

**Supporting information**

**EGFR and PI3K /m-TOR inhibitors: Design, microwave assisted synthesis and anticancer activity of thiazole-coumarin hybrids**

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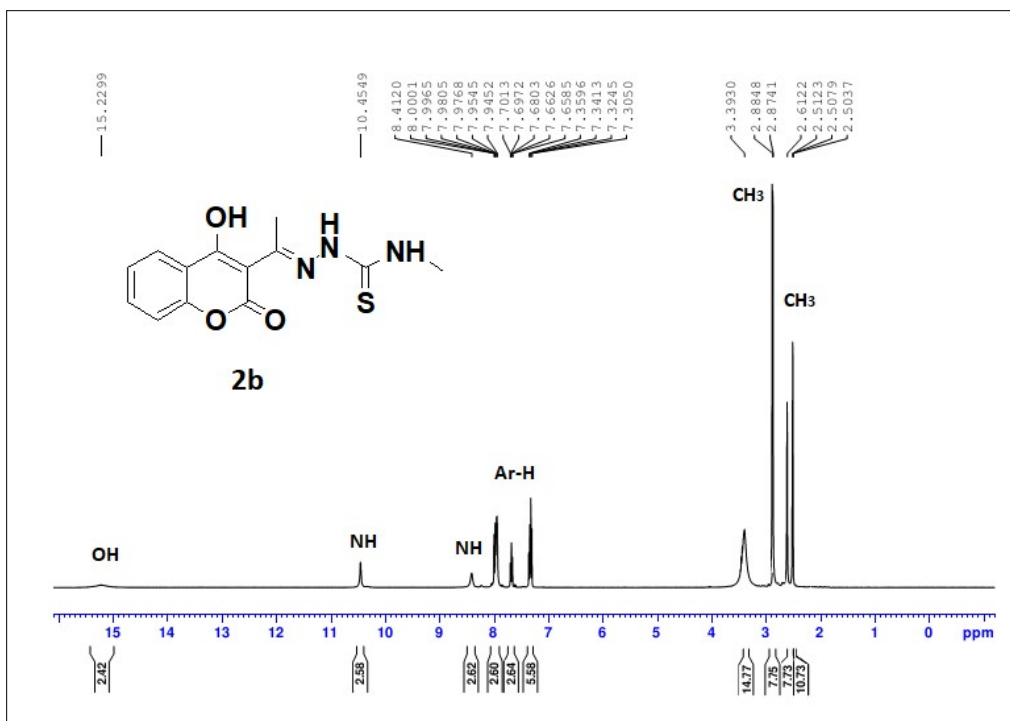
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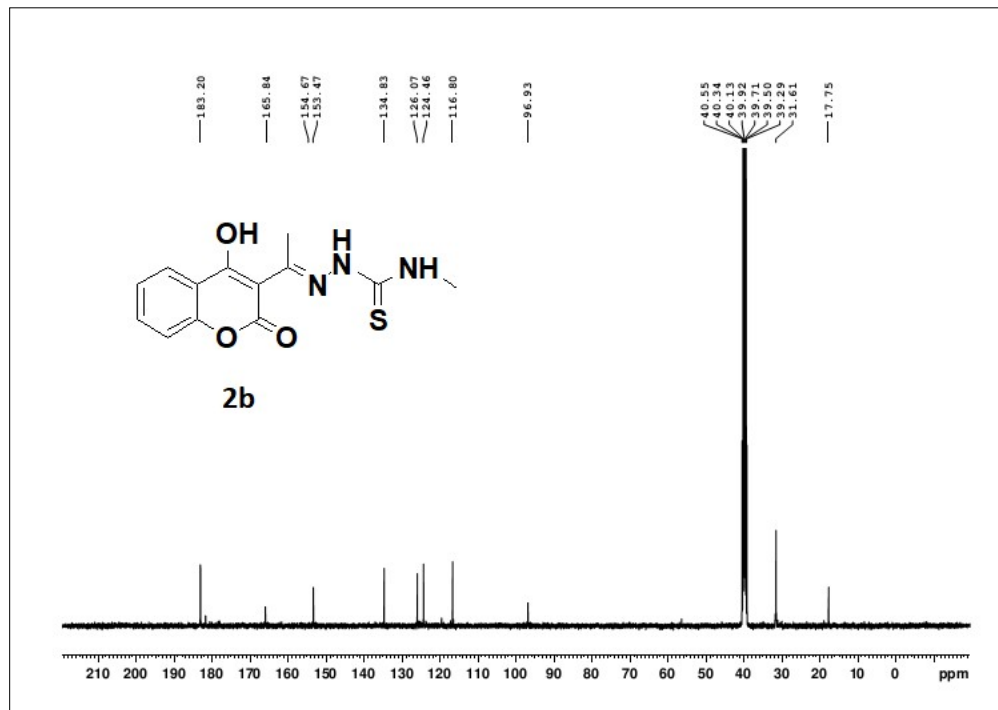
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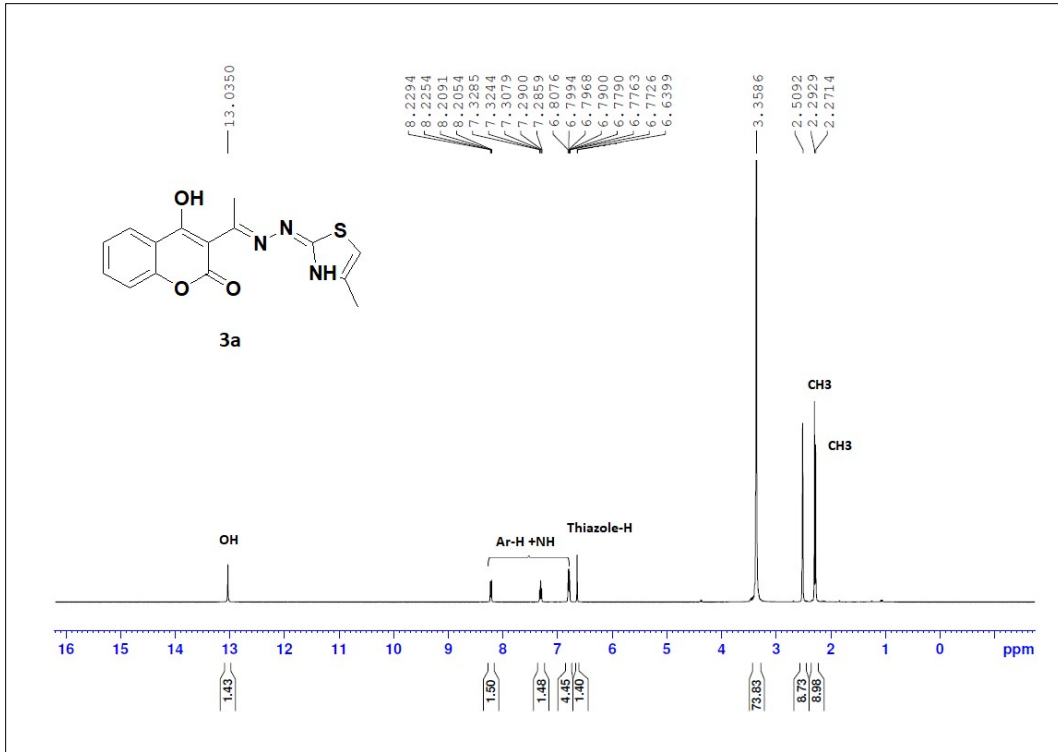
[nehad\\_km@yahoo.com](mailto:nehad_km@yahoo.com)



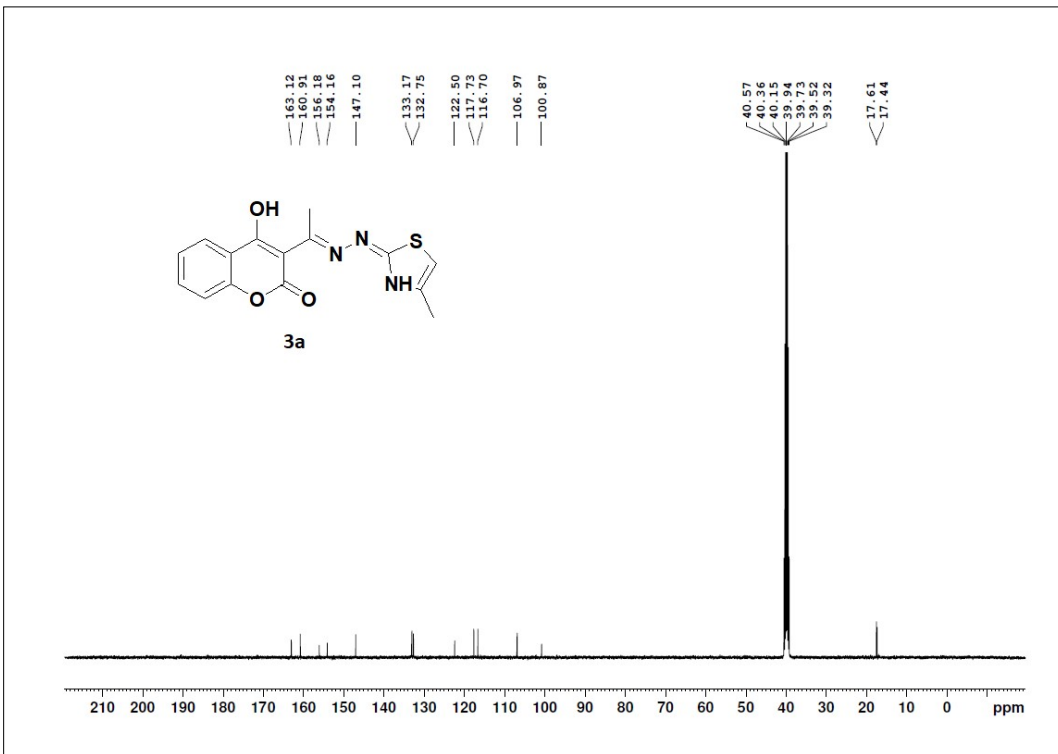
<sup>1</sup>H NMR spectrum of compound 2b



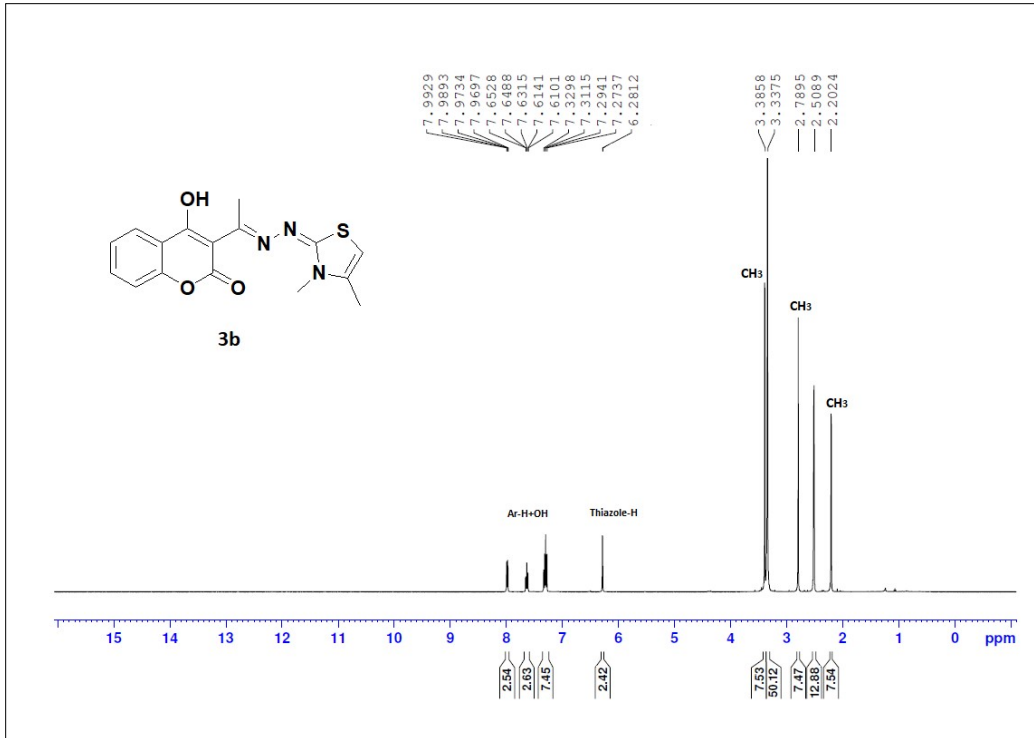
<sup>13</sup>C NMR spectrum of compound 2b



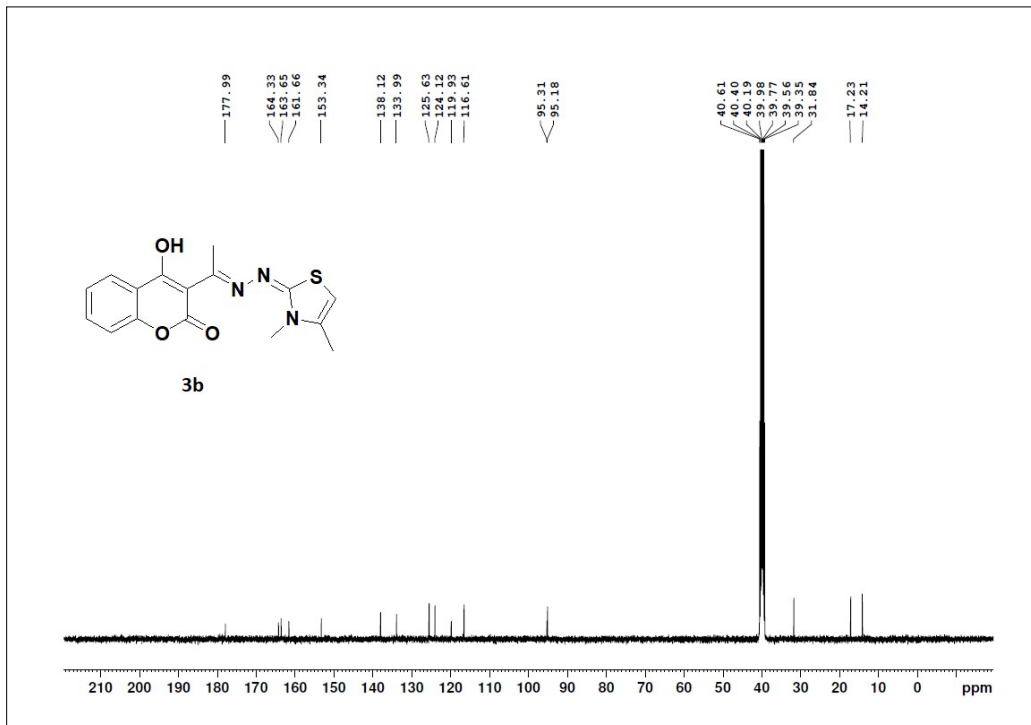
**<sup>1</sup>H NMR spectrum of compound 3a**



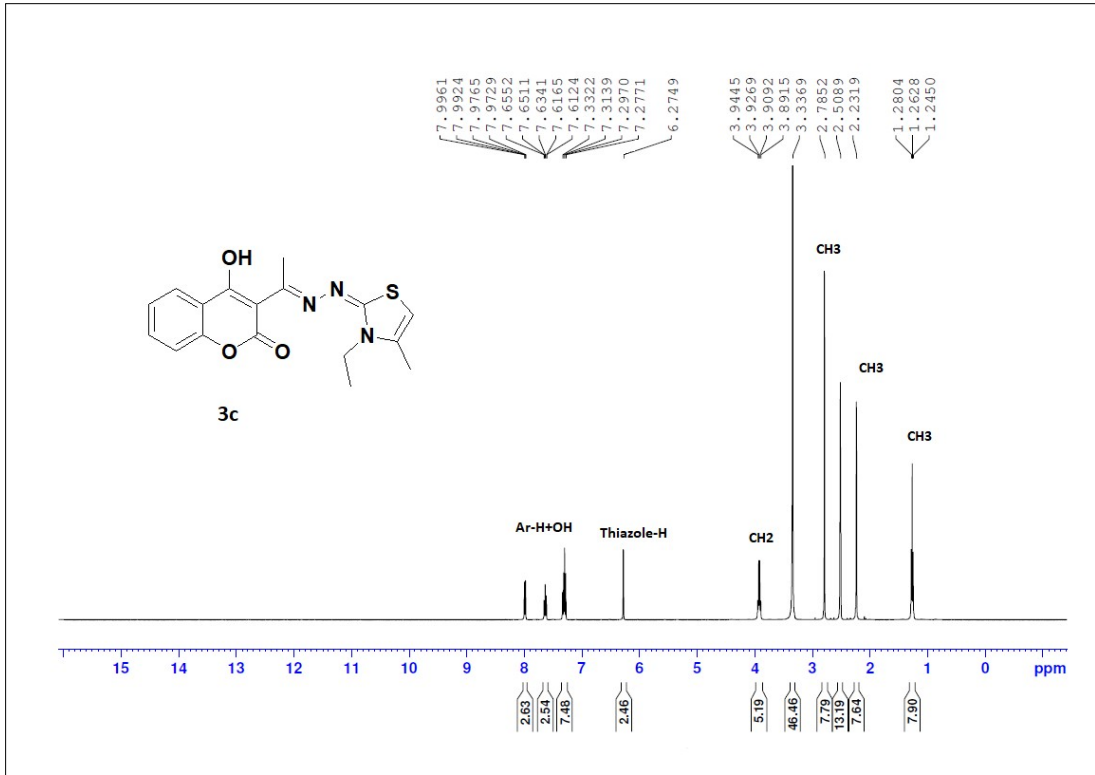
**<sup>13</sup>C NMR spectrum of compound 3a**



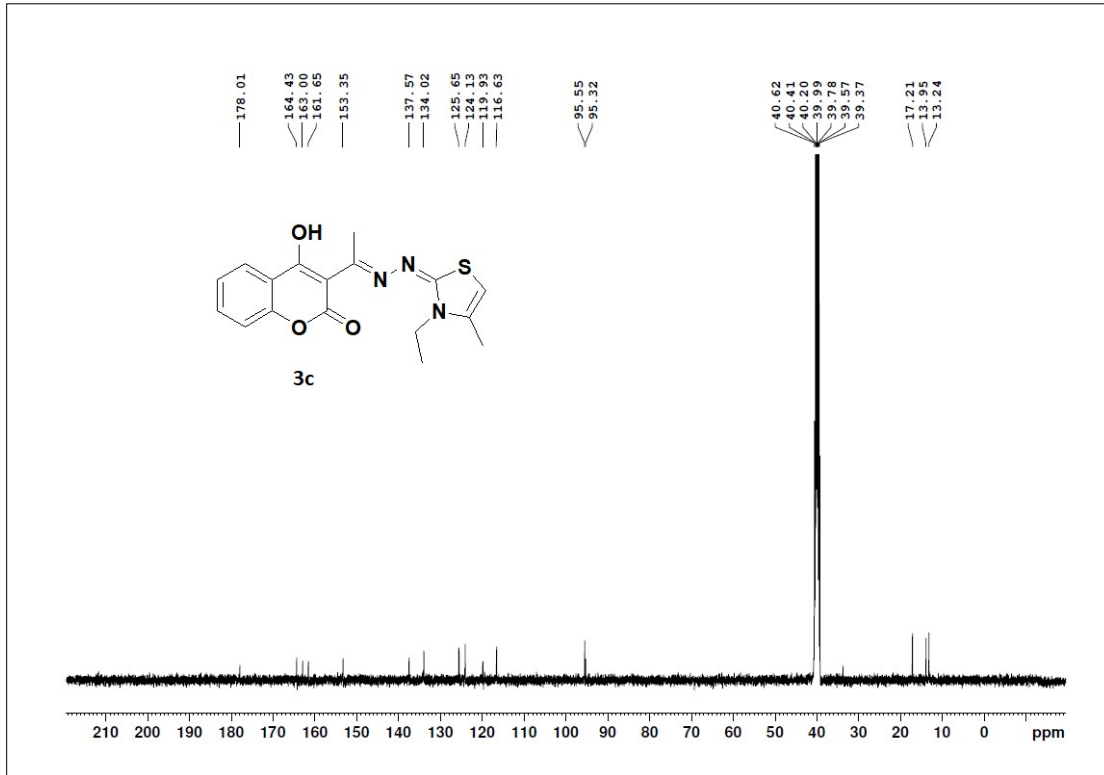
**<sup>1</sup>H NMR spectrum of compound 3b**



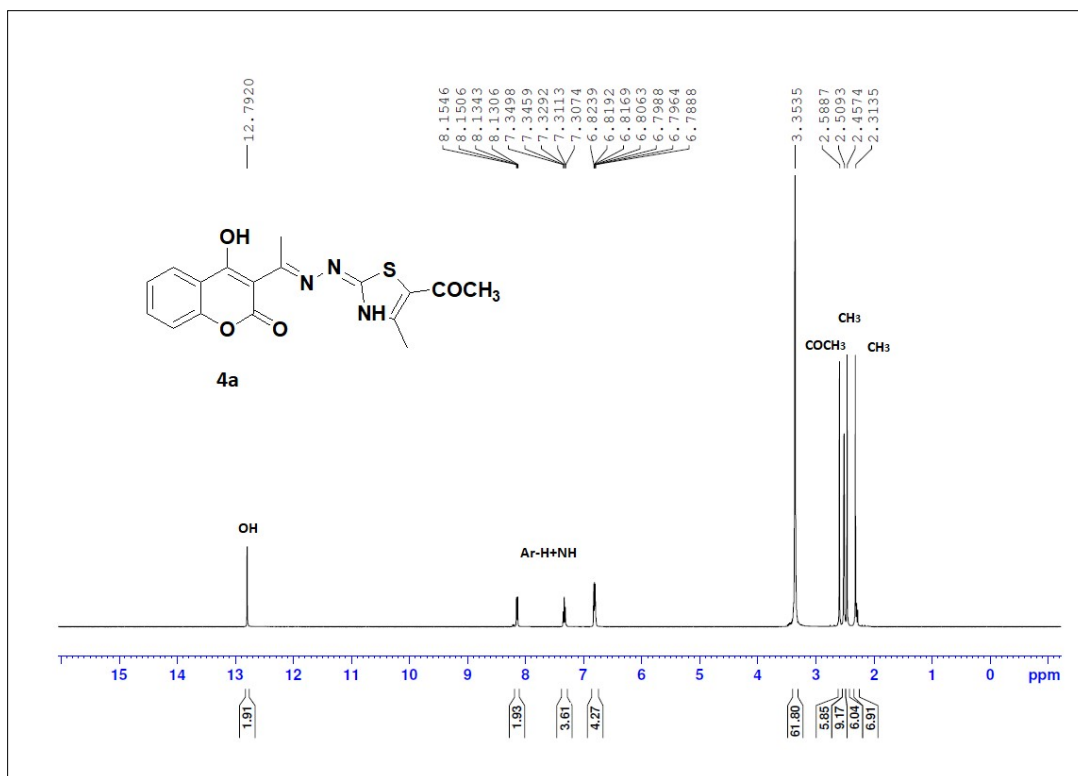
**<sup>13</sup>C NMR spectrum of compound 3b**



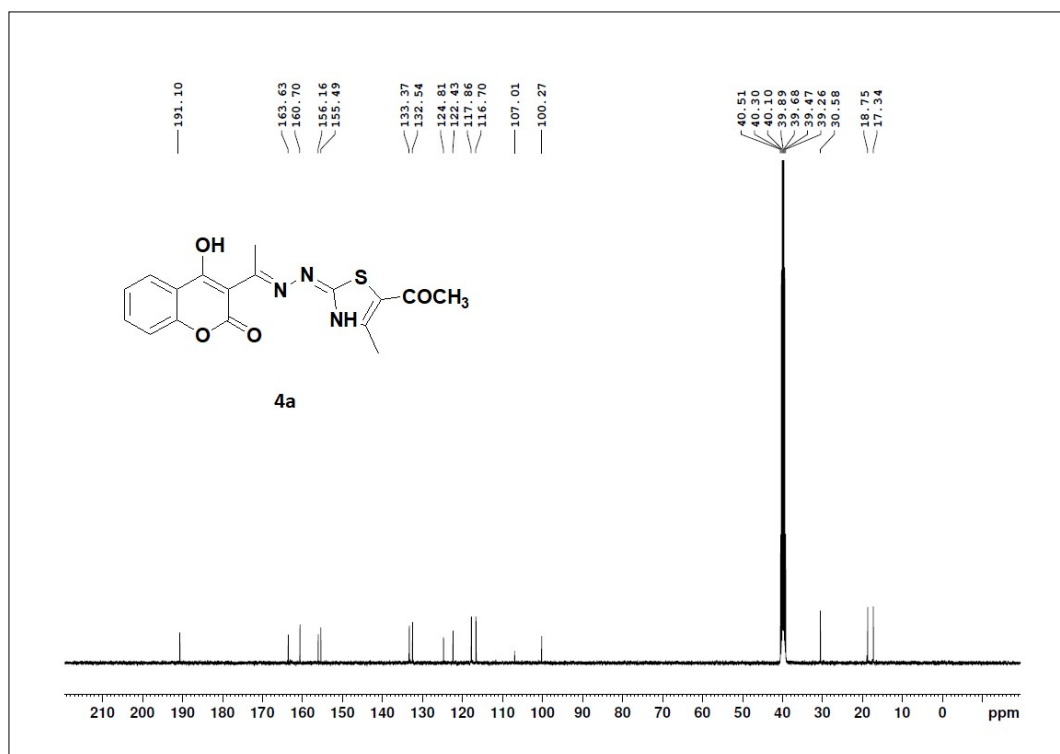
**<sup>1</sup>H NMR spectrum of compound 3c**



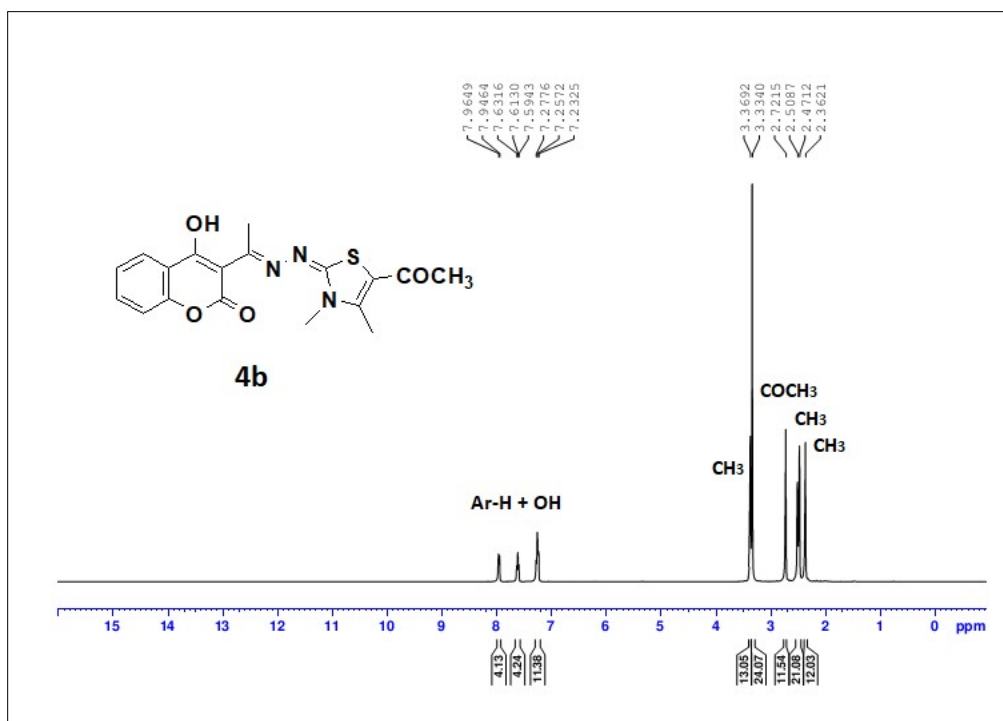
**<sup>13</sup>C NMR spectrum of compound 3c**



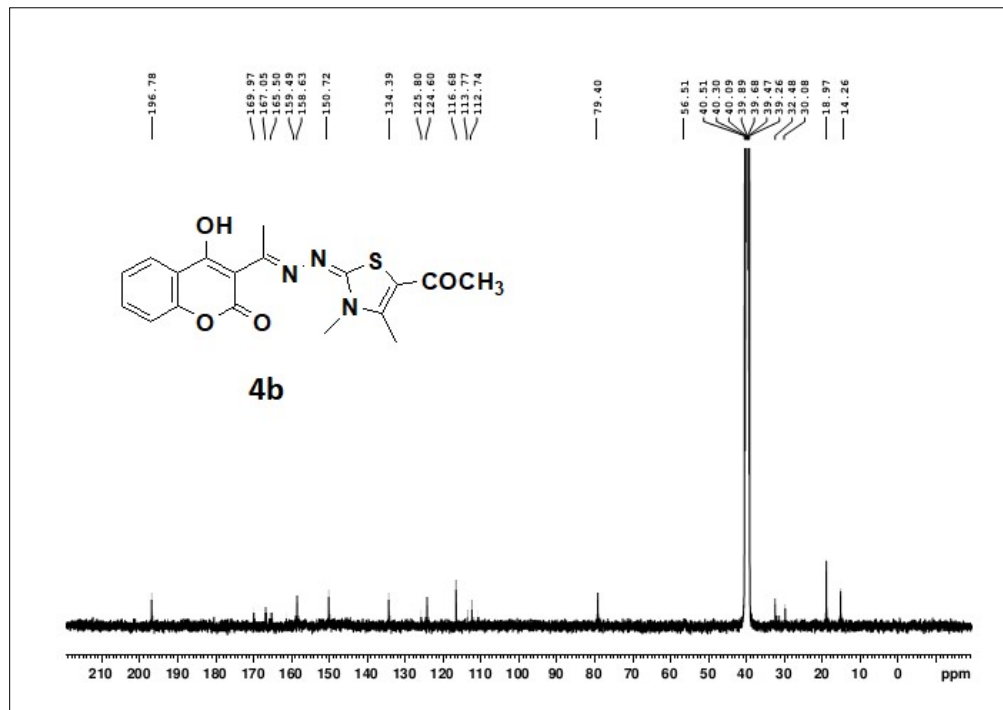
**<sup>1</sup>H NMR spectrum of compound 4a**



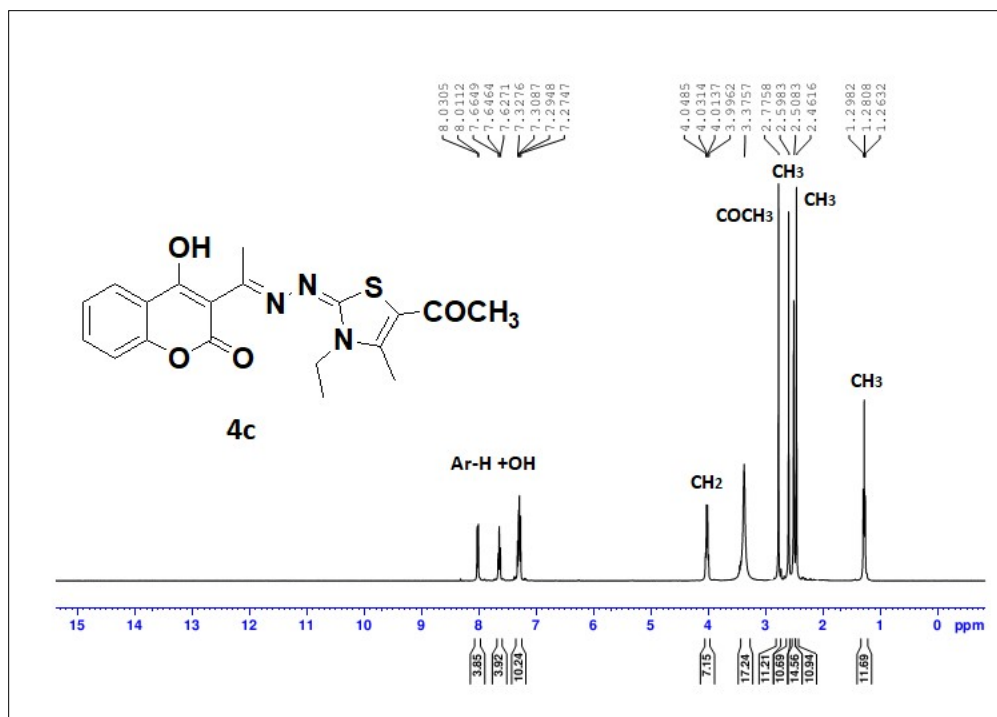
**<sup>13</sup>C NMR spectrum of compound 4a**



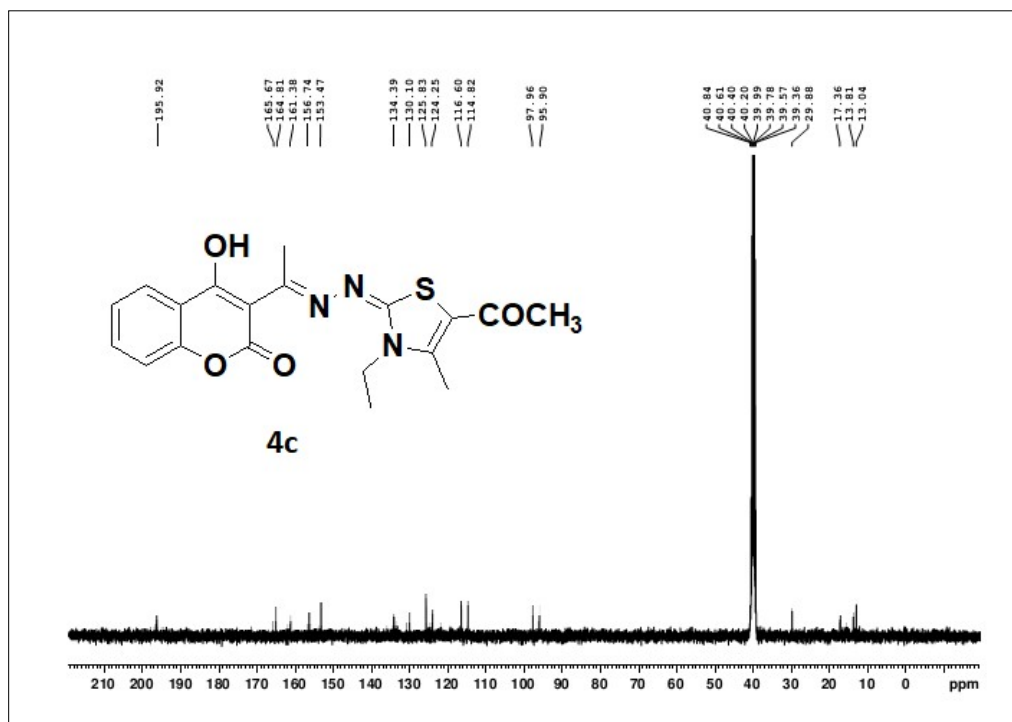
<sup>1</sup>H NMR spectrum of compound **4b**



<sup>13</sup>C NMR spectrum of compound **4b**

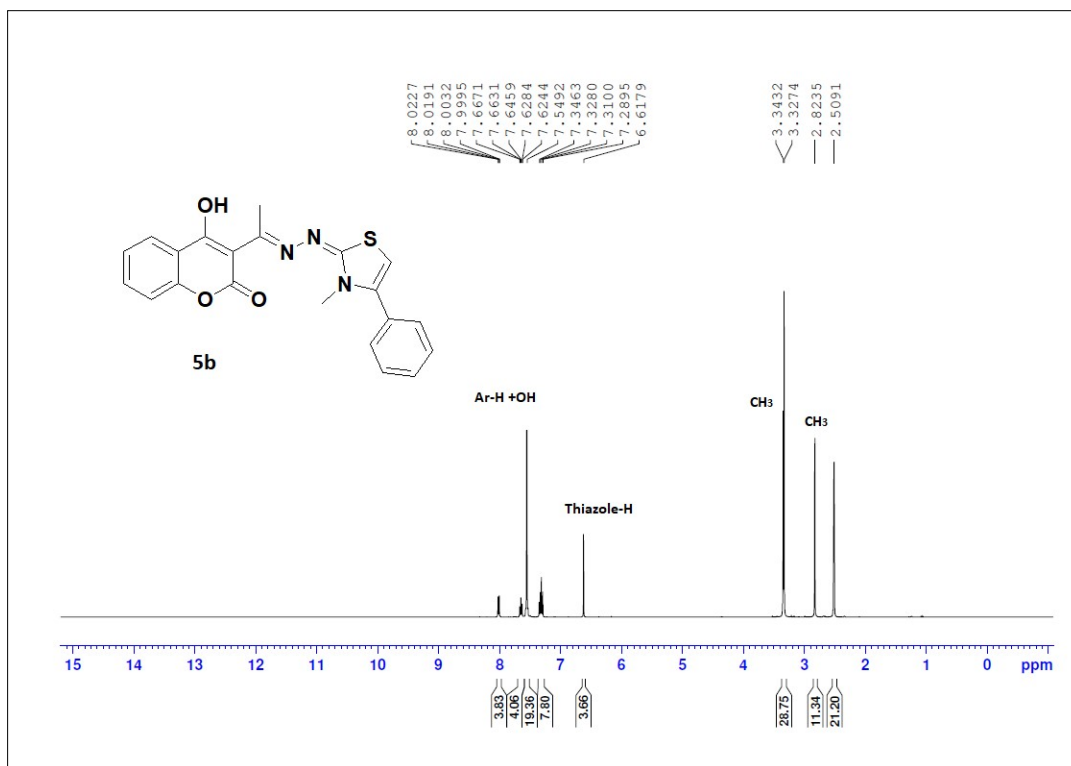


**<sup>1</sup>H NMR spectrum of compound 4c**

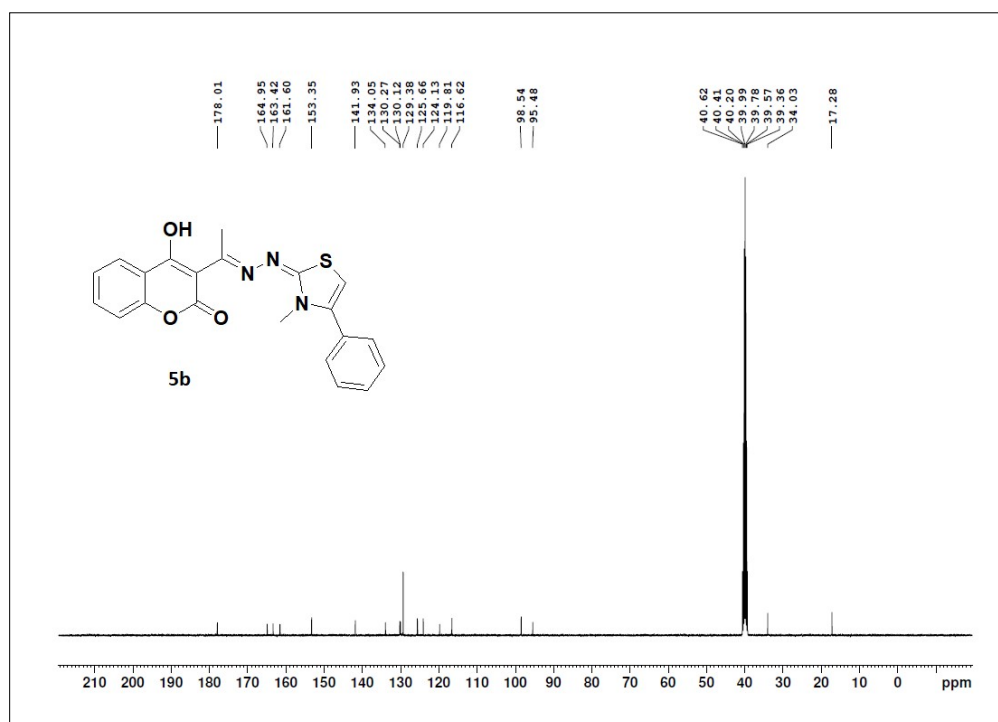


**<sup>13</sup>C NMR spectrum of compound 4c**

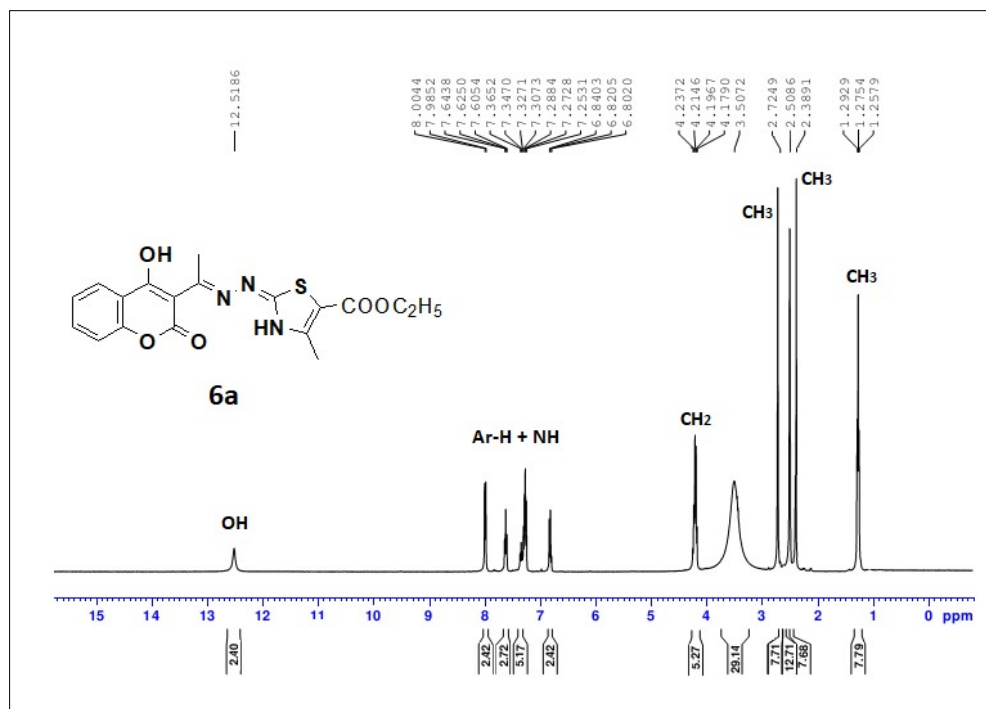




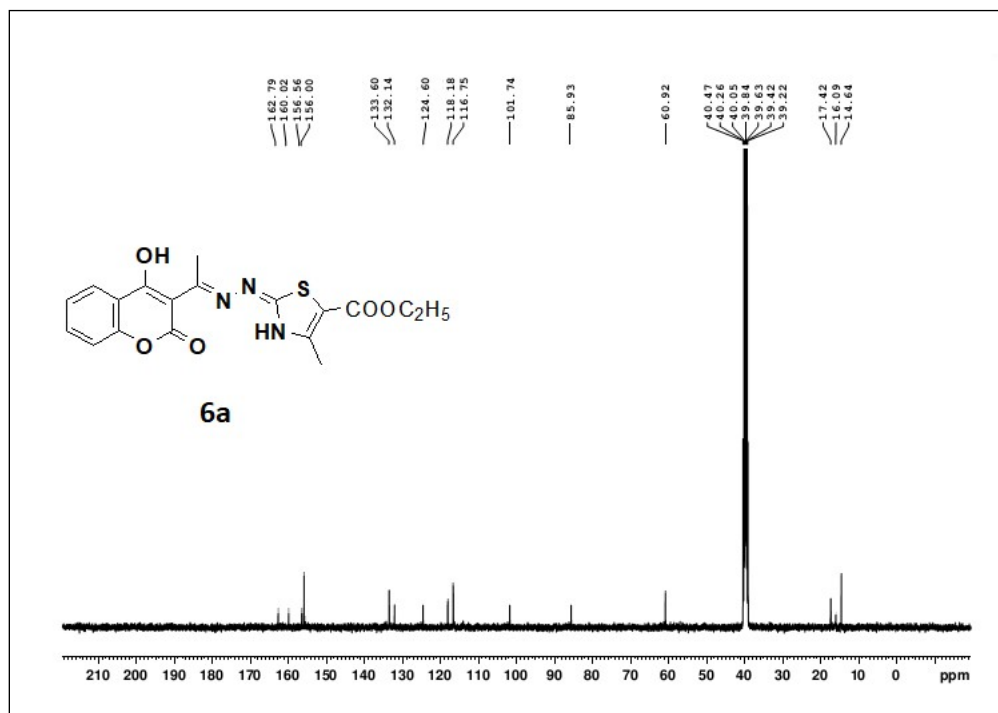
**<sup>1</sup>H NMR spectrum of compound 5b**



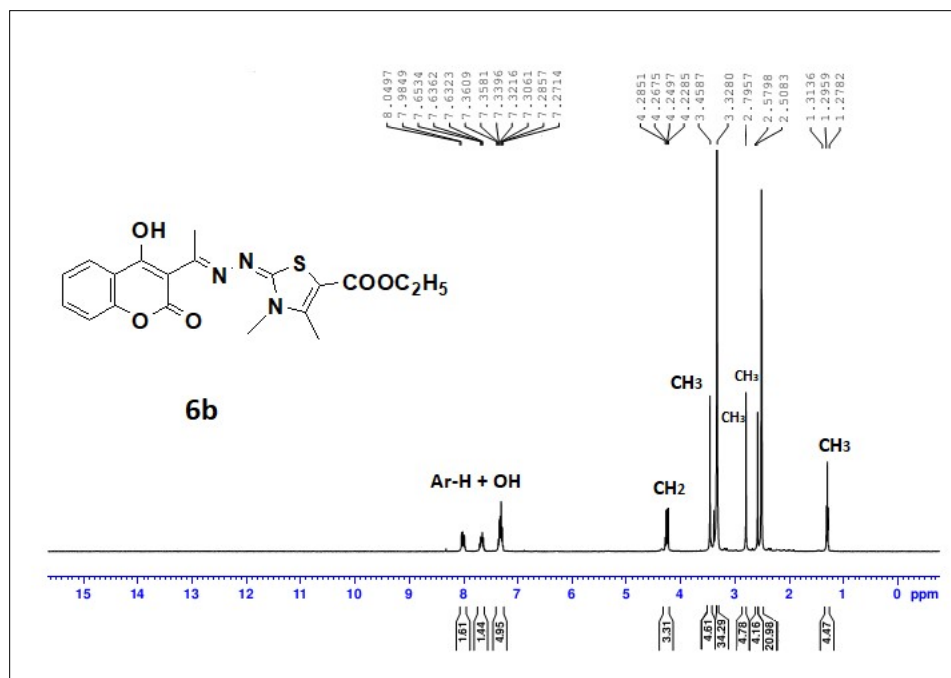
**<sup>13</sup>C NMR spectrum of compound 5b**



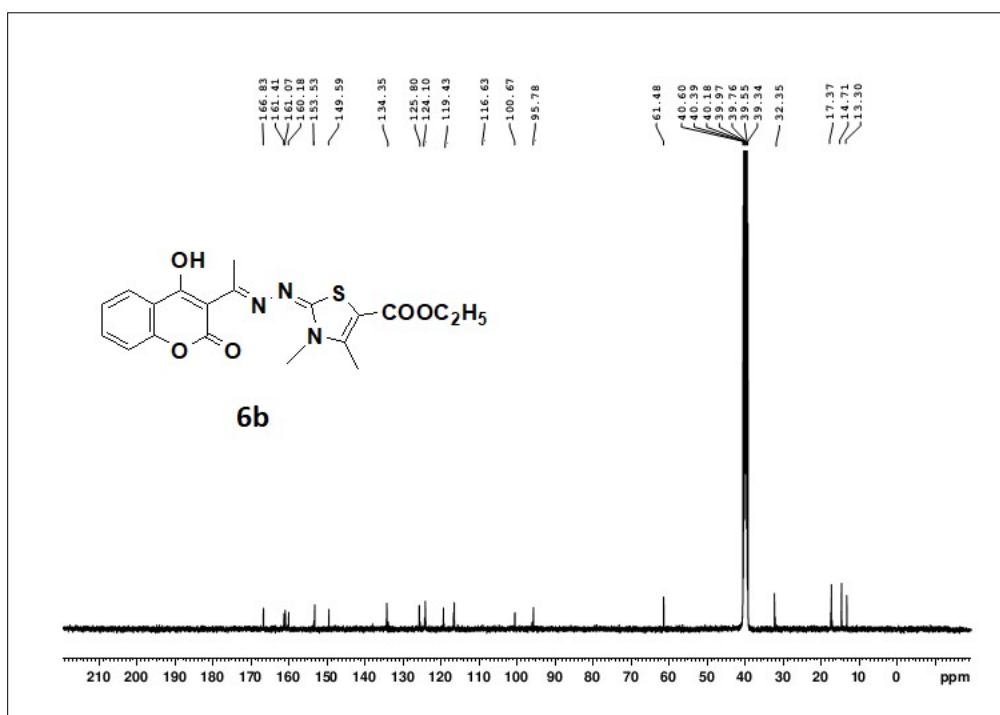
<sup>1</sup>H NMR spectrum of compound 6a



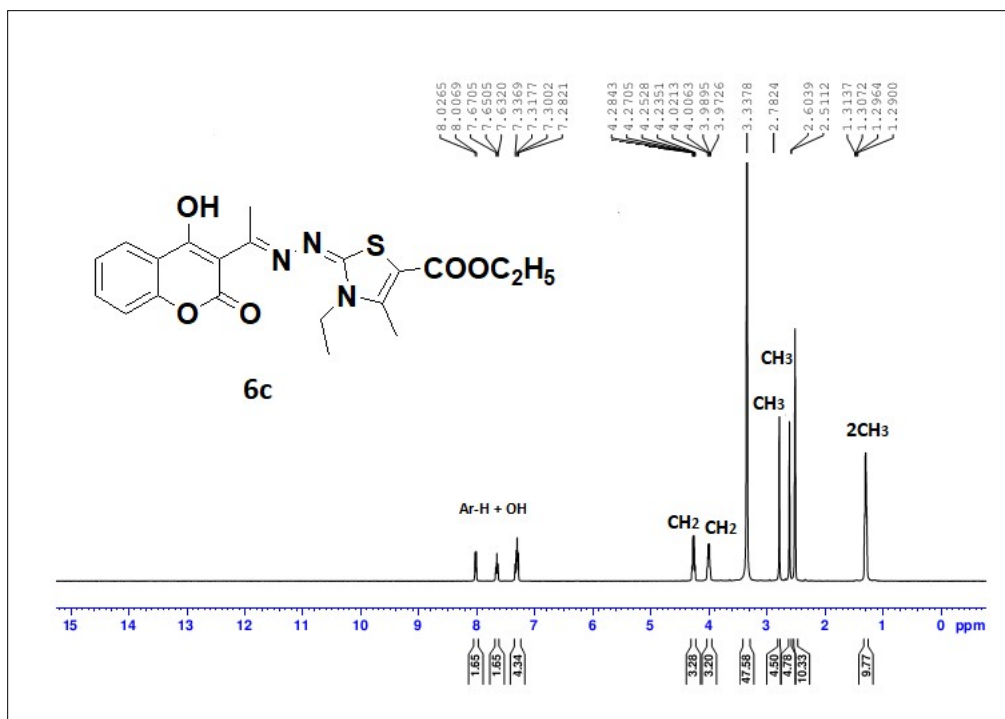
<sup>13</sup>C NMR spectrum of compound 6a



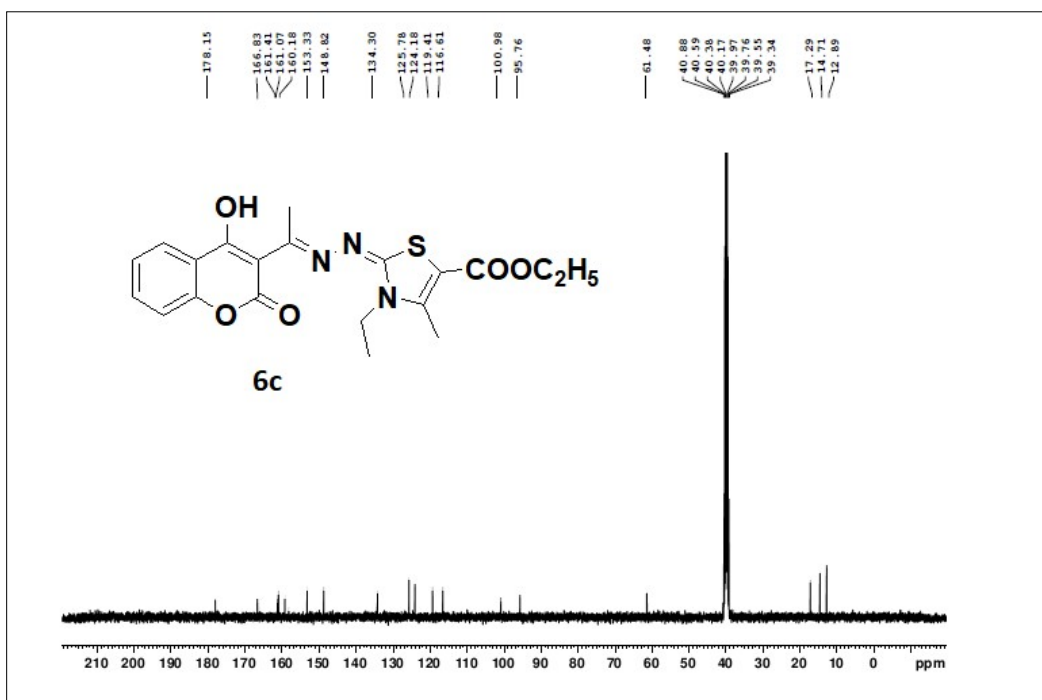
<sup>1</sup>H NMR spectrum of compound 6b



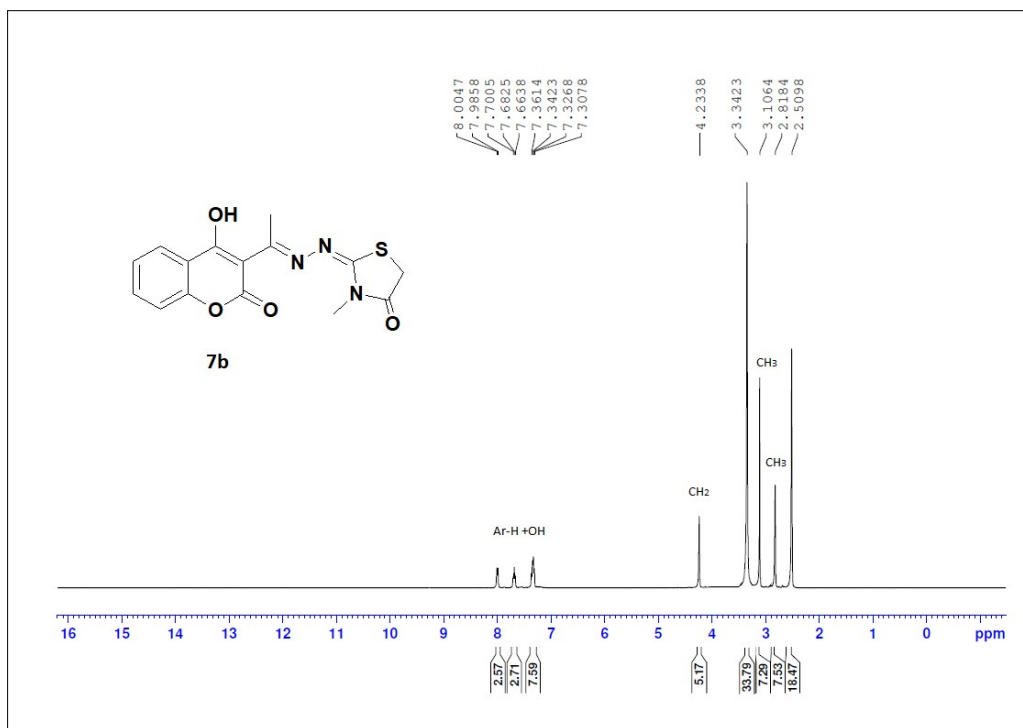
<sup>13</sup>C NMR spectrum of compound 6b



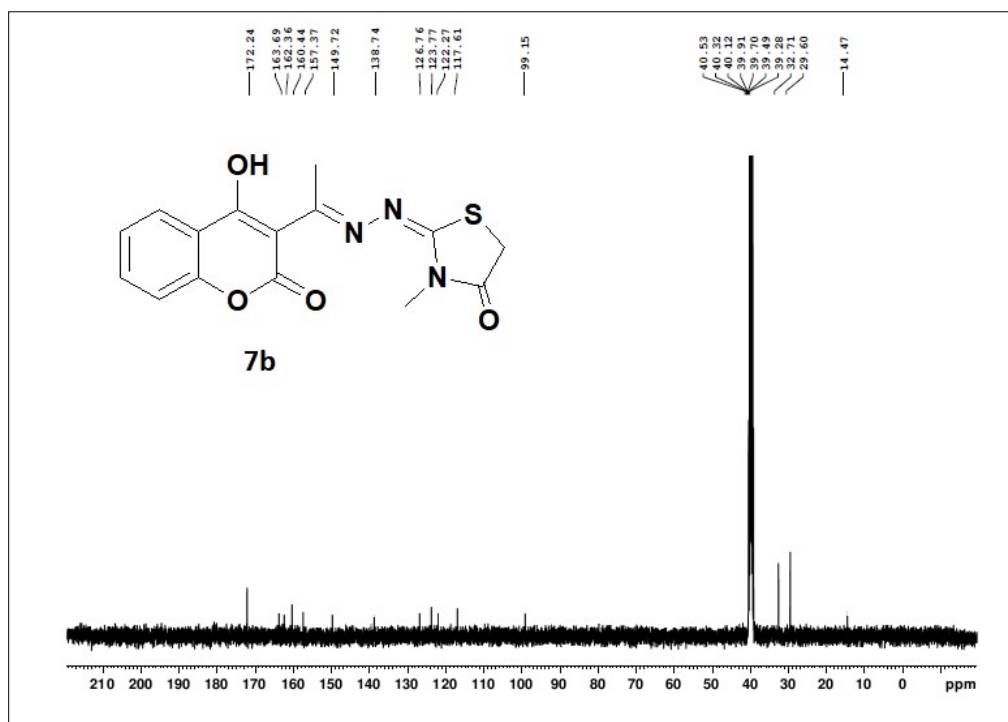
<sup>1</sup>H NMR spectrum of compound 6c



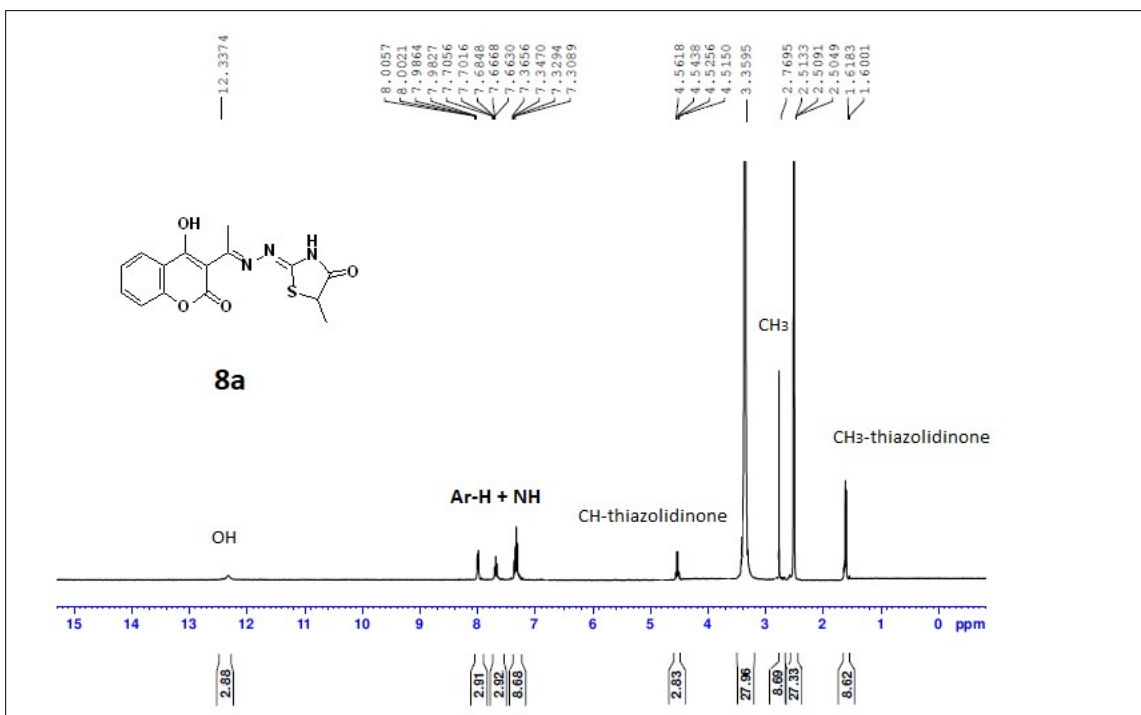
<sup>13</sup>C NMR spectrum of compound 6c



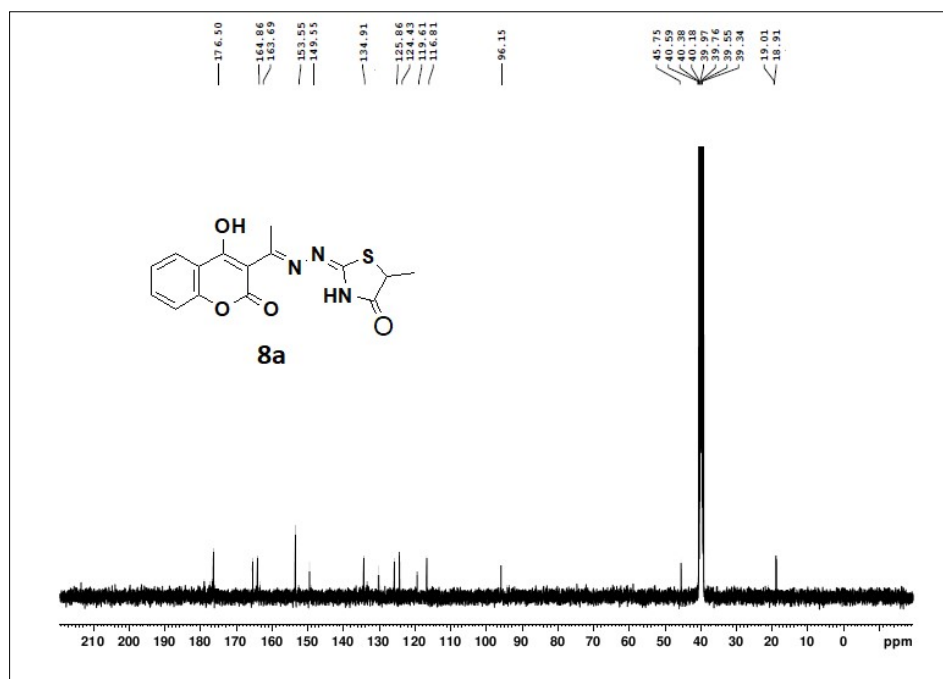
**<sup>1</sup>H NMR spectrum of compound 7b**



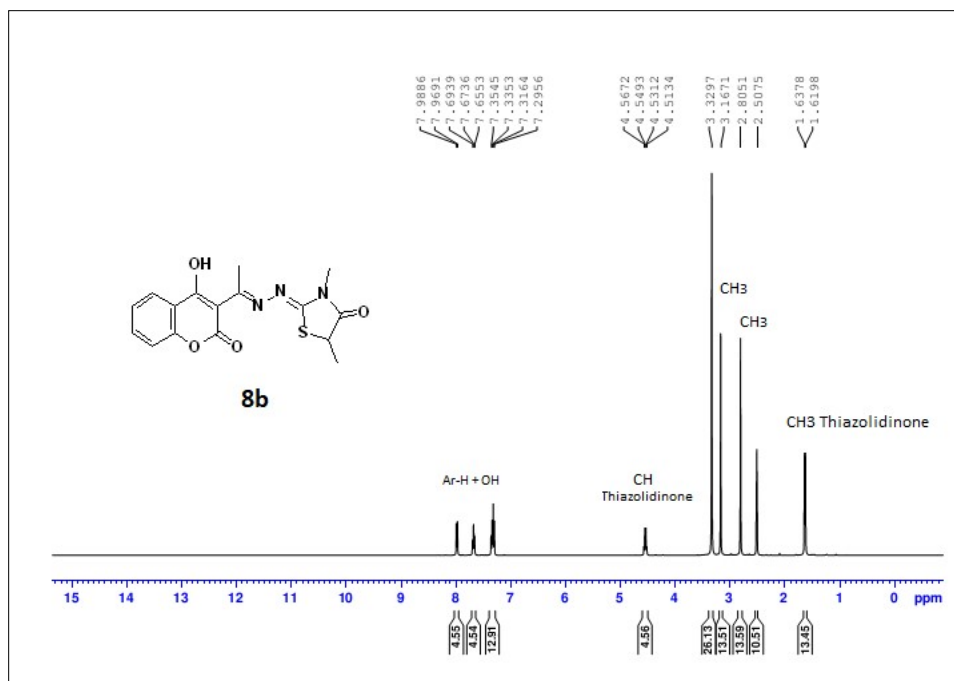
**<sup>13</sup>C NMR spectrum of compound 7b**



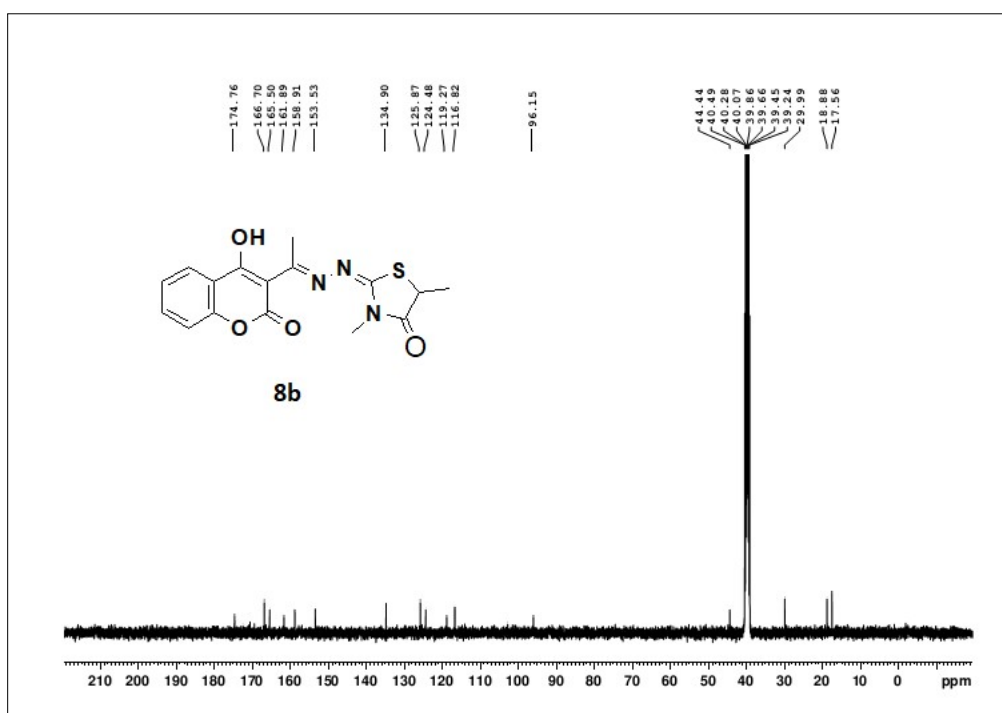
**<sup>1</sup>H NMR spectrum of compound 8a**



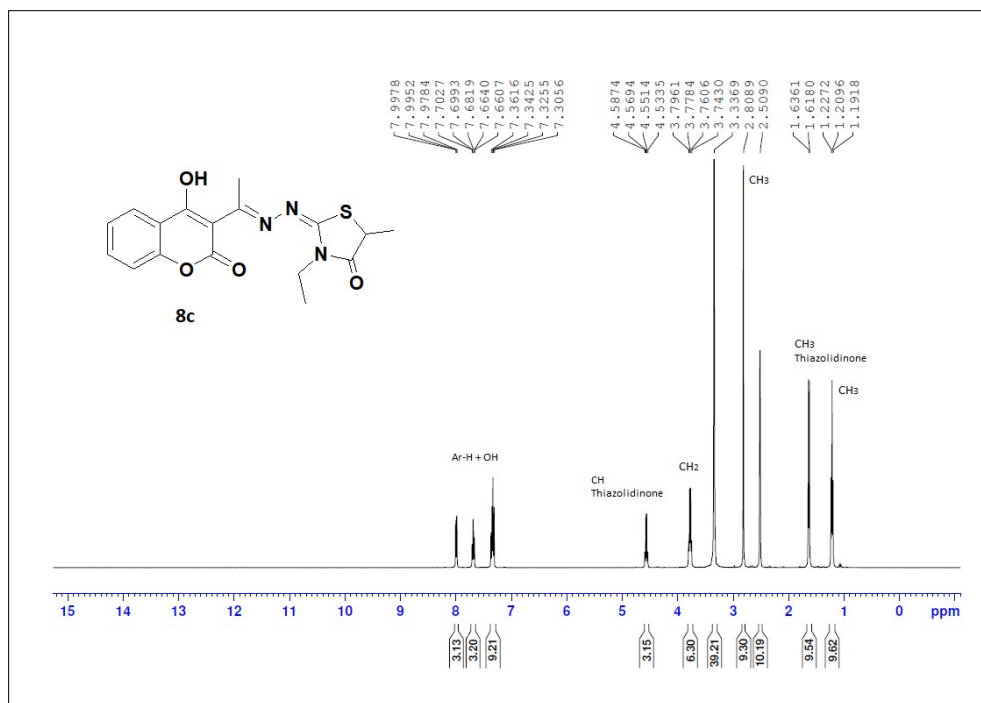
**<sup>13</sup>C NMR spectrum of compound 8a**



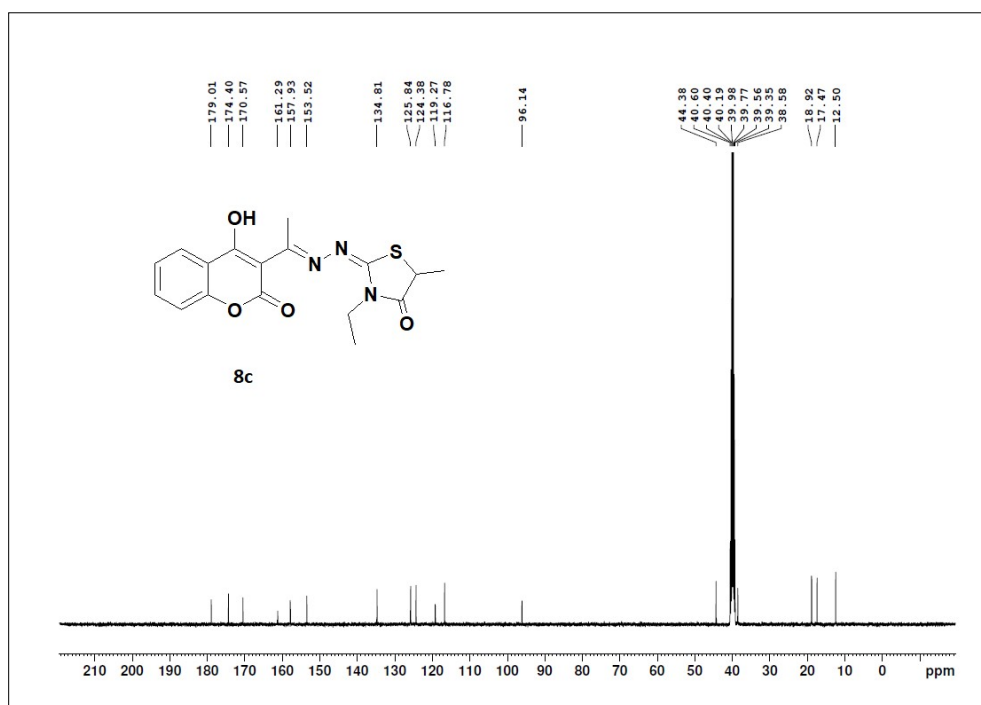
<sup>1</sup>H NMR spectrum of compound 8b



<sup>13</sup>C NMR spectrum of compound 8b

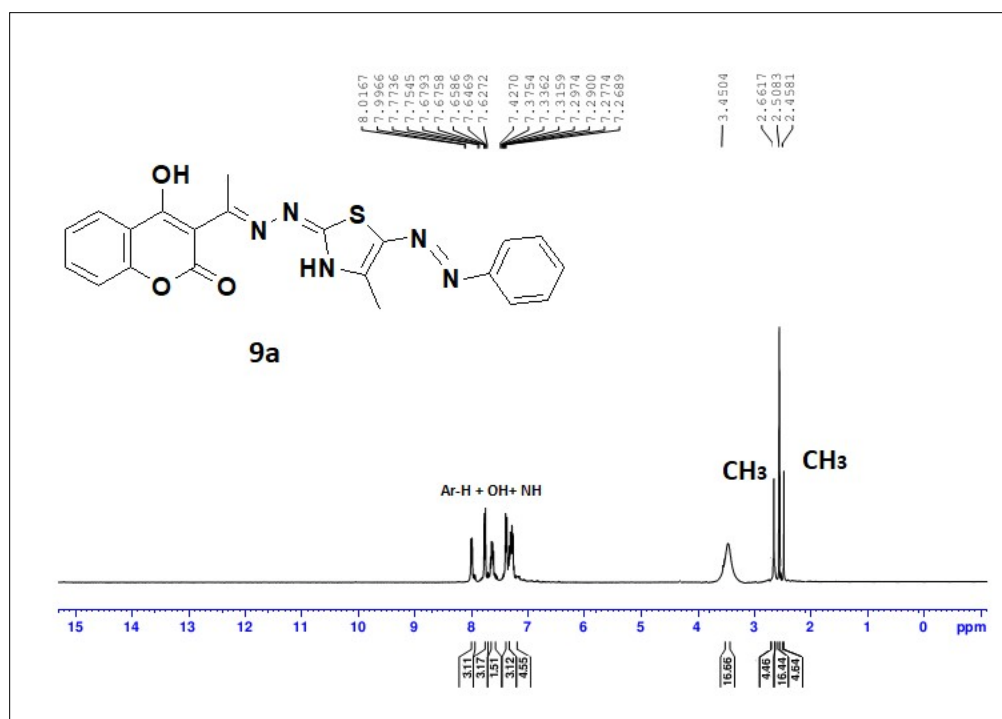


**<sup>1</sup>H NMR spectrum of compound 8c**

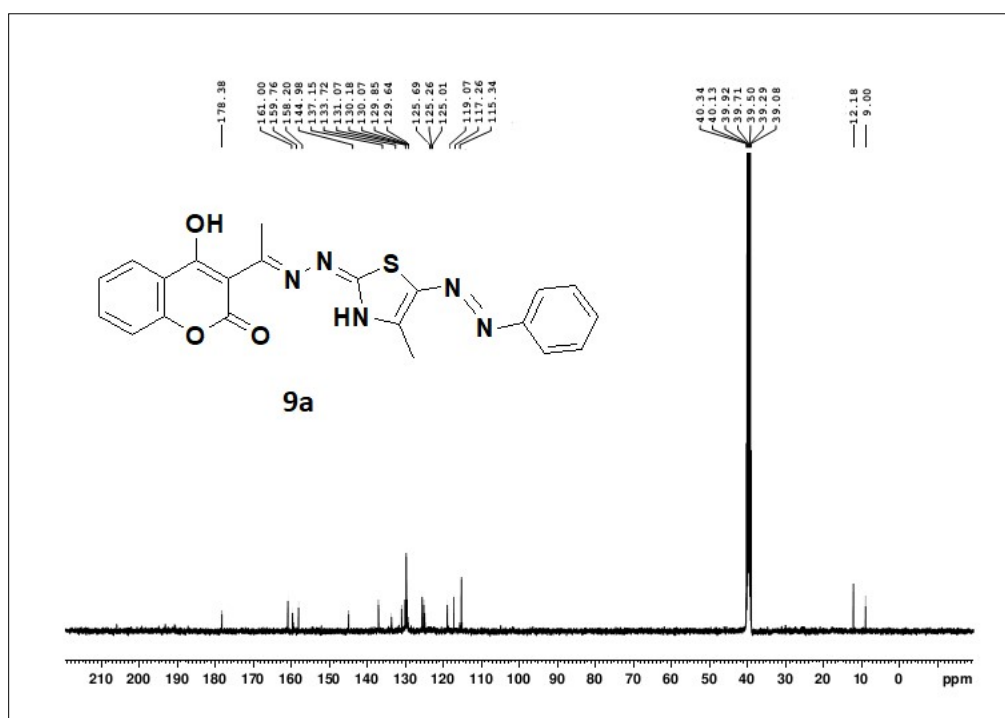


**<sup>13</sup>C NMR spectrum of compound 8c**

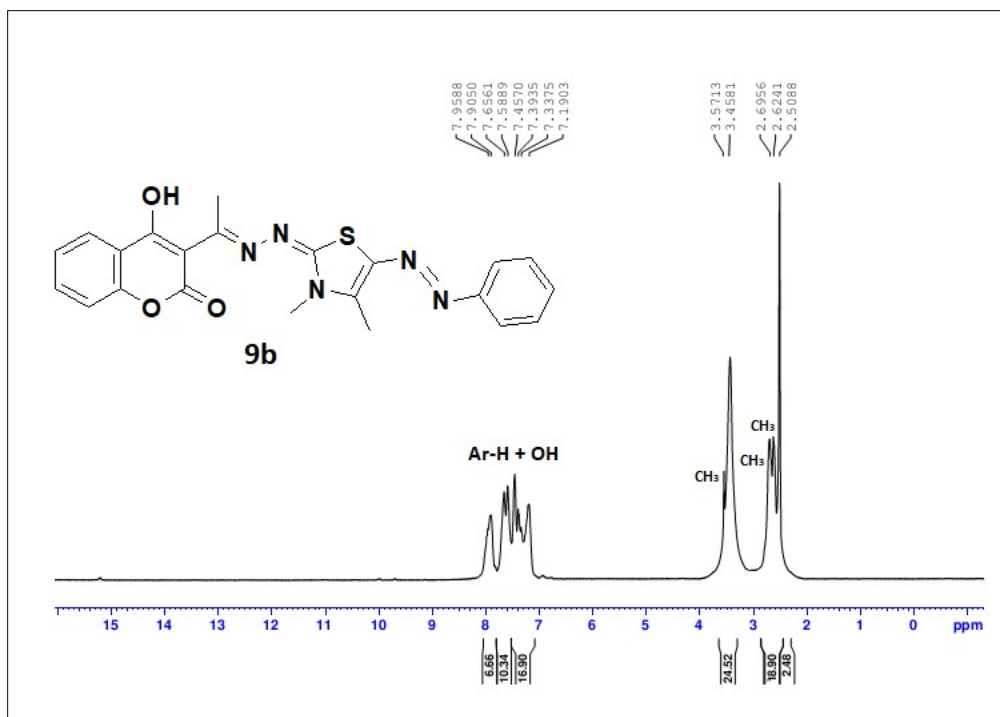




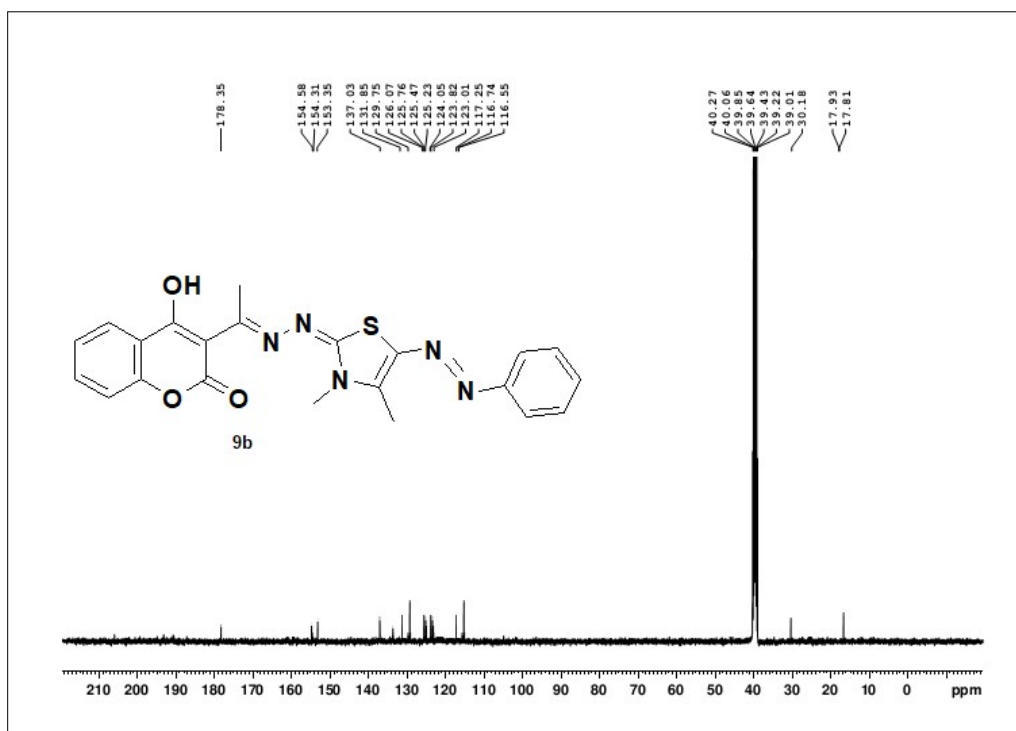
<sup>1</sup>H NMR spectrum of compound 9a



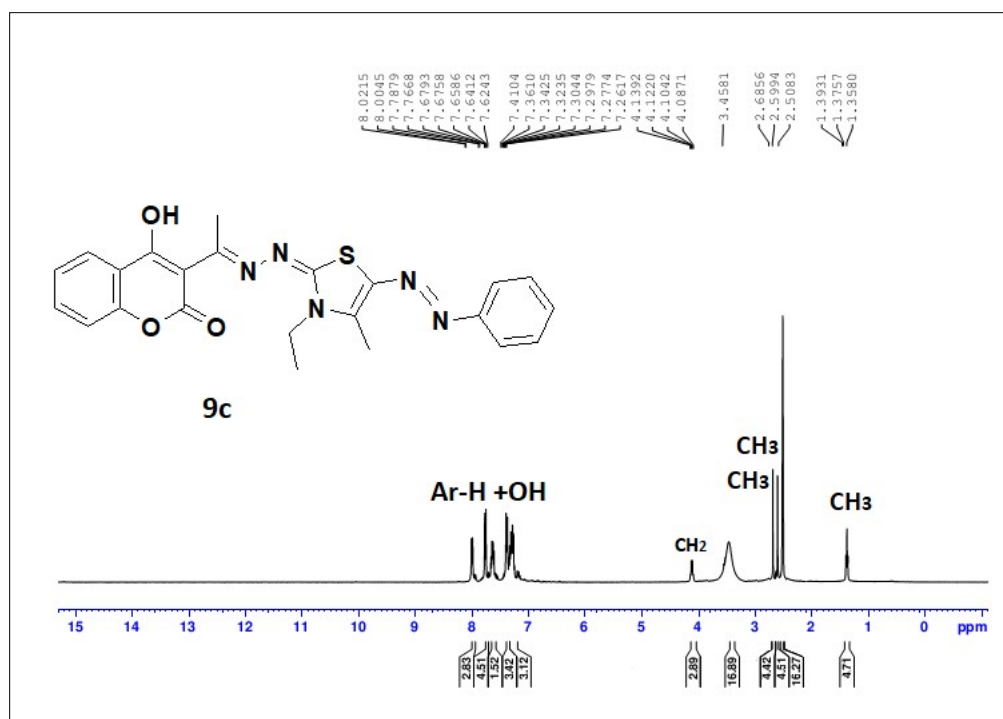
<sup>13</sup>C NMR spectrum of compound 9a



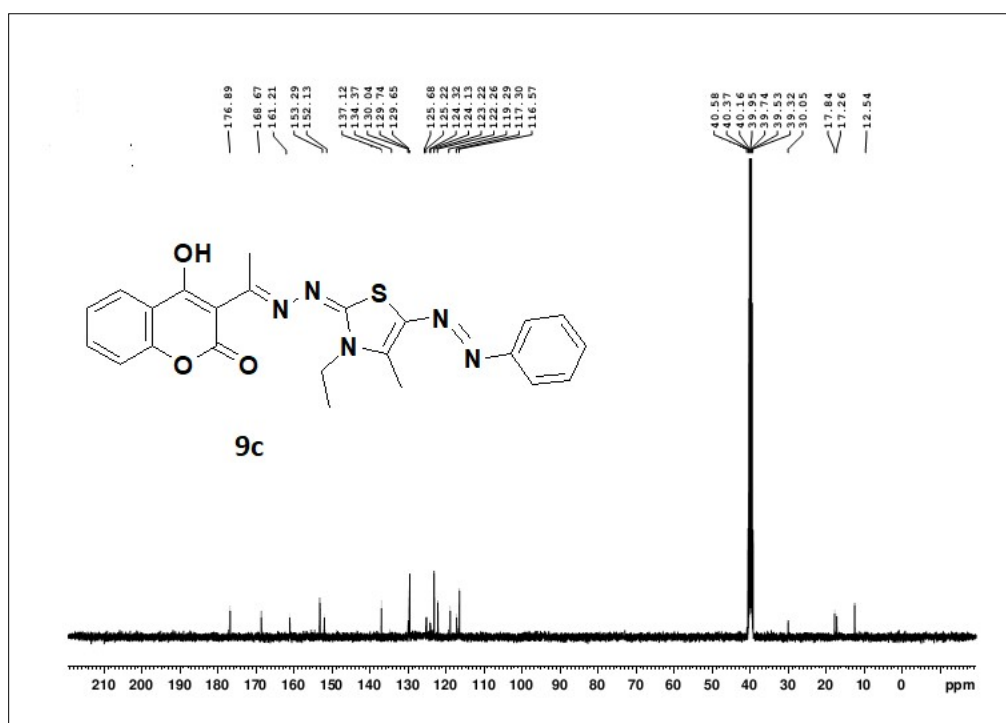
**<sup>1</sup>H NMR spectrum of compound 9b**



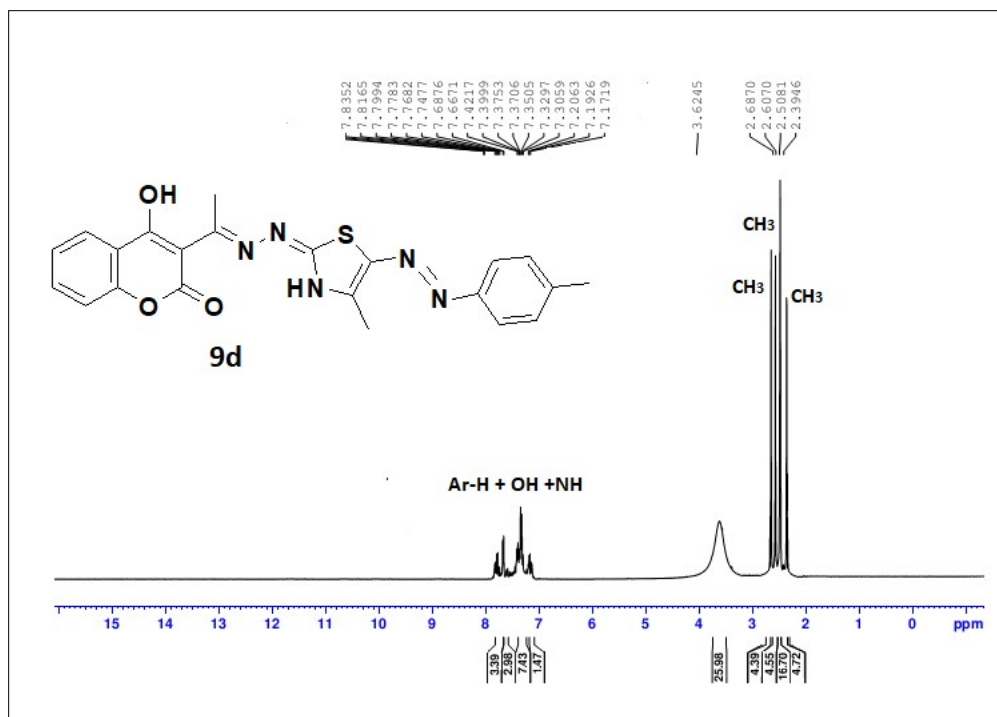
**<sup>13</sup>C NMR spectrum of compound 9b**



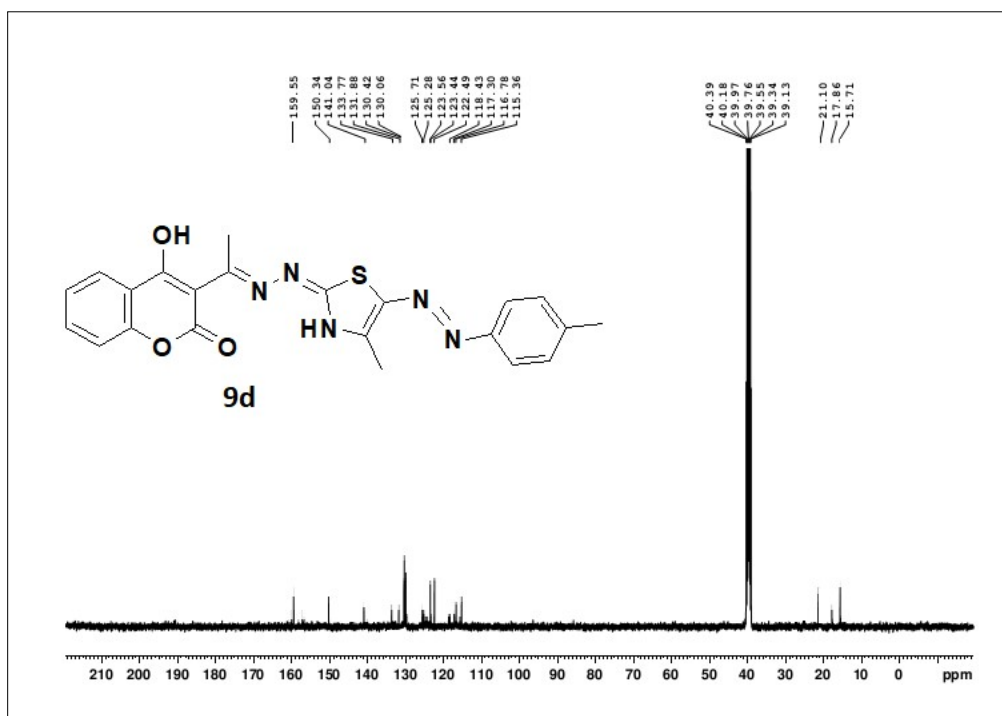
**<sup>1</sup>H NMR spectrum of compound 9c**



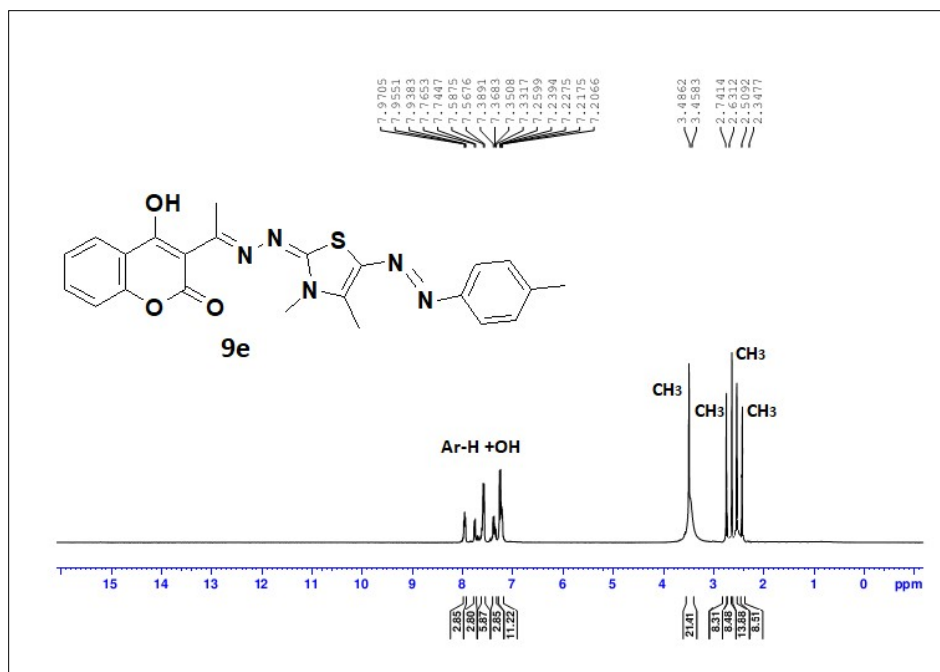
**<sup>13</sup>C NMR spectrum of compound 9c**



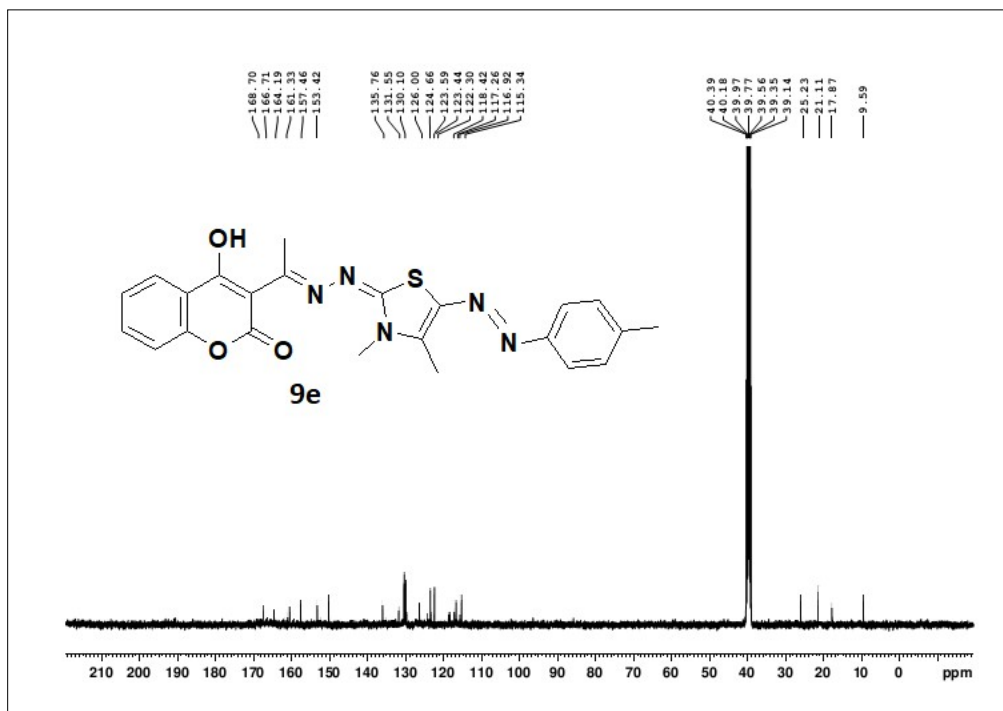
**<sup>1</sup>H NMR spectrum of compound 9d**



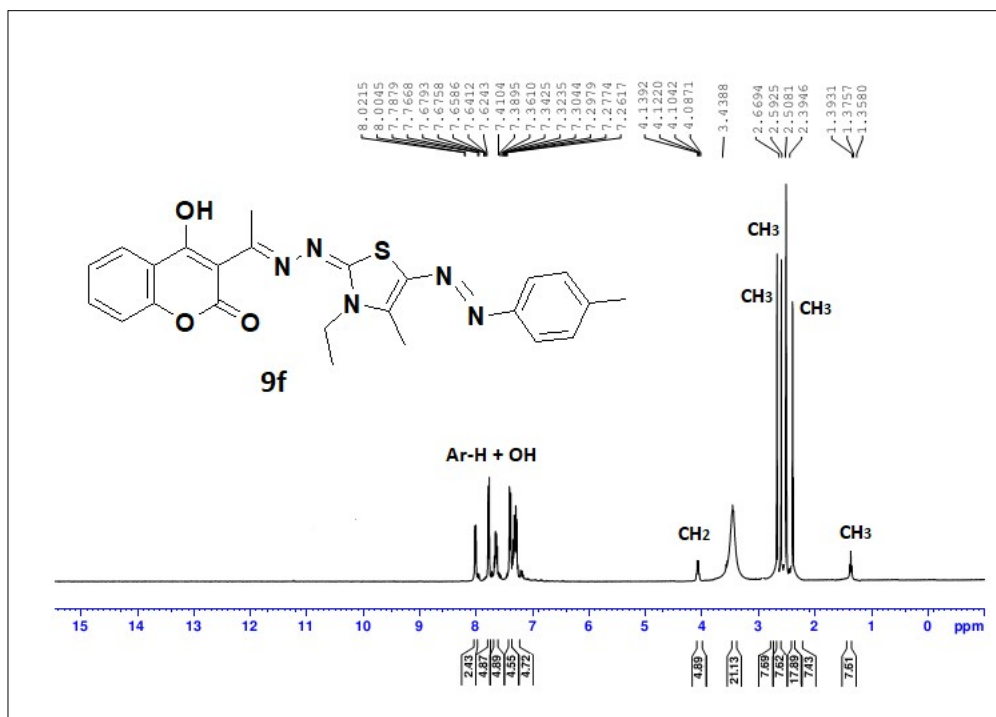
**<sup>13</sup>C NMR spectrum of compound 9d**



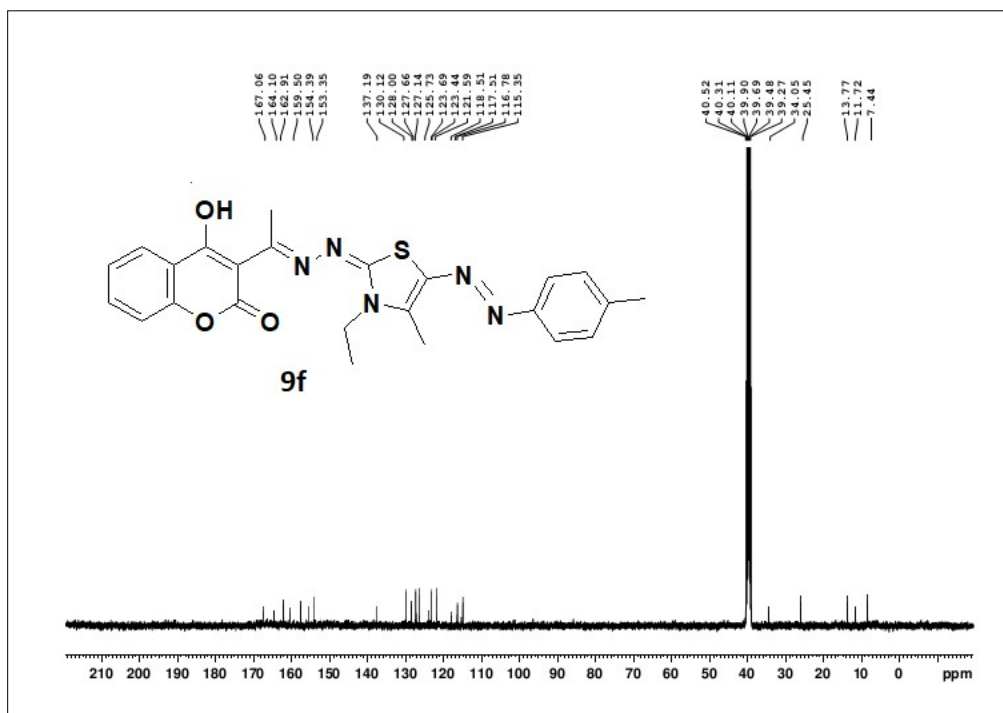
**<sup>1</sup>H NMR spectrum of compound 9e**



**<sup>13</sup>C NMR spectrum of compound 9e**



**<sup>1</sup>H NMR spectrum of compound 9f**



**<sup>13</sup>C NMR spectrum of compound 9f**

**The cytotoxic IC<sub>50</sub> values and selectivity index (S.I) of the synthesized compounds.**

Compound	IC <sub>50</sub> (μM) ± SD			
	MCF-7 (S.I.)	HCT-116 (S.I.)	HepG-2 (S.I.)	BJ-1 cells
<b>2a</b>	8.1 ± 1.1 (> 12.35)	17.8 ± 2.1(> 5.62)	61.4 ± 5.1 (> 1.63)	> 100
<b>2b</b>	13.6 ± 1.5 (> 7.35)	7.2 ± 0.6 (> 13.89)	48.1 ± 3.9 (> 2.08)	> 100
<b>2c</b>	22.7 ± 2.6 (> 4.41)	17.8 ± 1.8 (>5.62)	46.4 ± 3.6 (> 2.16)	> 100
<b>3a</b>	34.5 ± 3.6 (> 2.90)	32.6 ± 3.1 (> 3.07)	42.5 ± 4.1 (> 2.35)	> 100
<b>3b</b>	34.9 ± 3.1 (> 2.87)	27.2 ± 2.9 (> 3.68)	46.1 ± 3.7 (> 2.17)	> 100
<b>3c</b>	36.5 ± 4.2 (> 2.74)	36.3 ± 3.5 (> 2.75)	68.2 ± 5.6 (> 1.47)	> 100
<b>4a</b>	25.6 ± 3.1 (> 3.91)	31.4 ± 3.1(> 3.18)	48.8 ± 3.1 (> 2.05)	> 100
<b>4b</b>	32.7 ± 3.5 (> 3.06)	24.3 ± 2.7 (> 4.12)	57.1 ± 4.3 (> 1.75)	> 100
<b>4c</b>	33.7 ± 3.2 (> 2.97)	38.9 ± 3.2 (> 2.57)	62.5 ± 3.9 (> 1.6)	> 100
<b>5a</b>	34.8 ± 4.6 (> 2.87)	31.8 ± 3.2 (> 3.14)	47.6 ± 4.1 (> 2.10)	> 100
<b>5b</b>	34.6 ± 2.9 (> 2.89)	42.4 ± 4.1 (> 2.36)	66.4 ± 5.6 (> 1.51)	> 100
<b>5c</b>	25.9 ± 2.3 (> 3.86)	9.9 ± 0.9 (> 10.10)	86.9 ± 5.9 (> 1.15)	> 100
<b>6a</b>	6.4 ± 0.5 (> 15.63)	20.4 ± 1.9 (> 4.90)	57.2 ± 4.3 (> 1.75)	> 100
<b>6b</b>	11.2 ± 1.1 (> 8.93)	5.9 ± 0.7 (> 16.95)	41.4 ± 2.9 (> 2.42)	> 100
<b>6c</b>	20.7 ± 2.1 (> 4.83)	24.7 ±1.6 (> 4.05)	45.1 ± 4.1 (> 2.22)	> 100
<b>7a</b>	26.3 ± 4.1 (> 3.80)	9.5 ± 1.1 (> 10.53)	97.6 ± 8.2 (> 1.02)	> 100
<b>7b</b>	32.8 ± 3.5 (> 3.05)	41.2 ± 3.9 (> 2.43)	65.7 ± 5.1 (> 1.52)	> 100
<b>7c</b>	24.2 ± 3.7 (> 4.13)	10.8 ± 1.1 (> 9.26)	93.8 ± 6.1(> 1.07)	> 100
<b>8a</b>	27.4 ± 1.9 (> 3.65)	38.3 ± 4.2 (> 2.61)	42.4 ± 3.5 (> 2.36)	> 100
<b>8b</b>	26.1 ± 3.5 (> 3.83)	44.8 ± 4.5 (> 2.23)	67.2 ± 4.9 (> 1.49)	> 100
<b>8c</b>	7.4 ± 0.9 (> 13.5)	44.9 ± 4.3 (> 2.23)	80.2 ± 5.9 (> 1.25)	> 100
<b>9a</b>	33.4 ± 2.8 (> 2.99)	33.9 ± 2.8 (> 2.95)	71.2 ± 5.1 (> 1.40)	> 100
<b>9b</b>	32.3 ± 3.5 (>3.09)	37.9 ± 2.5 (> 2.64)	64.1 ± 5.5 (> 1.56)	> 100
<b>9c</b>	32.8 ± 2.8 (> 3.05)	47.2 ± 4.5 (> 2.12)	60.9 ± 4.8 (> 1.64)	> 100
<b>9d</b>	26.3 ± 2.5 (> 3.80)	45.6 ± 4.2 (> 2.19)	57.2 ± 4.6 (> 1.75)	> 100
<b>9e</b>	23.3 ± 1.9 (> 4.29)	55.2 ± 5.1 (> 1.81)	74.4 ± 5.9 (> 1.34)	> 100
<b>9f</b>	17.8 ± 1.1 (> 5.62)	40.1 ±4.7 (> 2.49)	82.1 ± 6.1(> 1.22)	> 100
<b>Doxorubicin</b>	16.7 ± 1.5	21.8 ± 2.9	63.2 ± 5.8	