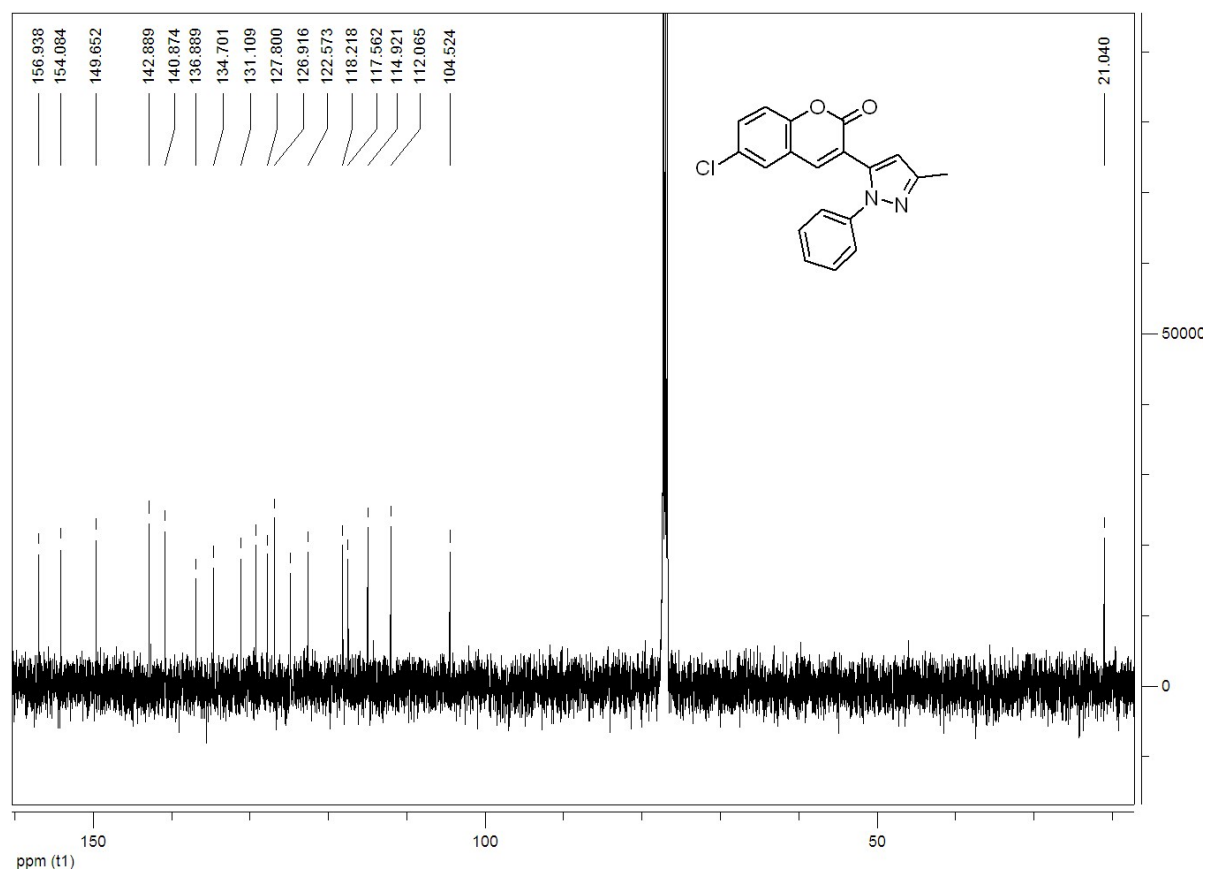
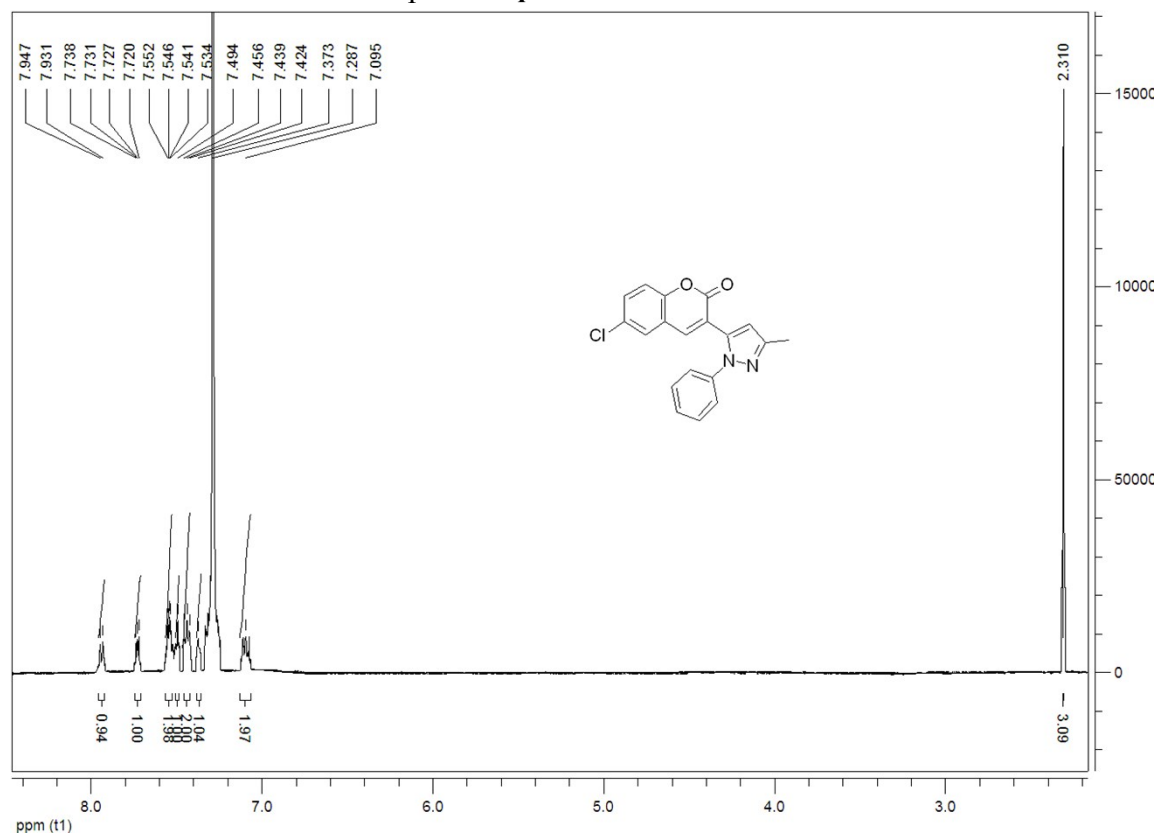


Chemical structure of compound 10: Cc1nc(NC2=CC=CC=C2)c3cc(=O)c4ccc(cc4O3)C(=O)c5ccc(cc5)[N+](=O)[O-]

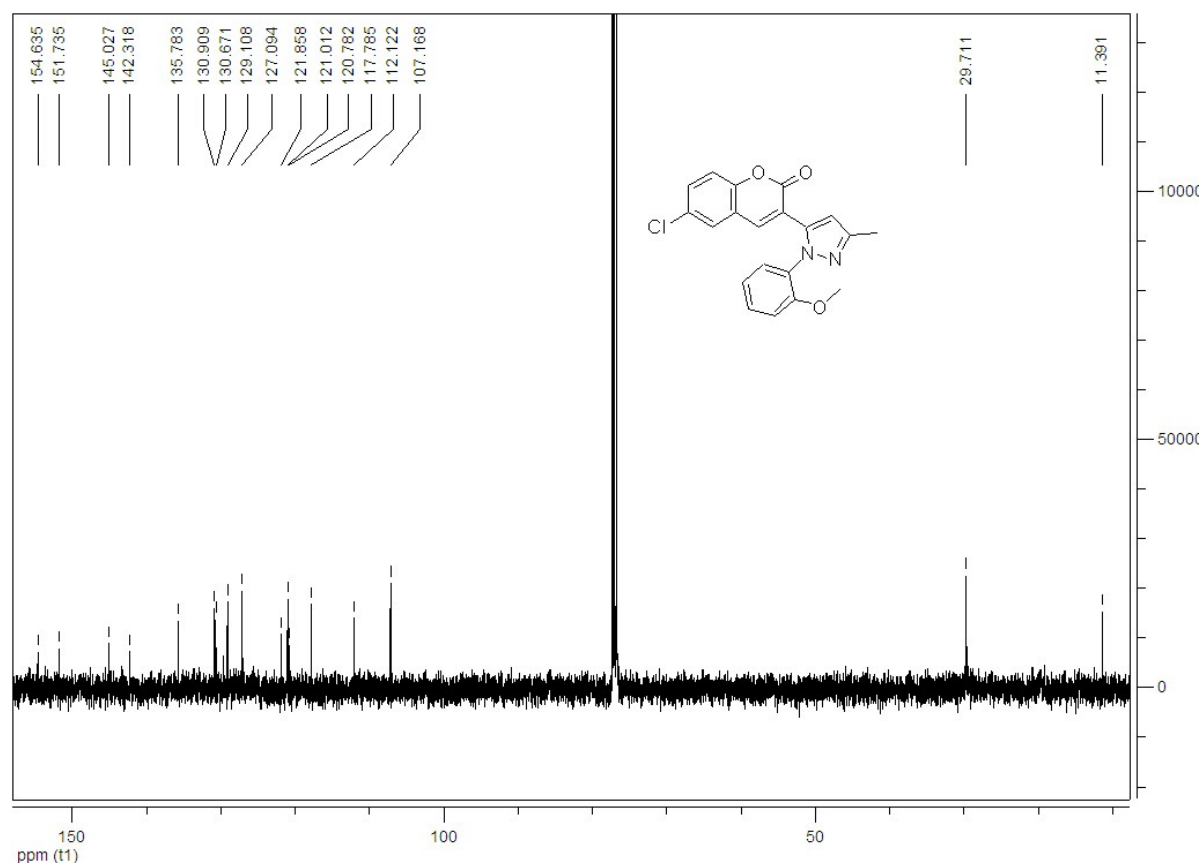
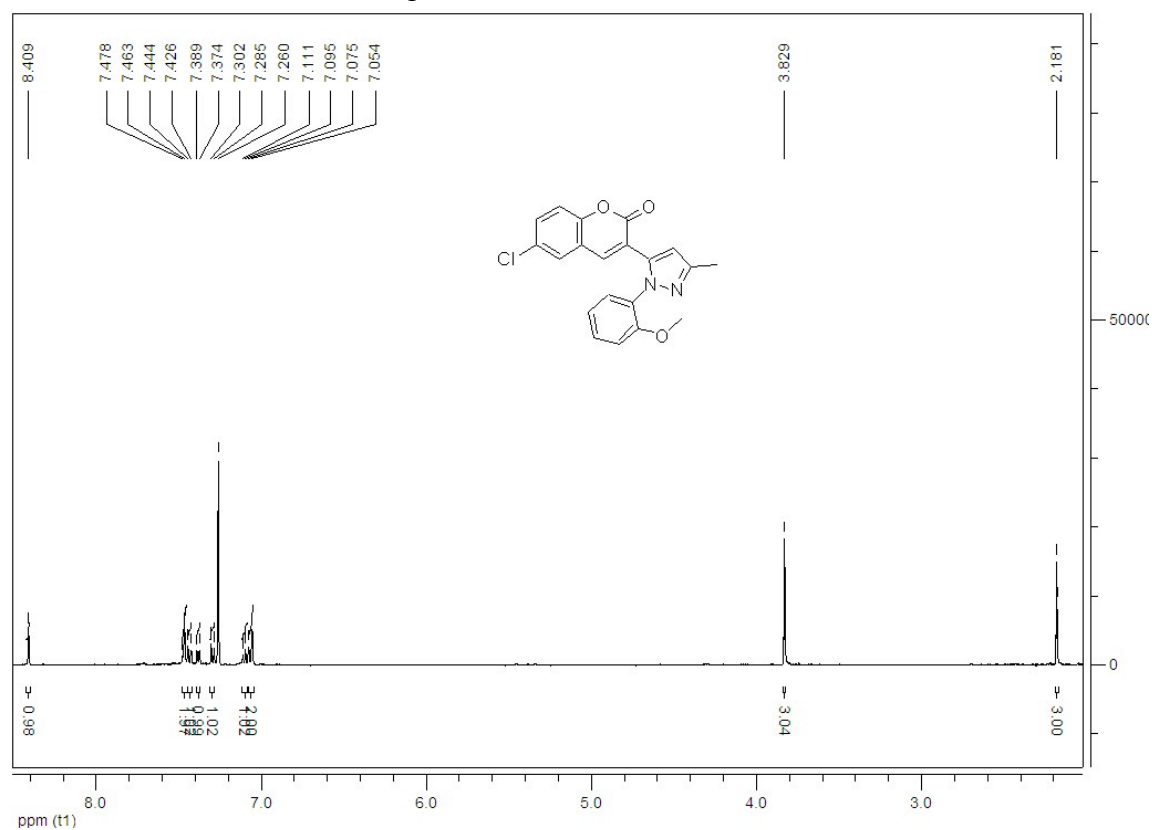
¹H NMR spectrum (CDCl₃) of compound 10. The spectrum shows peaks from 2.384 to 7.383 ppm. The chemical structure of compound 10 is shown as an inset. The peaks are assigned as follows: aromatic protons (7.383, 7.375, 7.375, 7.365, 7.336, 7.327, 7.319, 7.308, 7.299, 7.290, 7.281, 7.260, 7.251, 7.245, 7.234, 7.229, 7.216, 7.211, 6.997, 6.991, 6.982, 6.976, 6.621 ppm), methoxy protons (3.90 ppm, integration 3.00), and methyl protons (2.384 ppm, integration 0.96). The x-axis is labeled 'ppm (t1)' and the y-axis is labeled 'Intensity'.



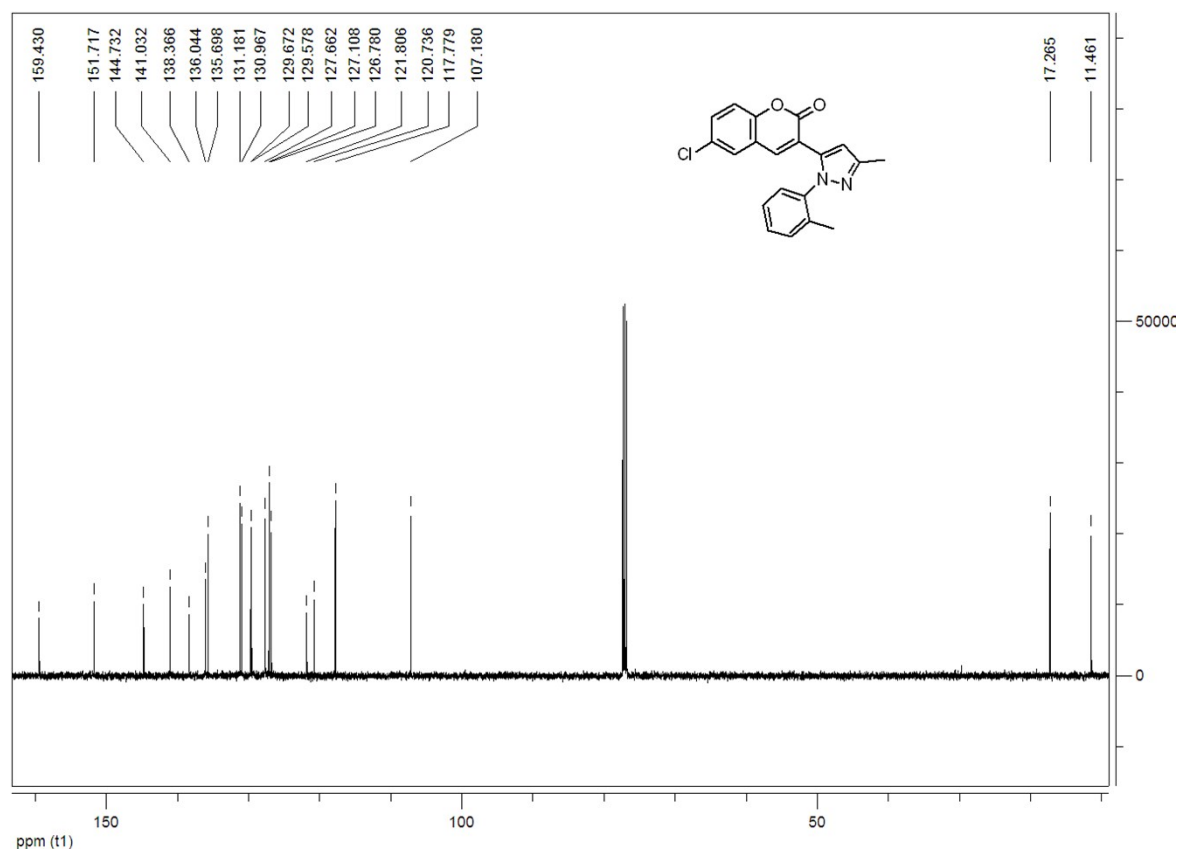
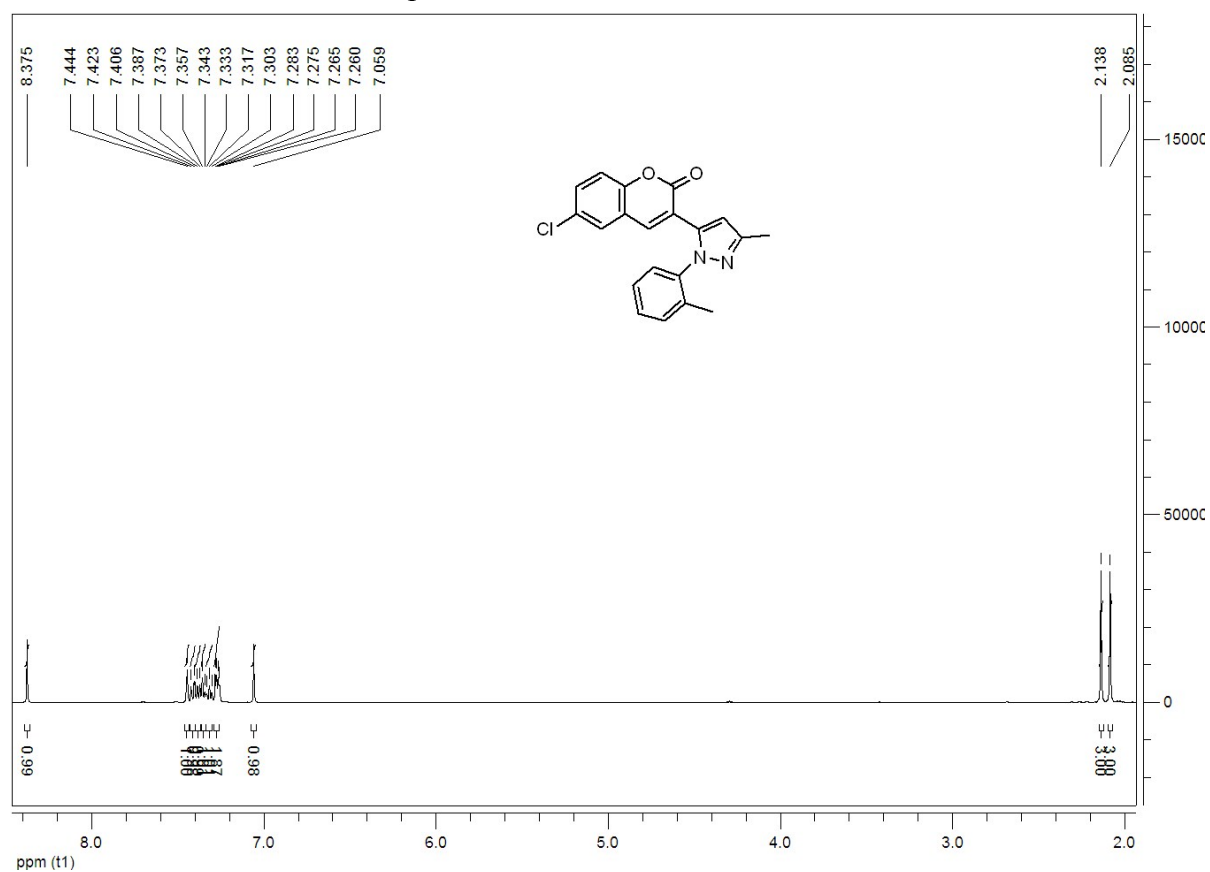
^1H NMR and ^{13}C NMR of compound **4q**



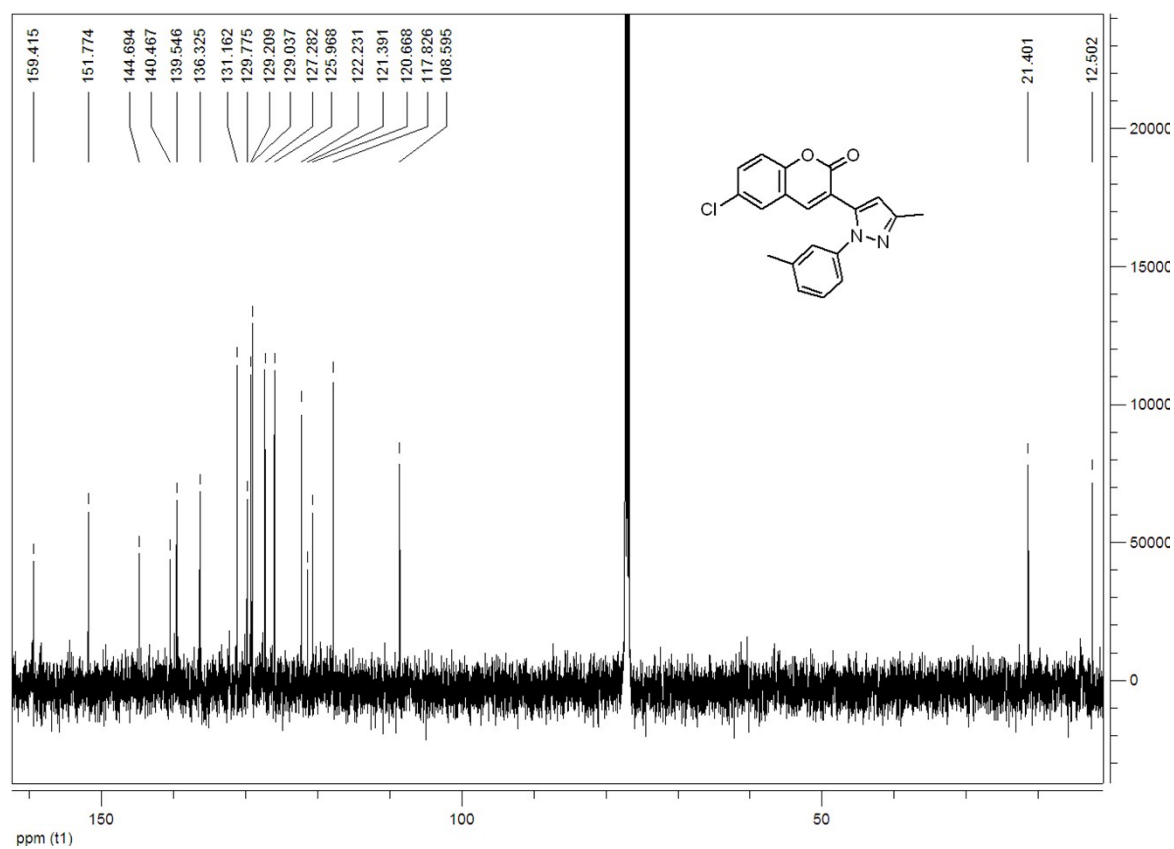
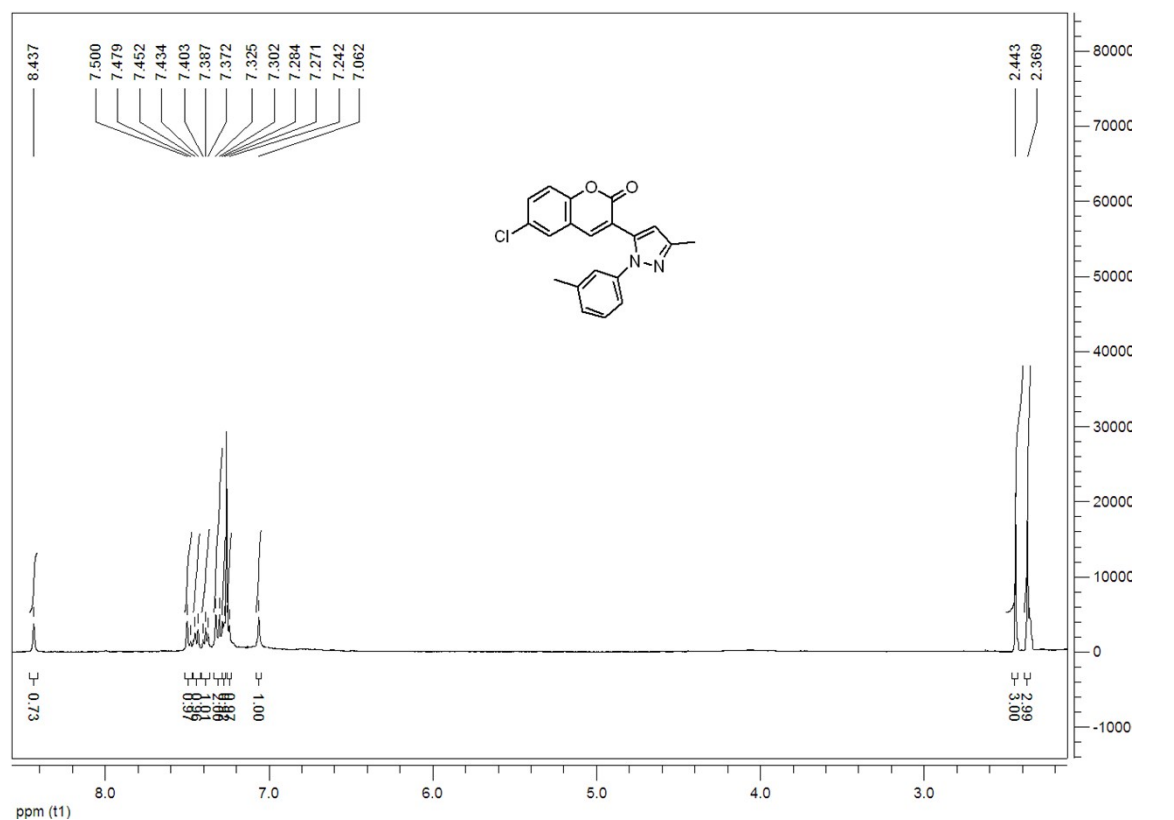
^1H NMR and ^{13}C NMR of compound 4r



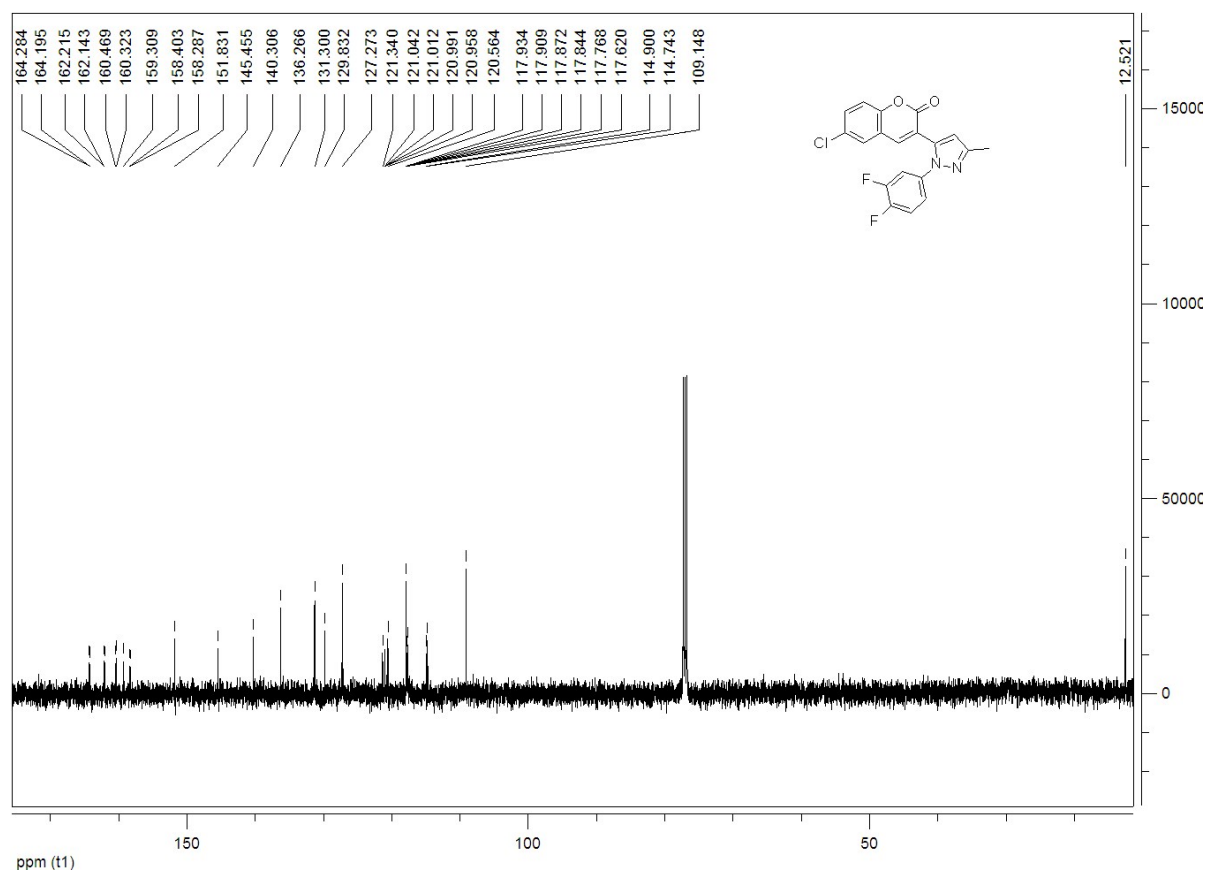
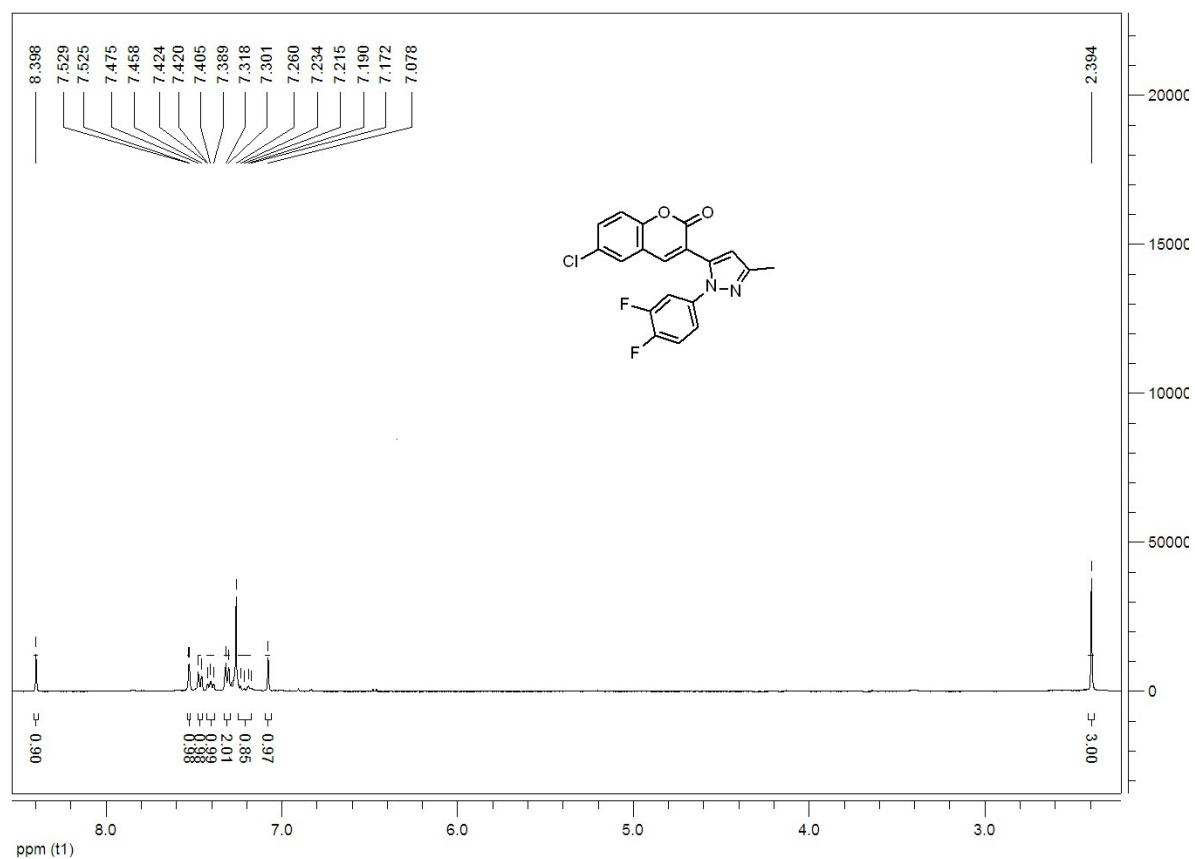
¹H NMR and ¹³C NMR of compound 4s



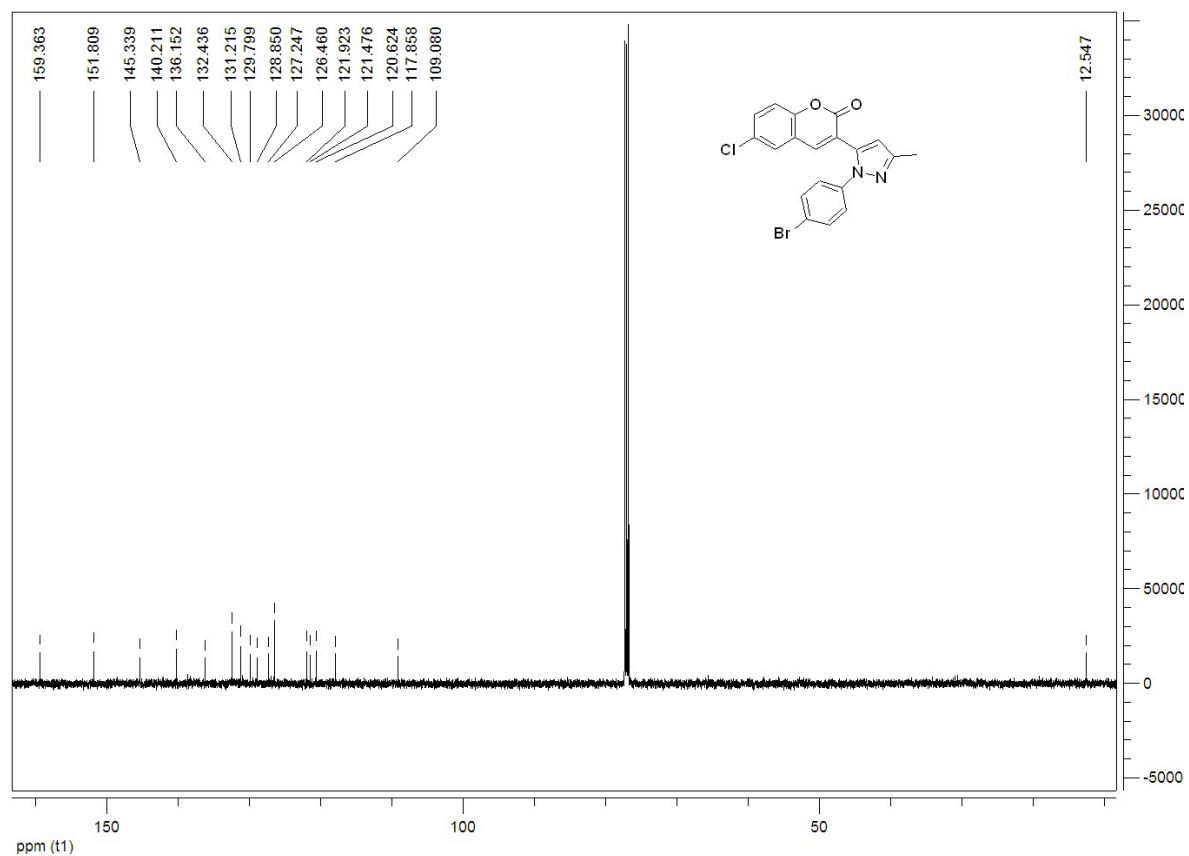
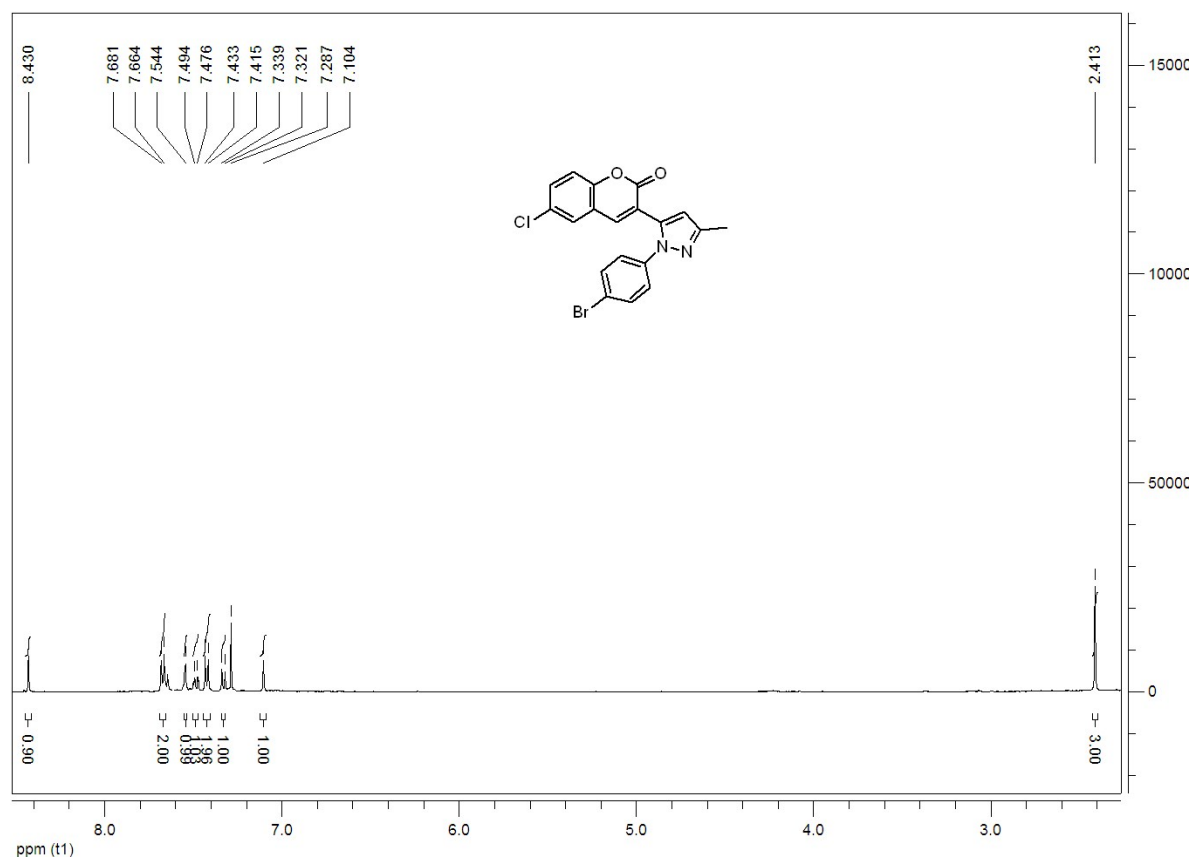
^1H NMR and ^{13}C NMR of compound 4t



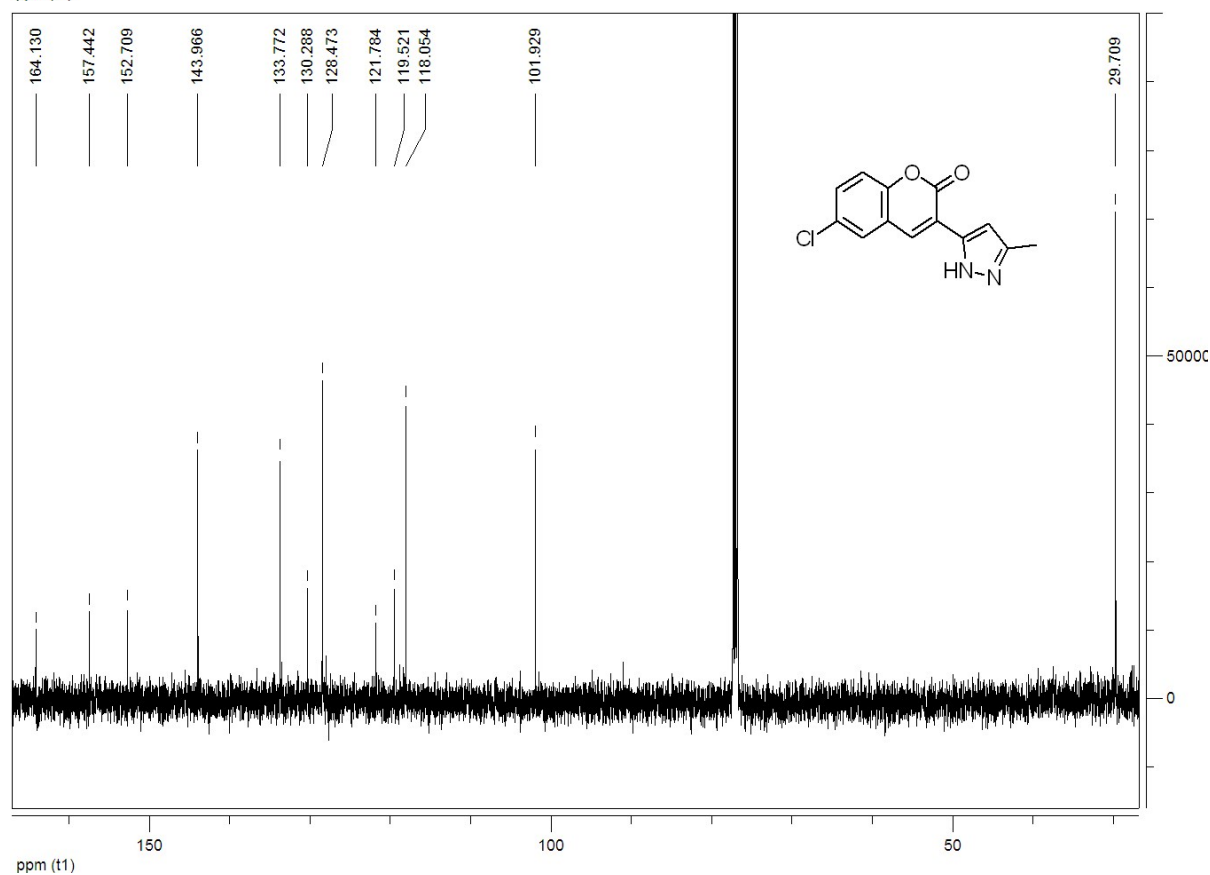
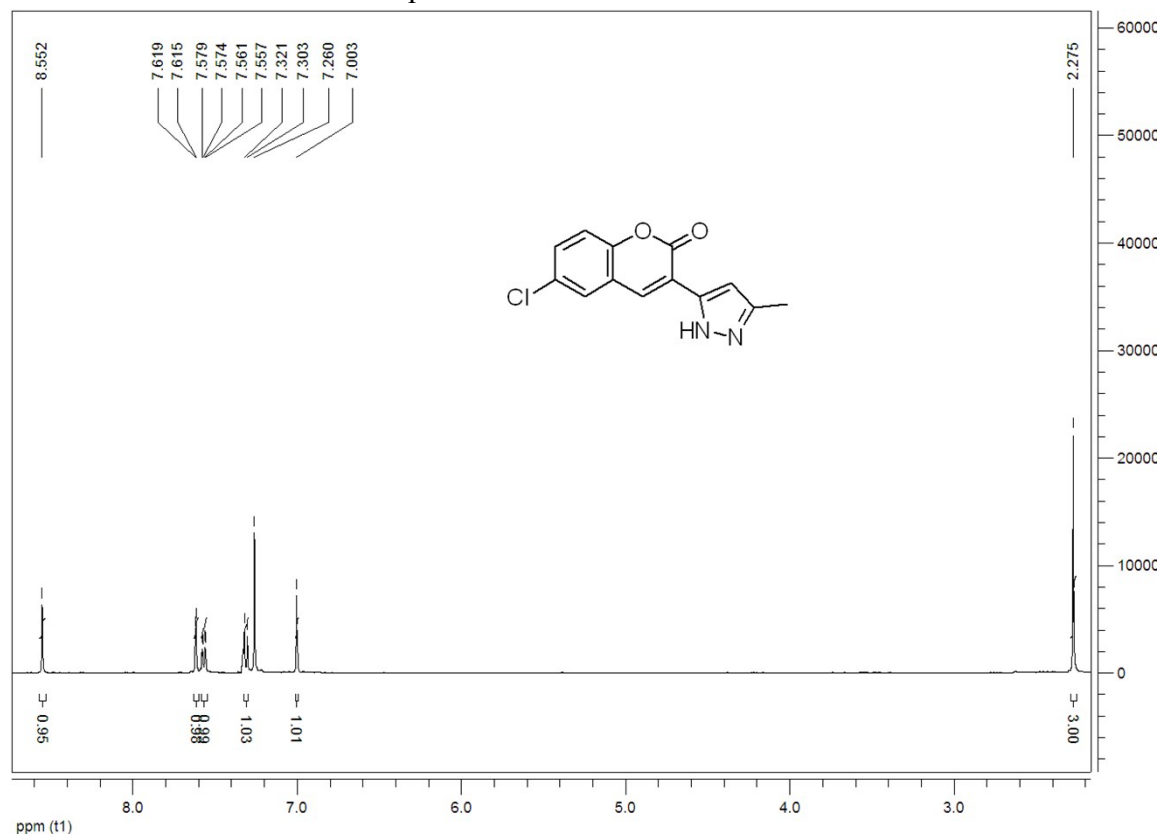
^1H NMR and ^{13}C NMR of compound **4u**



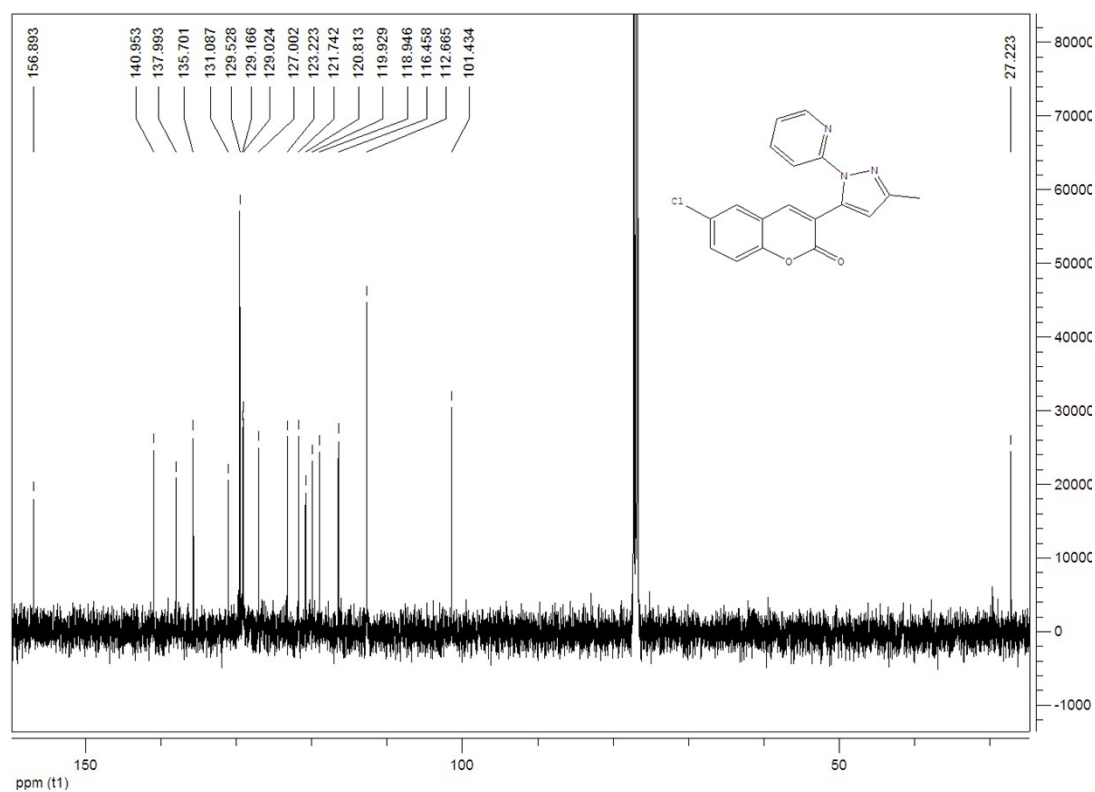
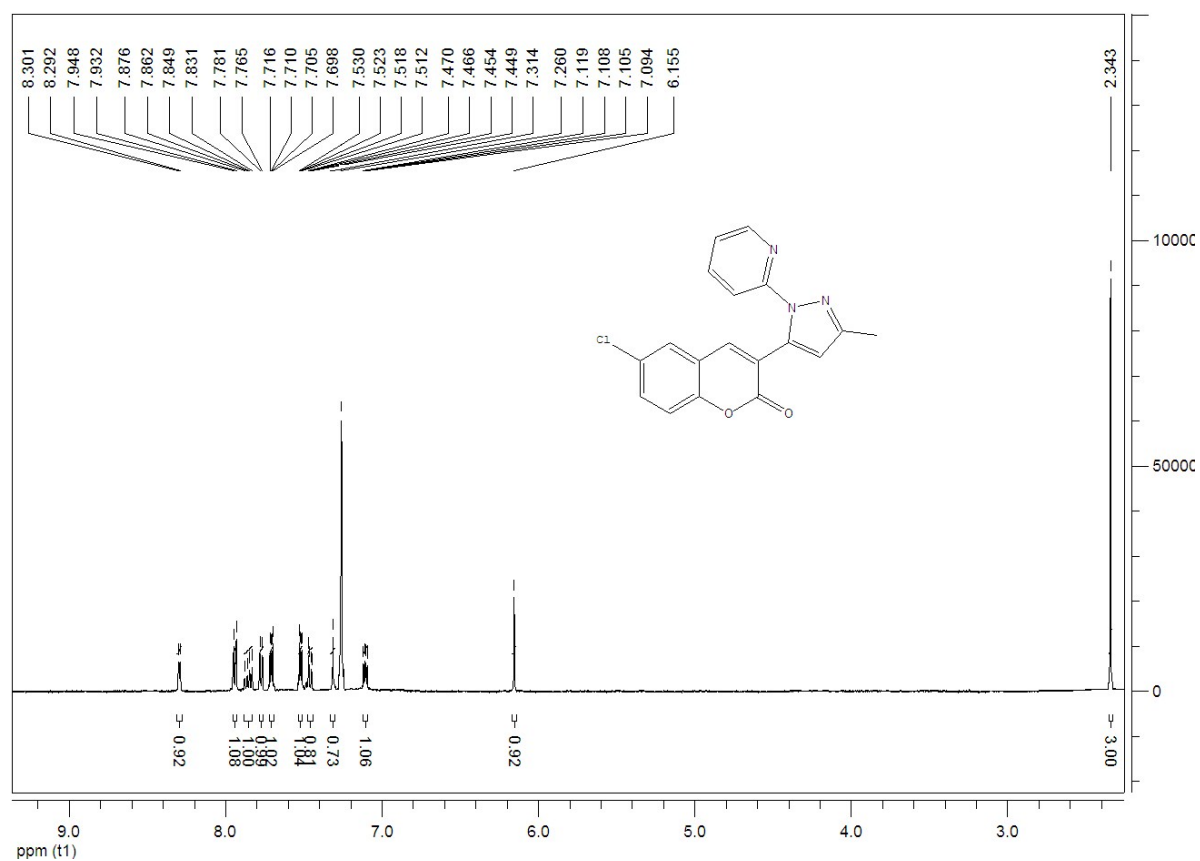
^1H NMR and ^{13}C NMR of compound 4v



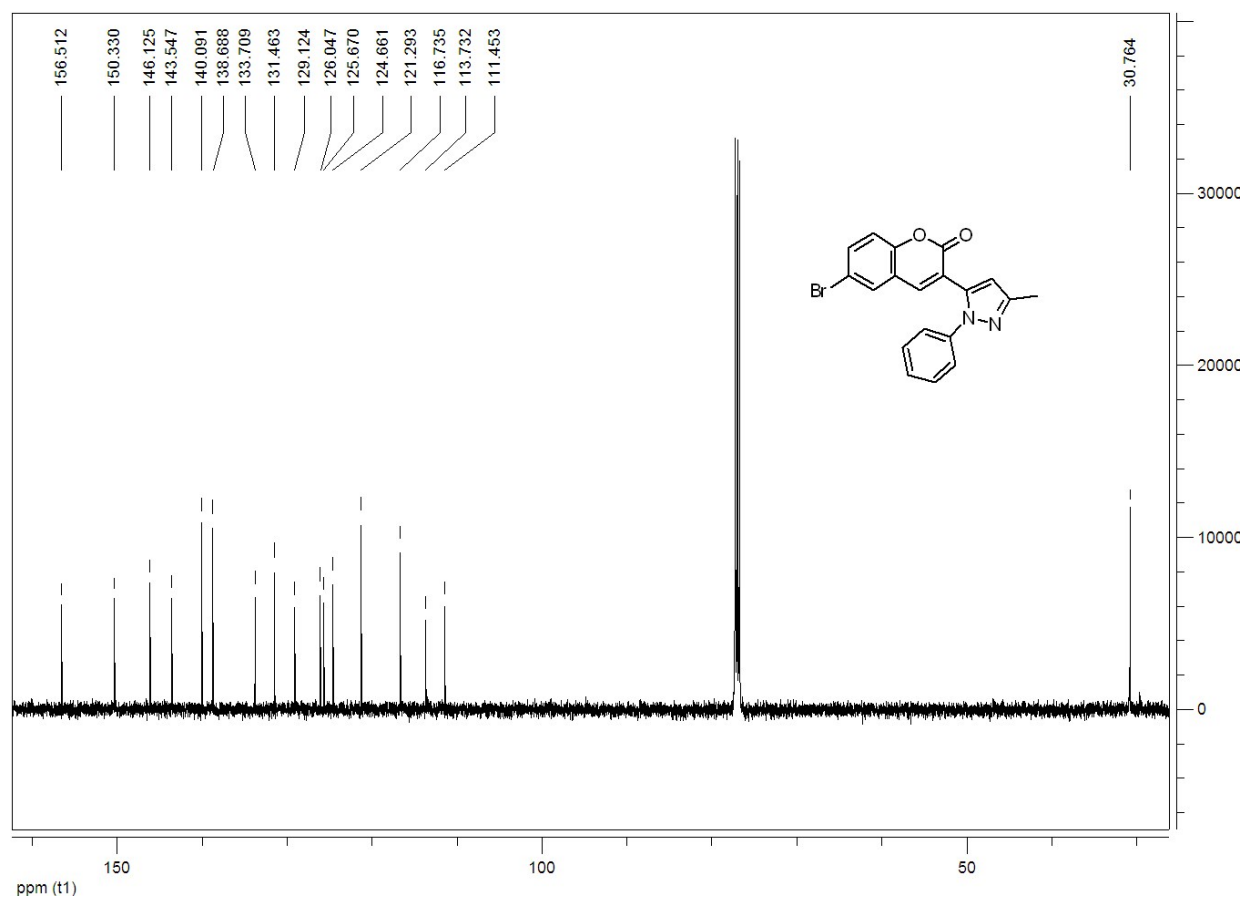
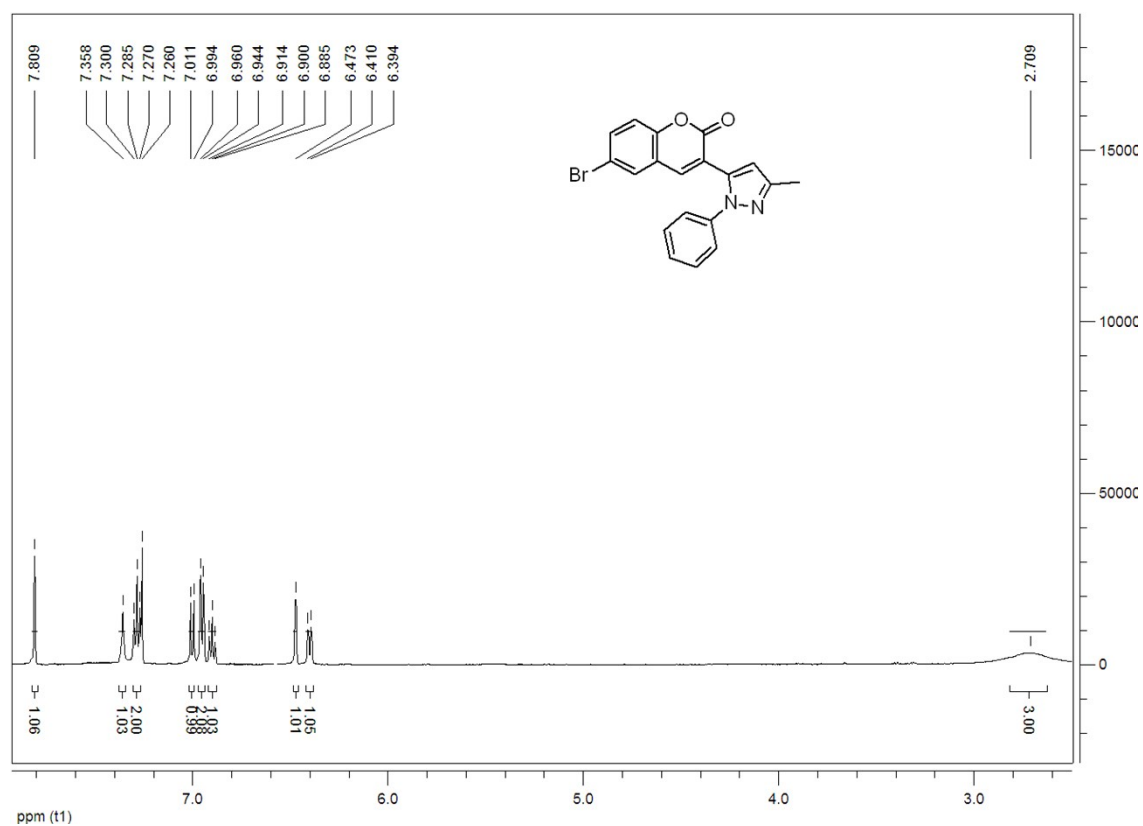
^1H NMR and ^{13}C NMR of compound **4w**



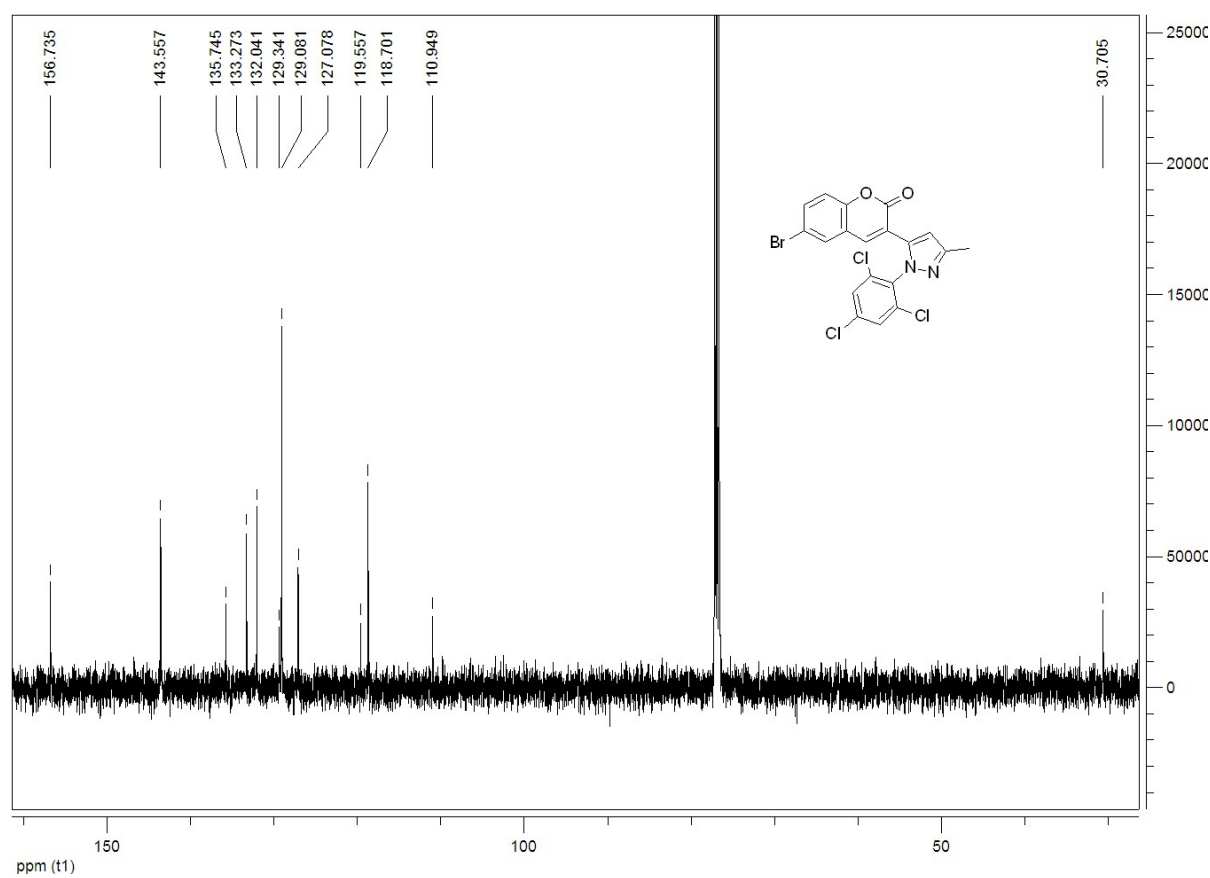
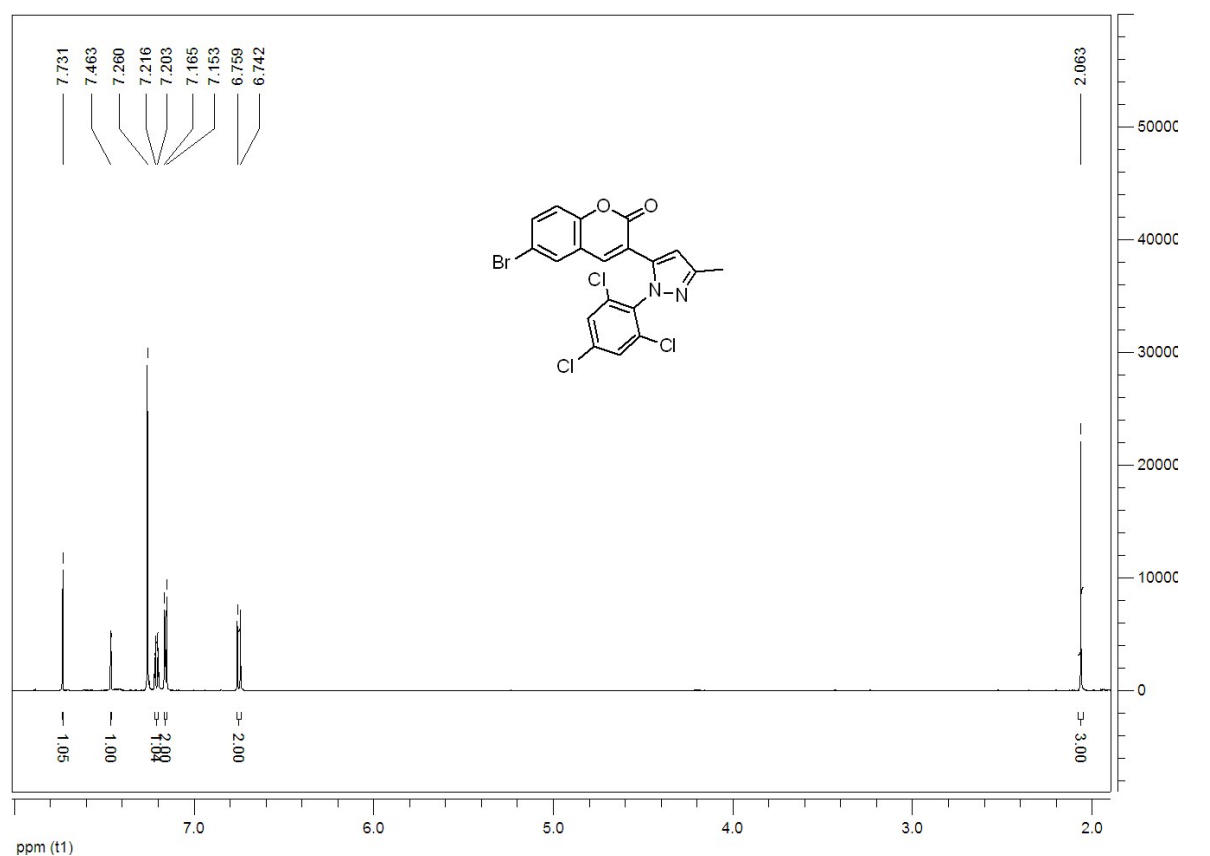
^1H NMR and ^{13}C NMR of compound 4x



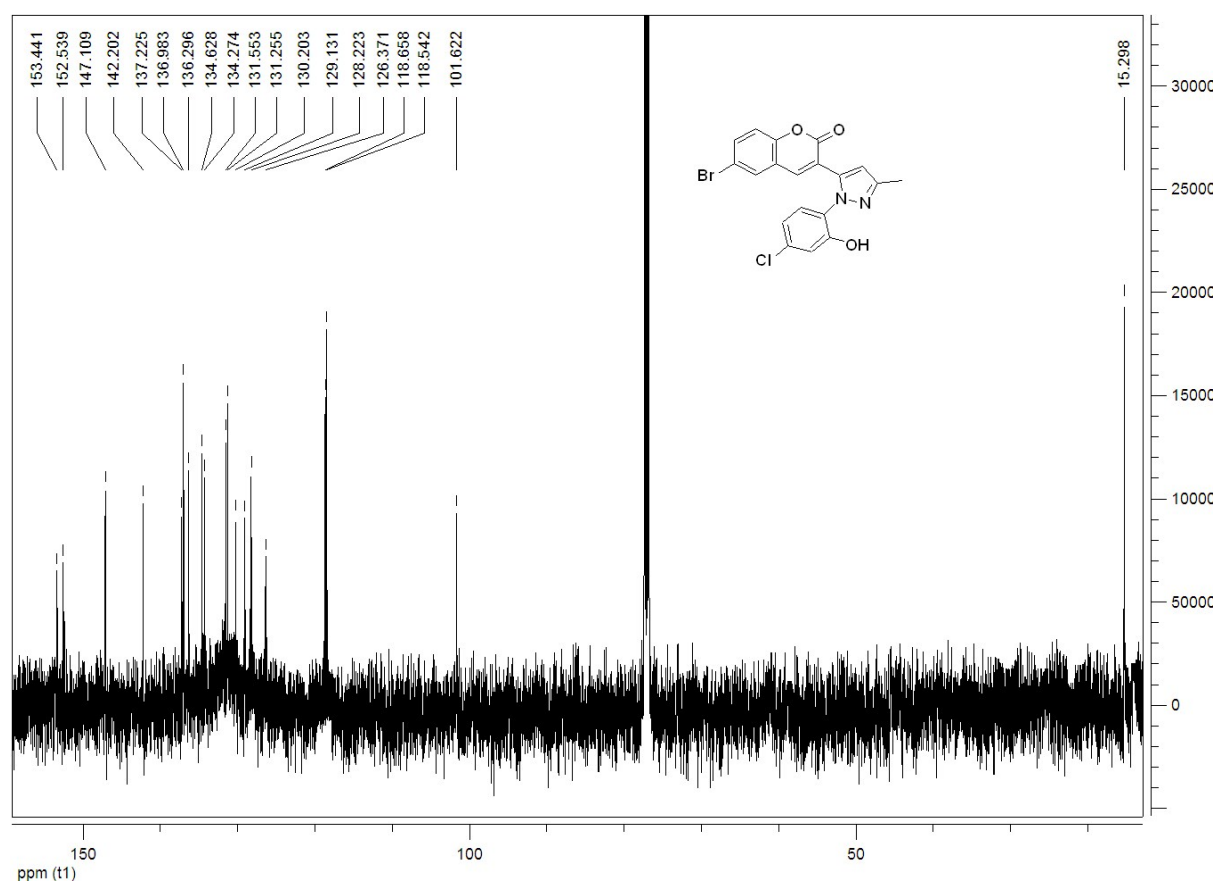
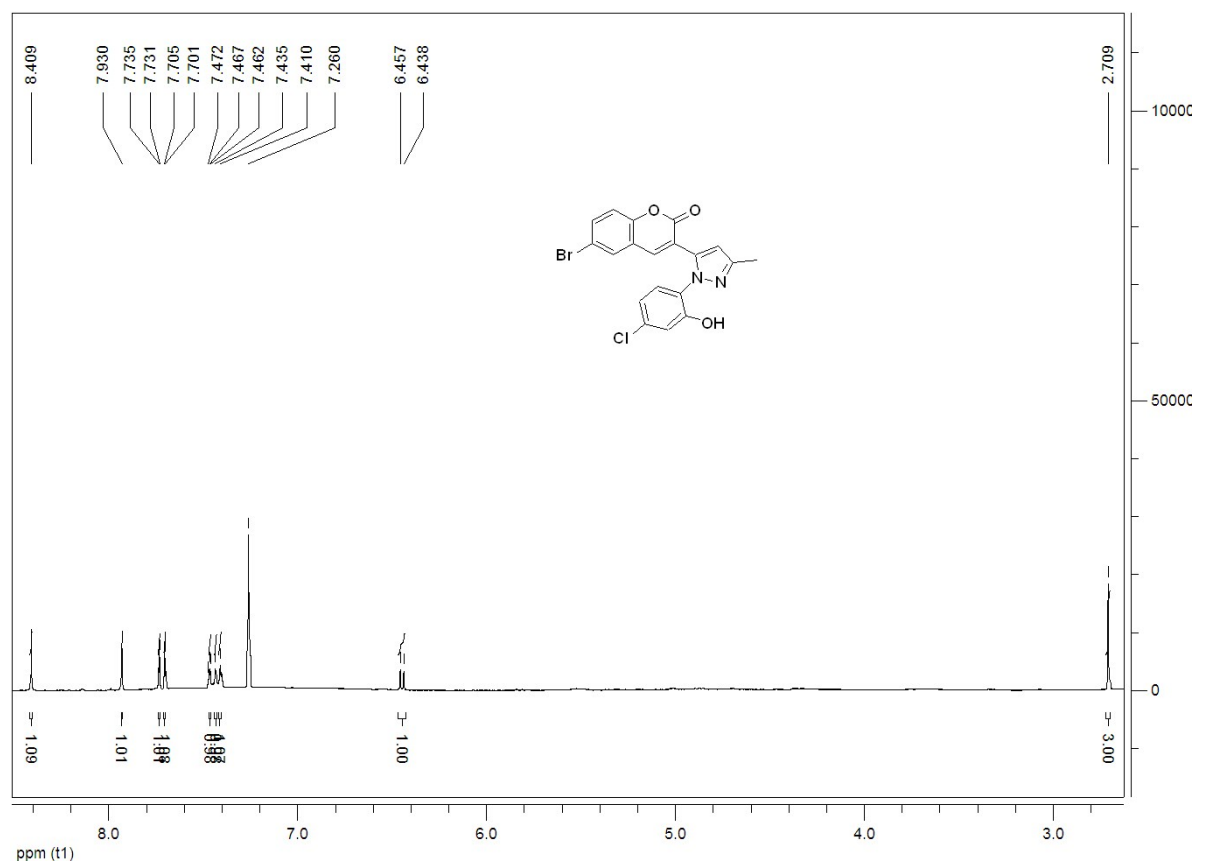
^1H NMR and ^{13}C NMR of compound 4y



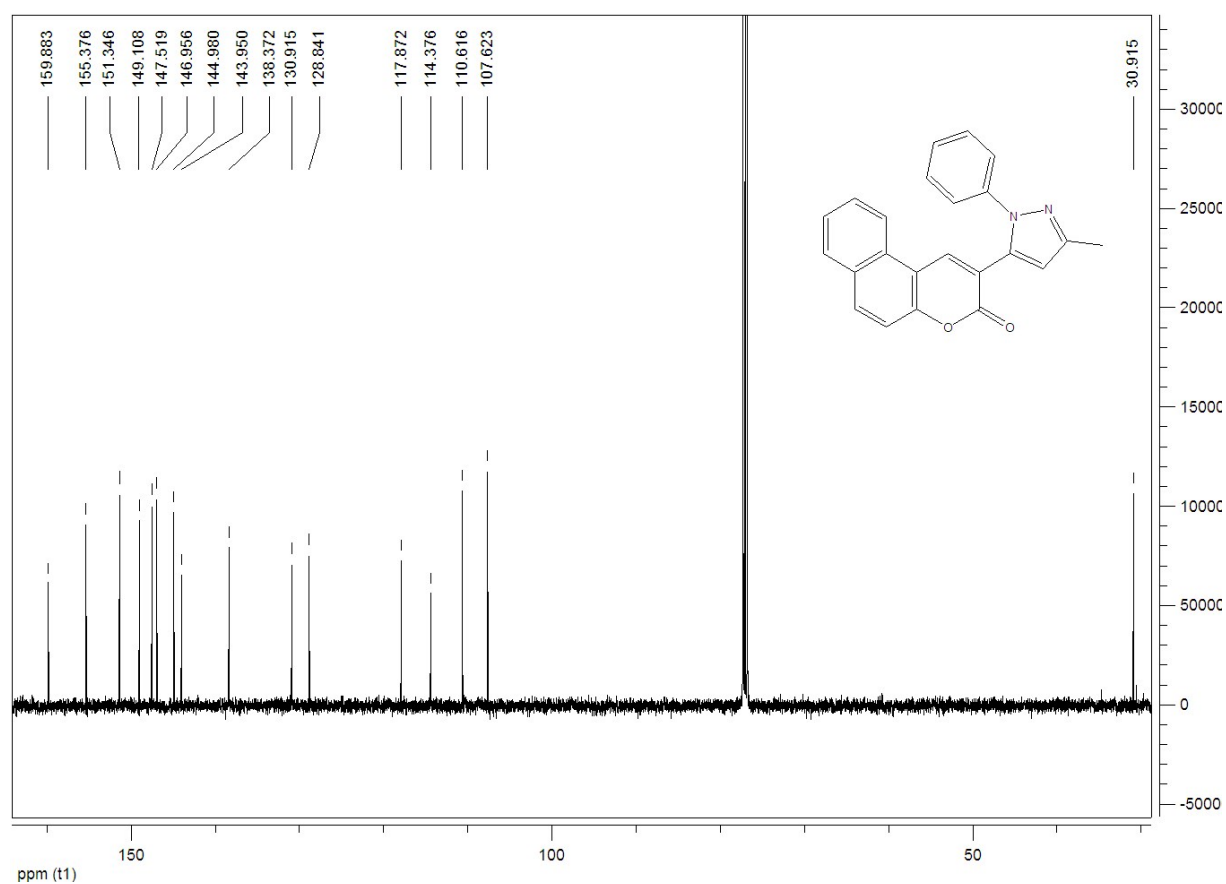
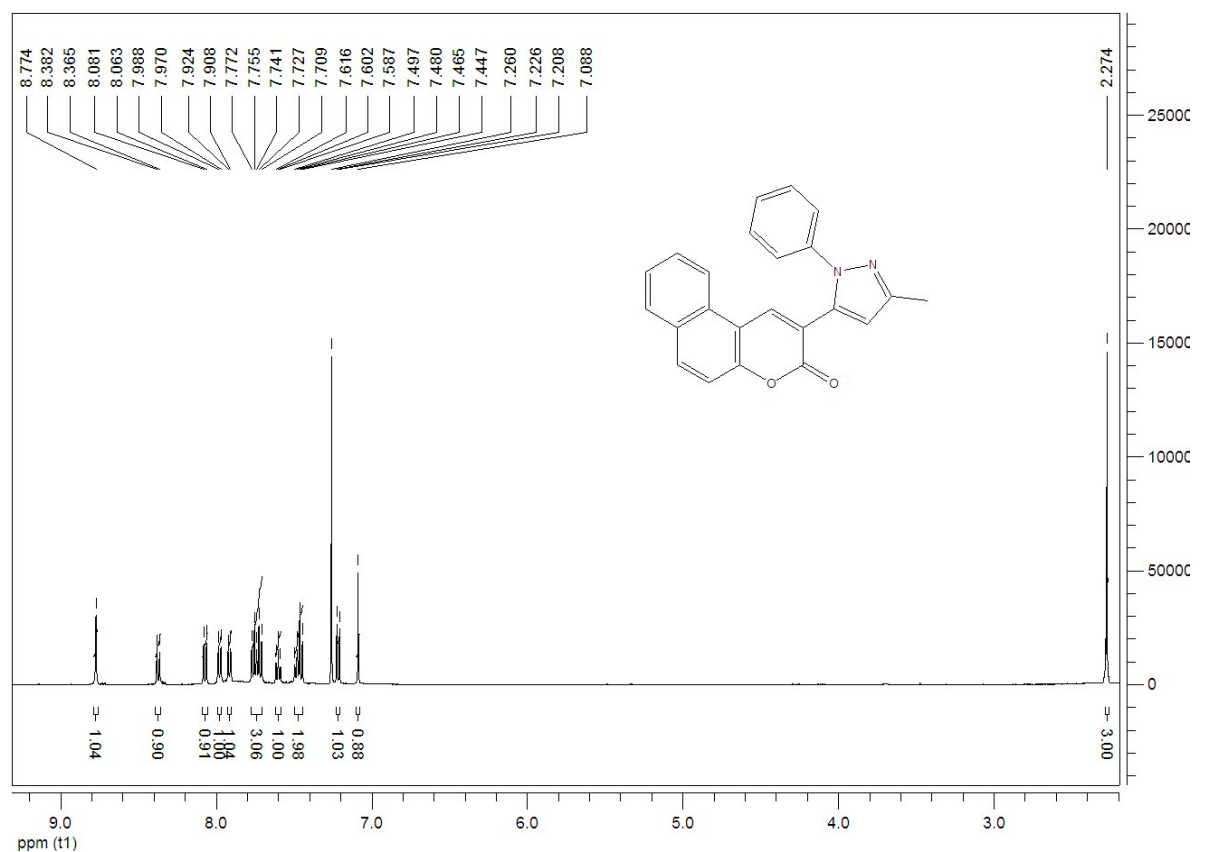
^1H NMR and ^{13}C NMR of compound **4z**



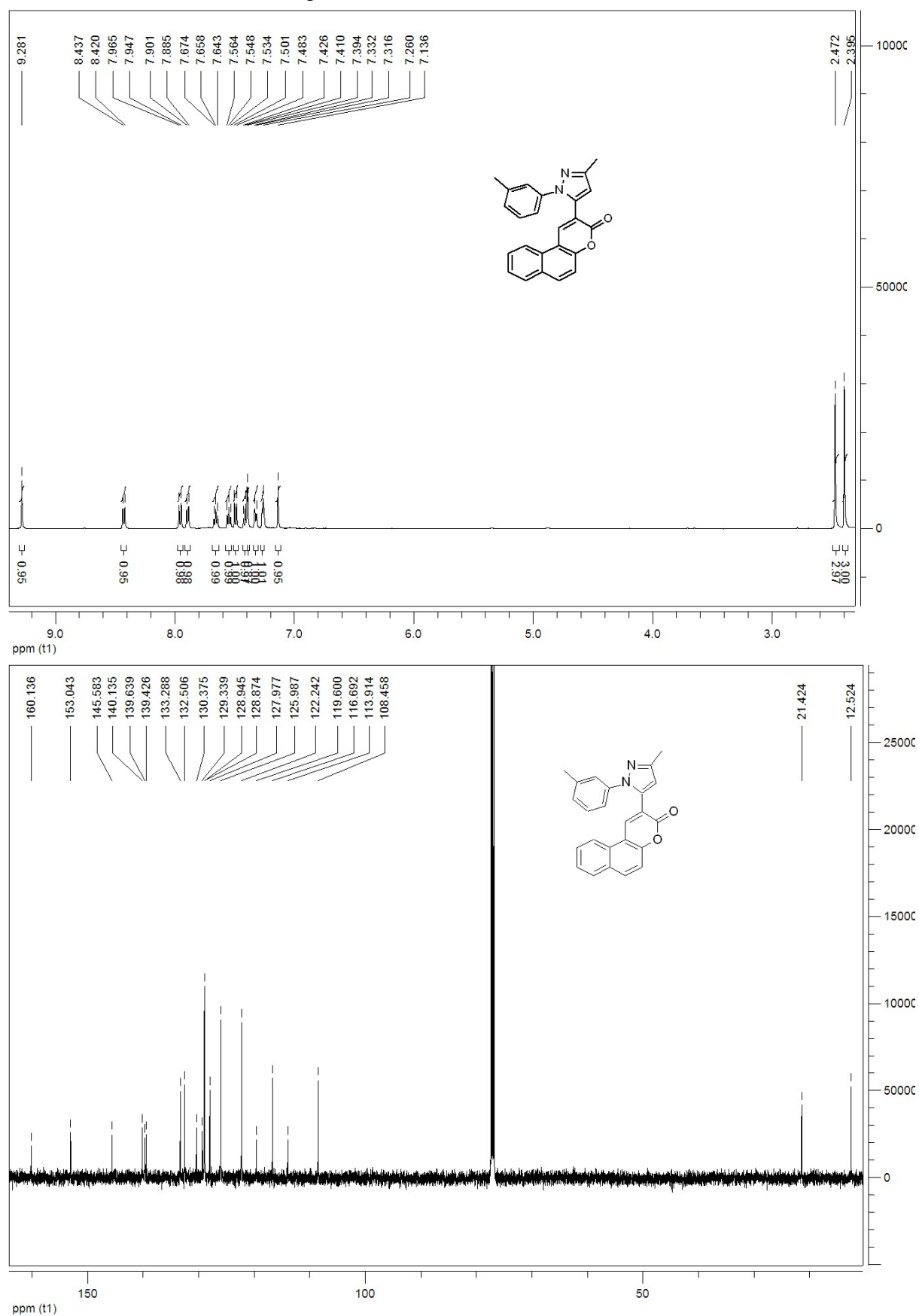
^1H NMR and ^{13}C NMR of compound **4aa**



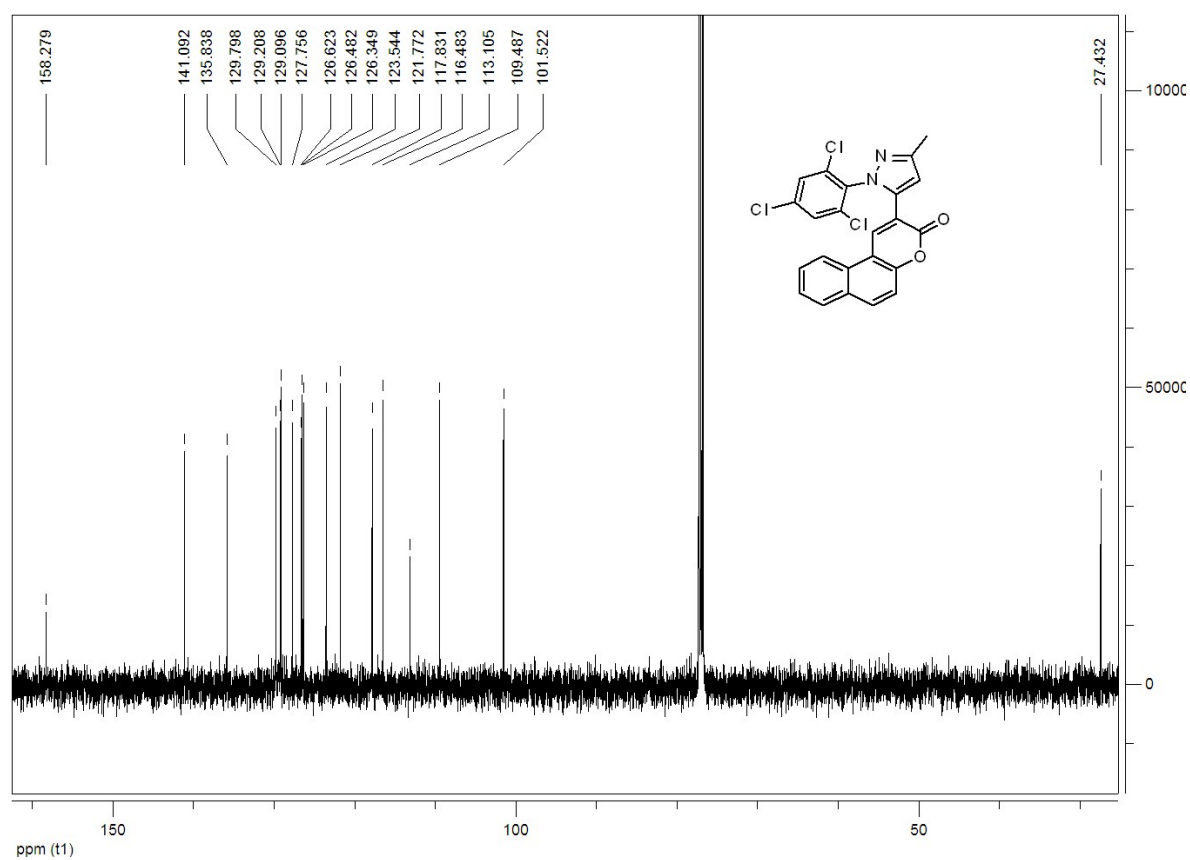
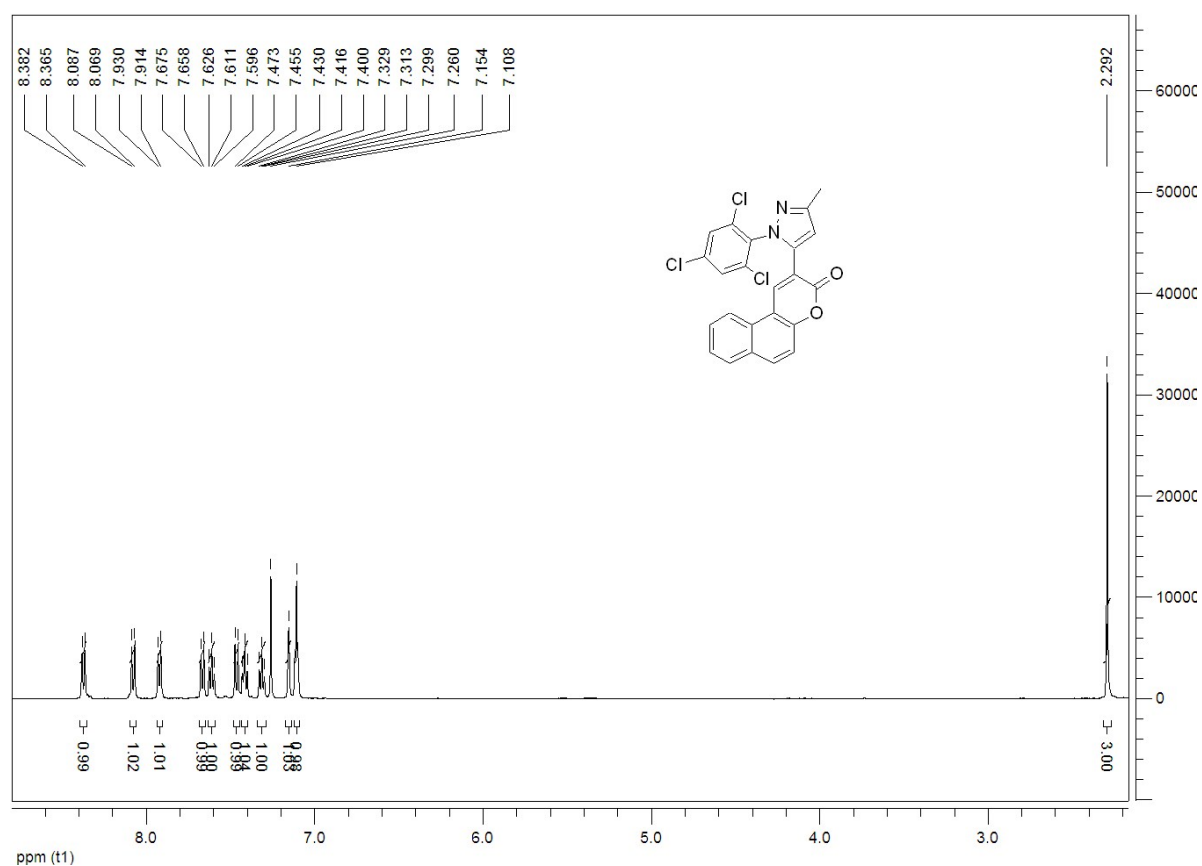
¹H NMR and ¹³C NMR of compound **4ab**



^1H NMR and ^{13}C NMR of compound **4ac**



¹H NMR and ¹³C NMR of compound **4ad**



^1H NMR and ^{13}C NMR of compound **4ae**

