

## Supporting Information

### **A Ligand-free approach towards coumarin analogs via Natural Deep Eutectic Solvent-mediated Suzuki-Miyaura coupling**

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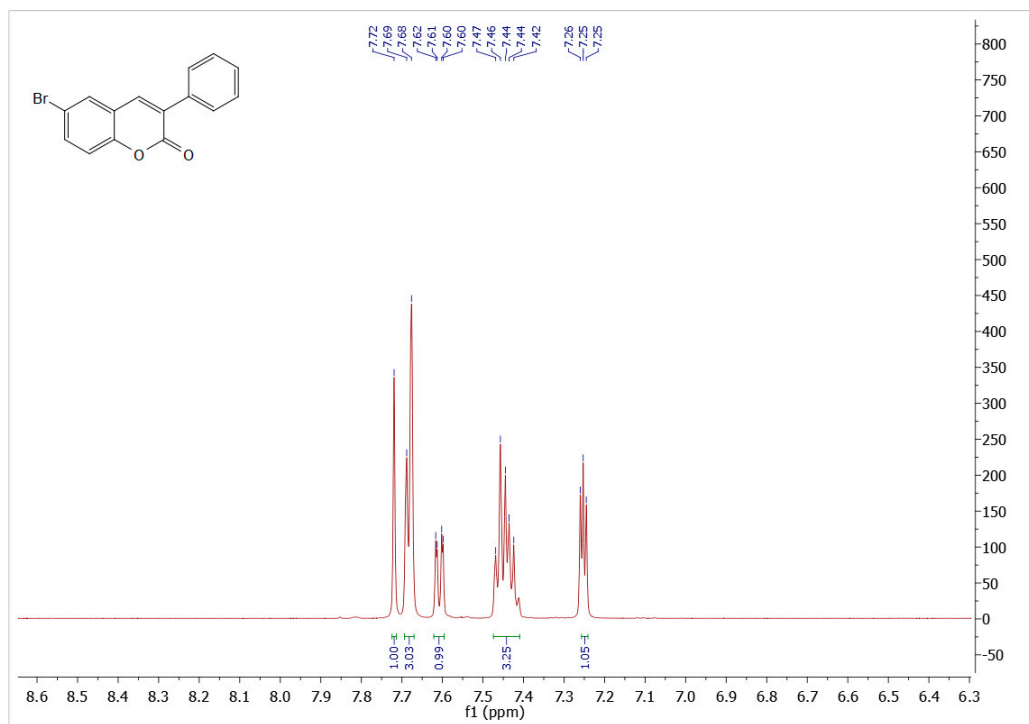
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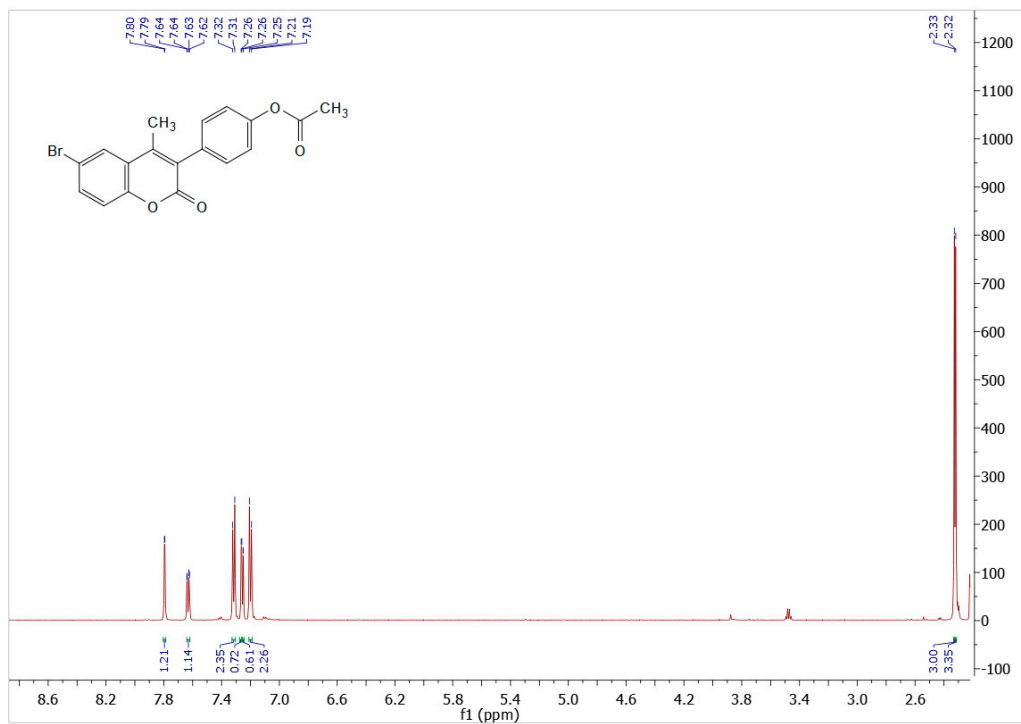
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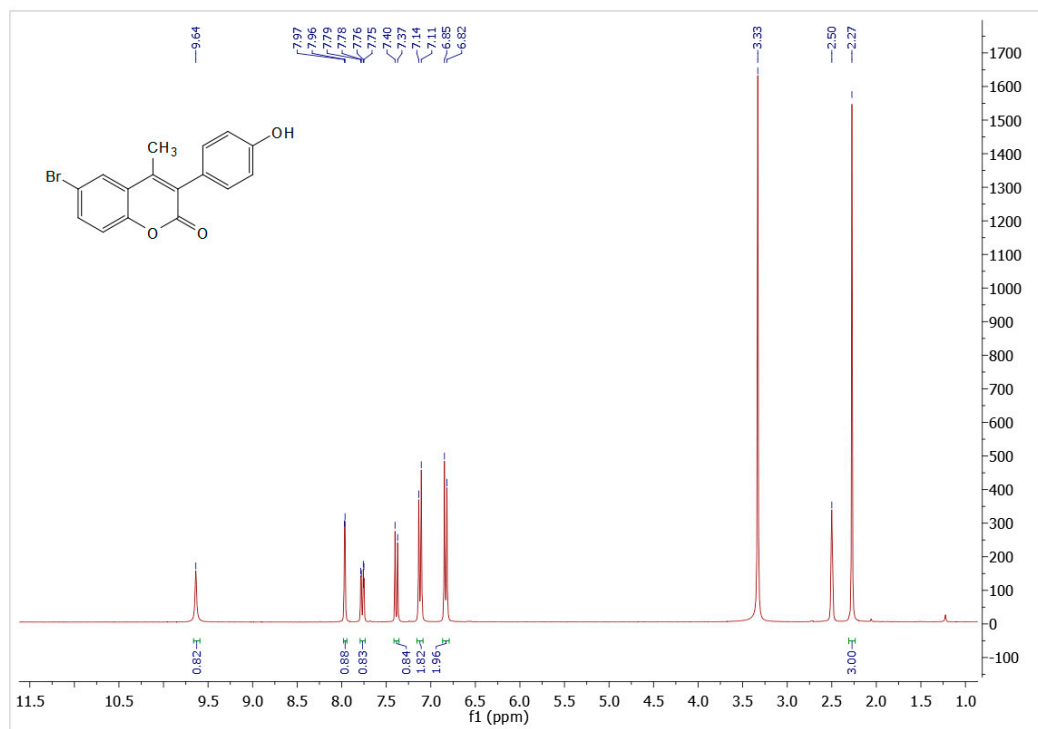
## Nuclear Magnetic Resonance data

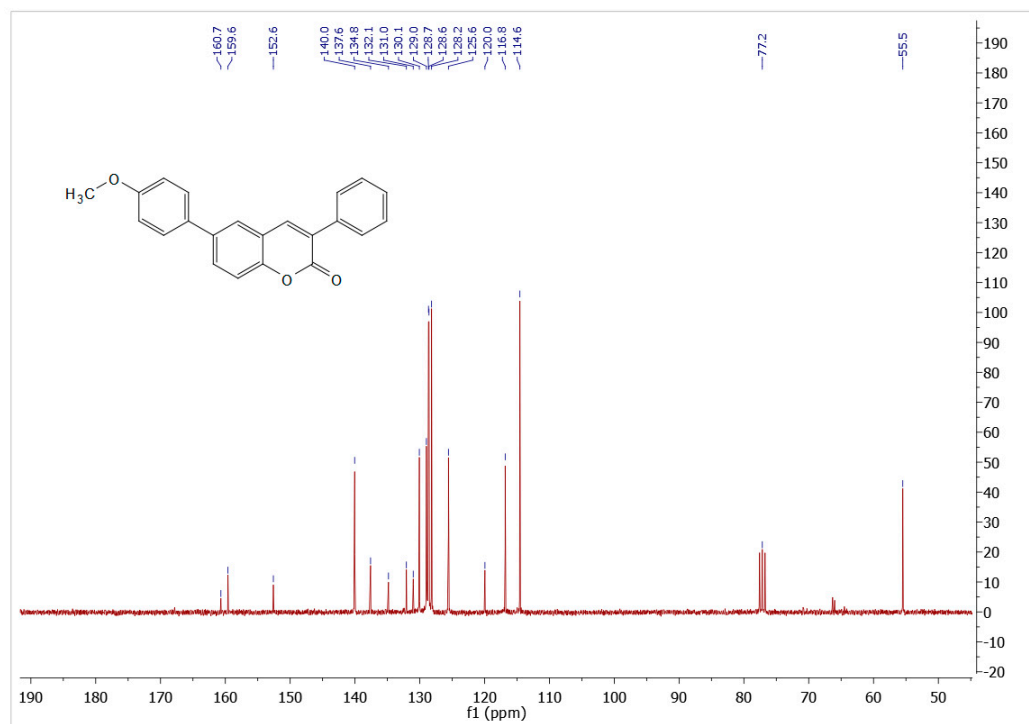


**Figure S1.** <sup>1</sup>H NMR spectrum of **3a** (600 MHz, CDCl<sub>3</sub>).

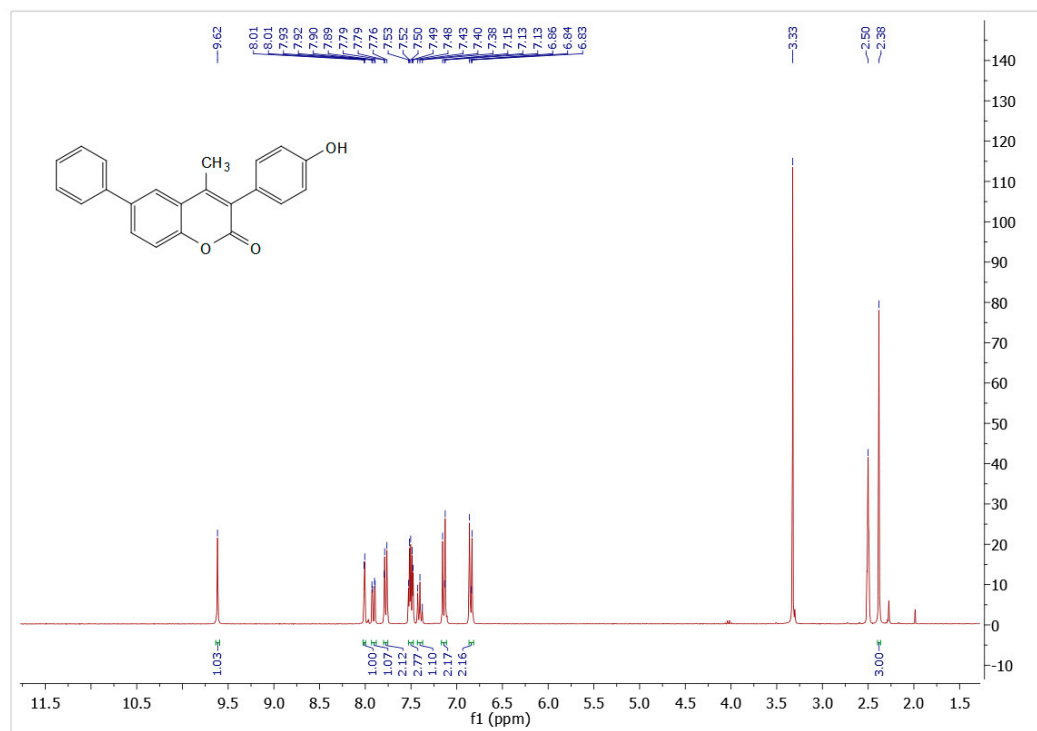


**Figure S2.** <sup>1</sup>H NMR spectrum of **3b** (600 MHz, CDCl<sub>3</sub>).

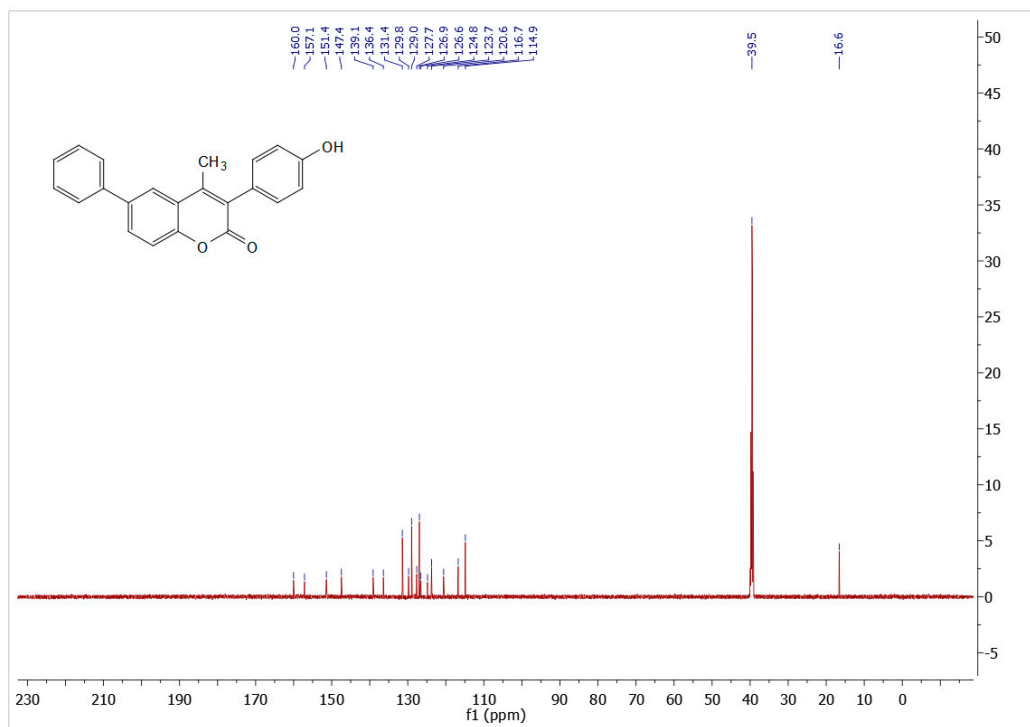




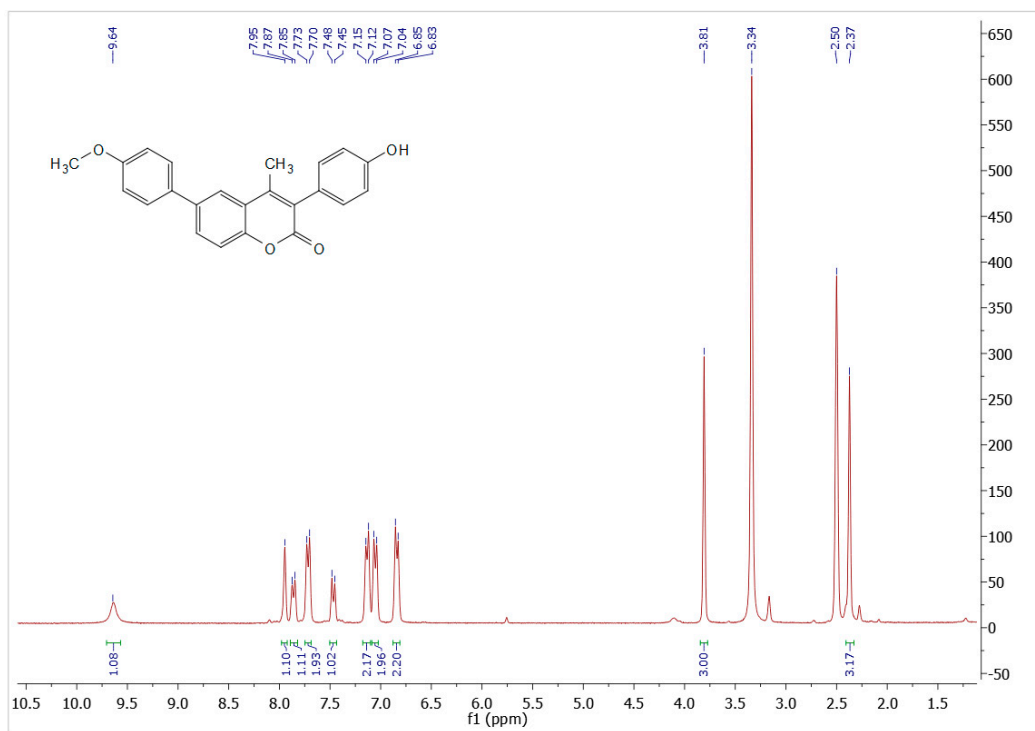
**Figure S5.** <sup>13</sup>C NMR spectrum of **4a** (75 MHz, CDCl<sub>3</sub>).



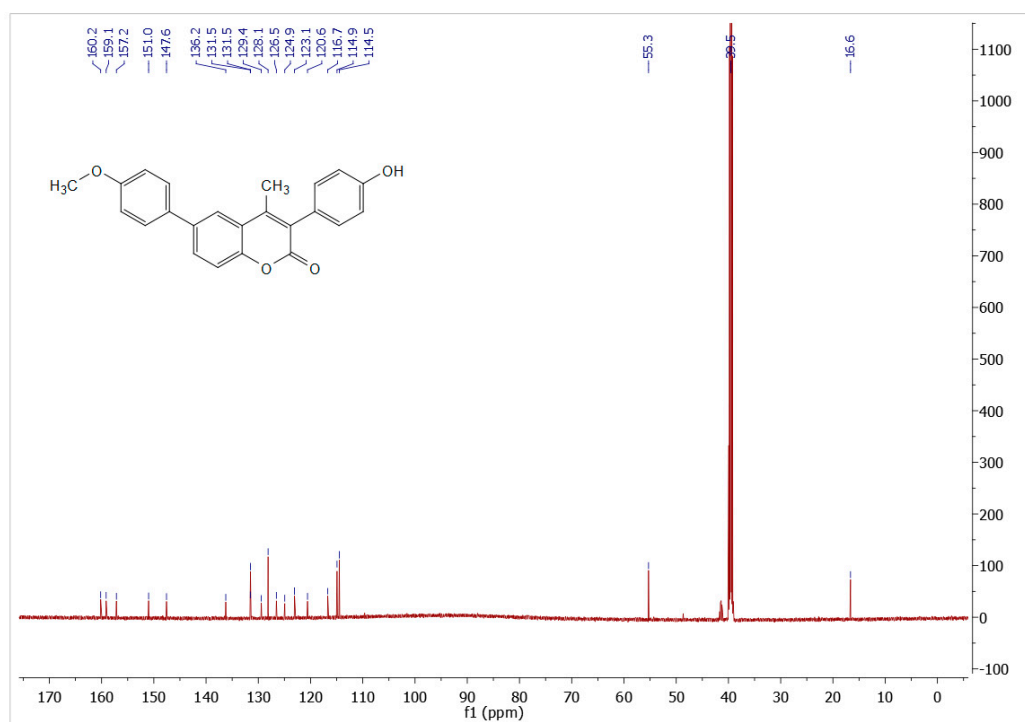
**Figure S6.** <sup>1</sup>H NMR spectrum of **4b** (600 MHz, DMSO-d<sub>6</sub>).



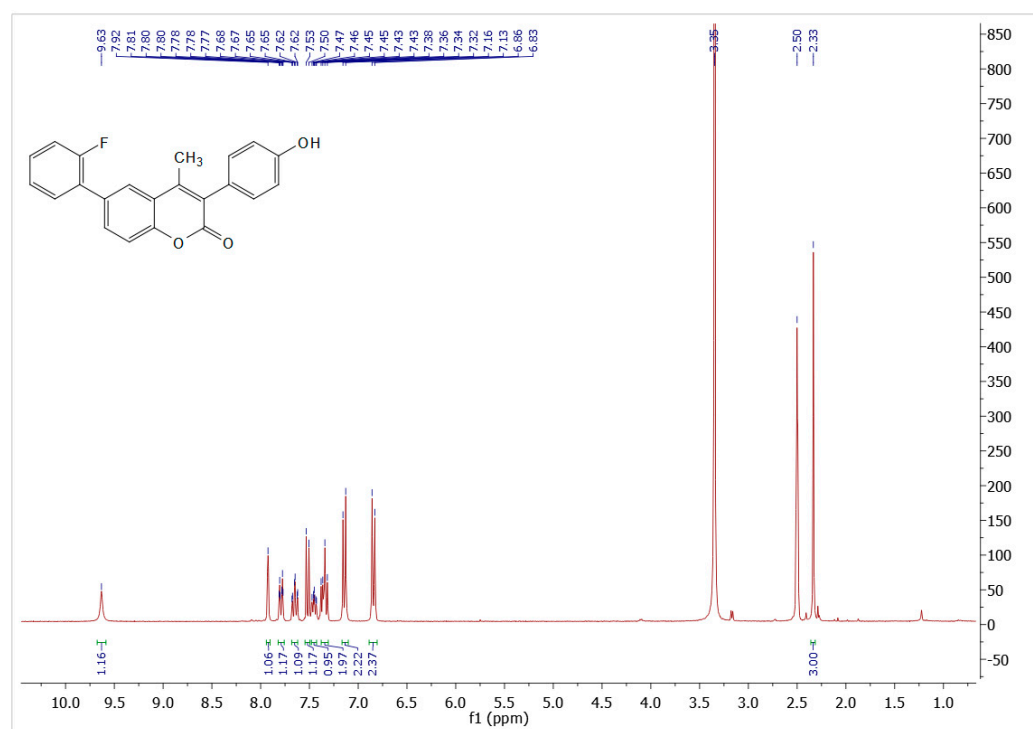
**Figure S7.** <sup>13</sup>C NMR spectrum of **4b** (150 MHz, DMSO-d<sub>6</sub>).



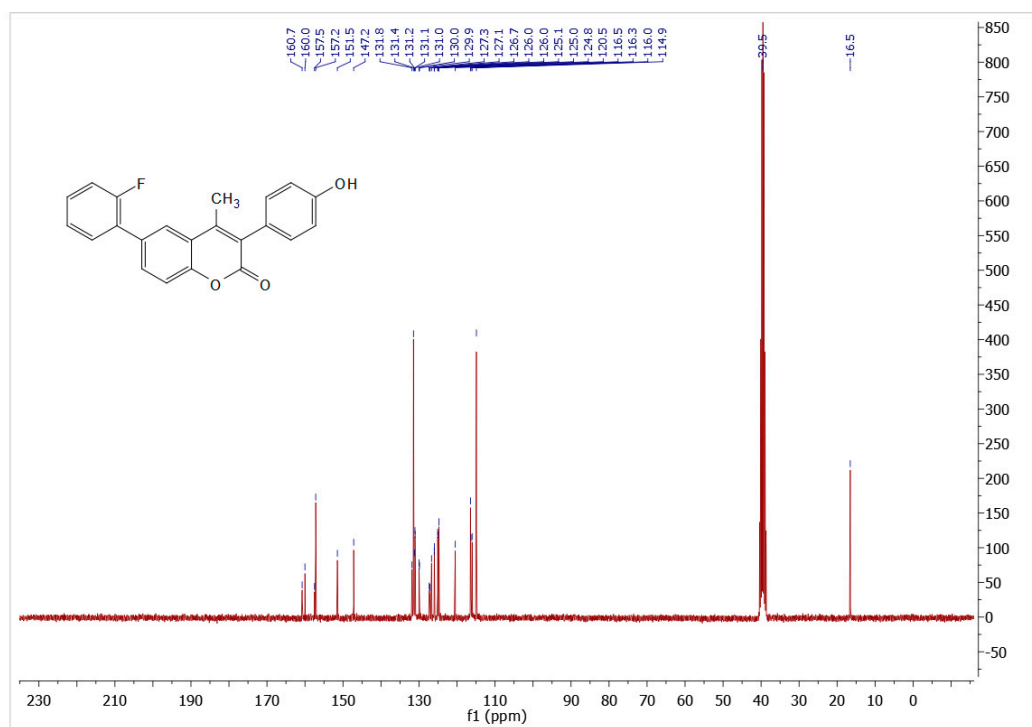
**Figure S8.** <sup>1</sup>H NMR spectrum of **4c** (600 MHz, DMSO-d<sub>6</sub>).



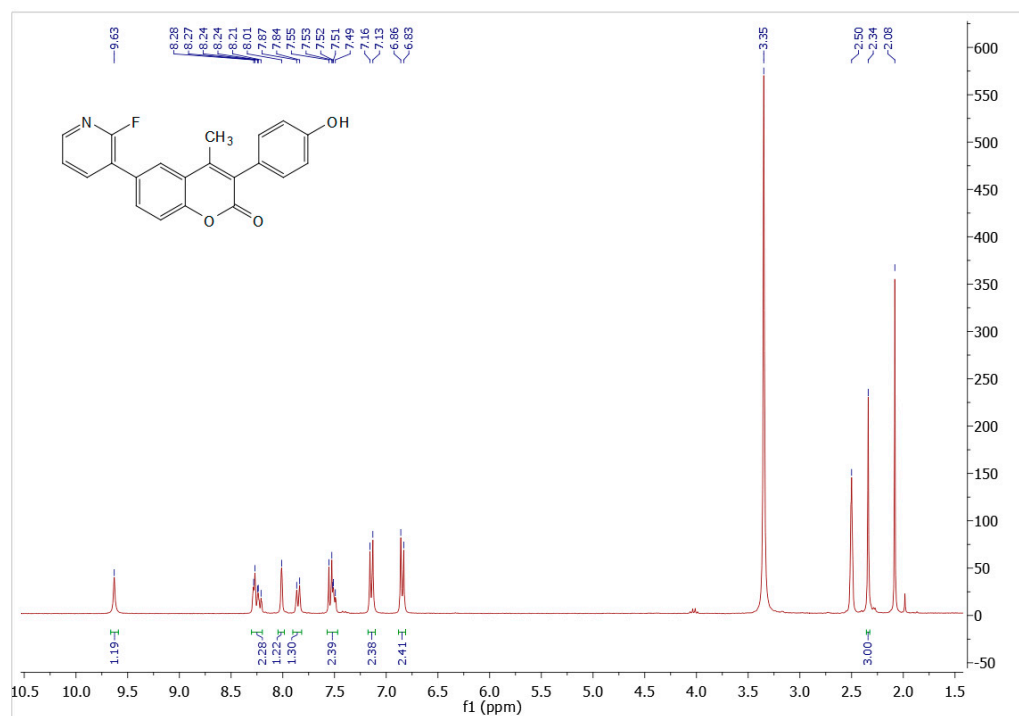
**Figure S9.**  $^{13}\text{C}$  NMR spectrum of **4c** (150 MHz,  $\text{DMSO-d}_6$ ).



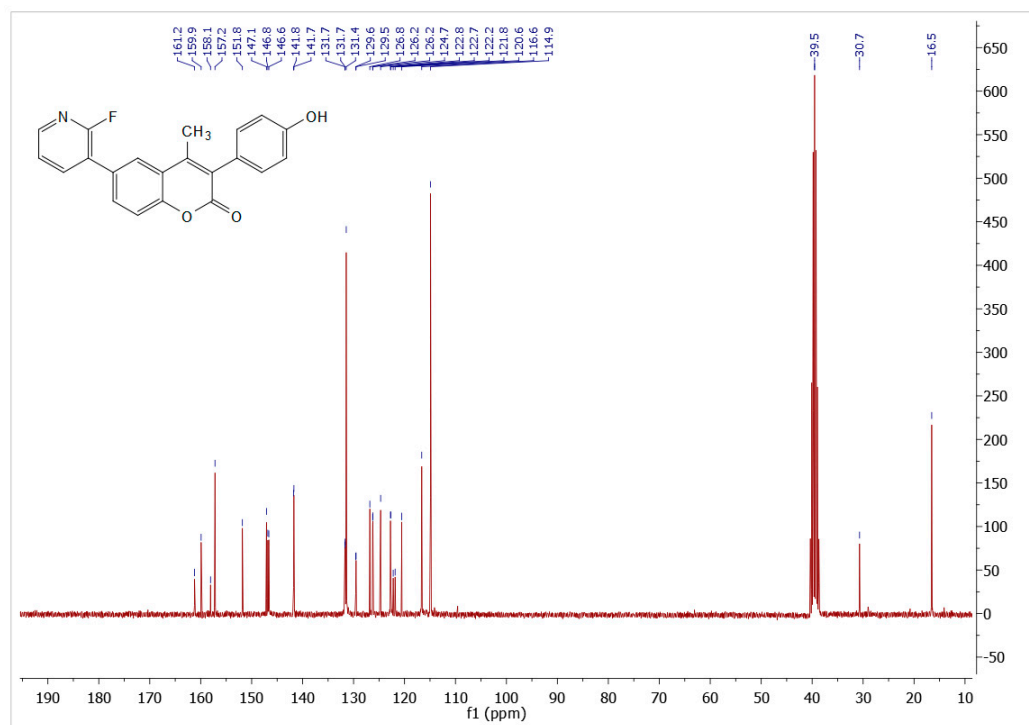
**Figure S10.**  $^1\text{H}$  NMR spectrum of **4d** (300 MHz,  $\text{DMSO-d}_6$ ).



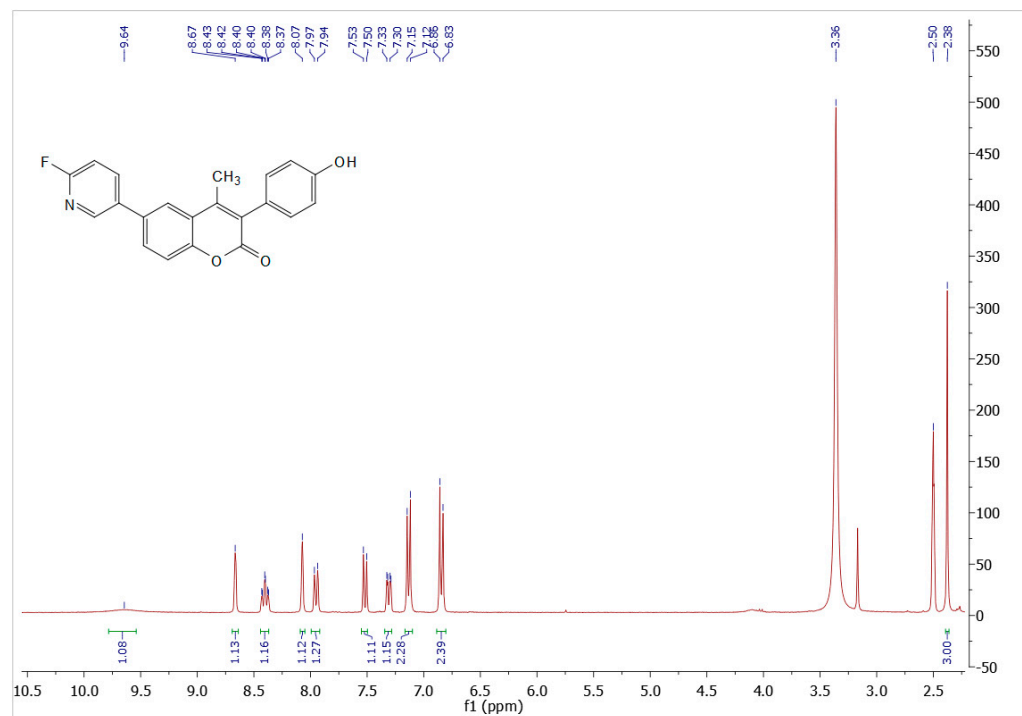
**Figure S11.** <sup>13</sup>C NMR spectrum of **4d** (75 MHz, DMSO-d<sub>6</sub>).



**Figure S12.** <sup>1</sup>H NMR spectrum of **4e** (300 MHz, DMSO-d<sub>6</sub>).

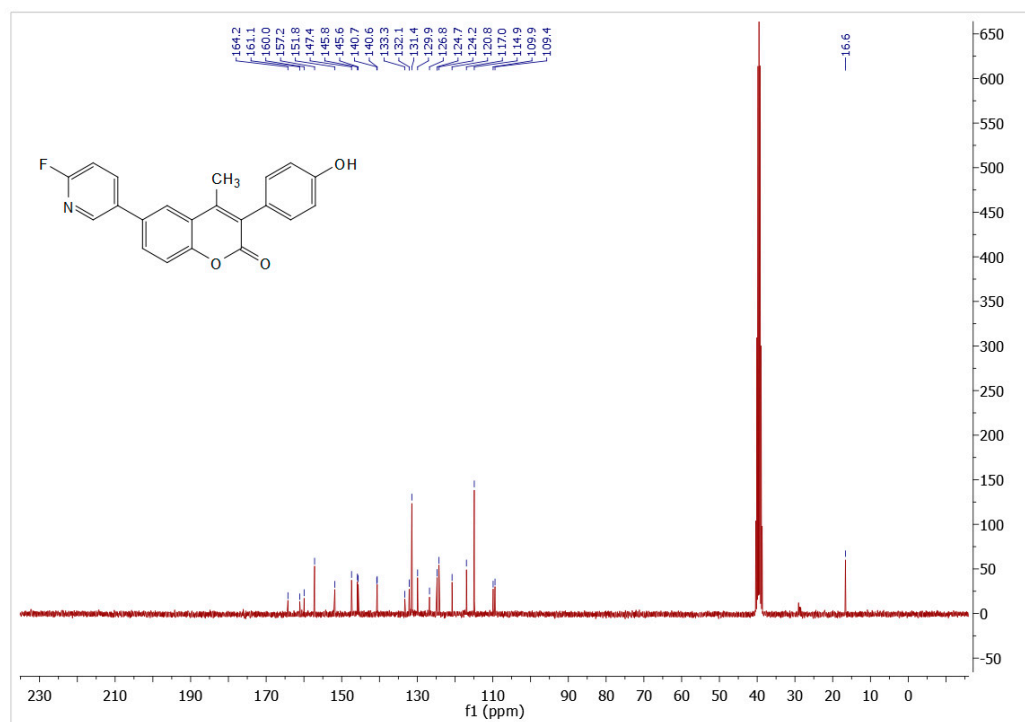


**Figure S13.**  $^{13}\text{C}$  NMR spectrum of **4e** (75 MHz,  $\text{DMSO-d}_6$ ).

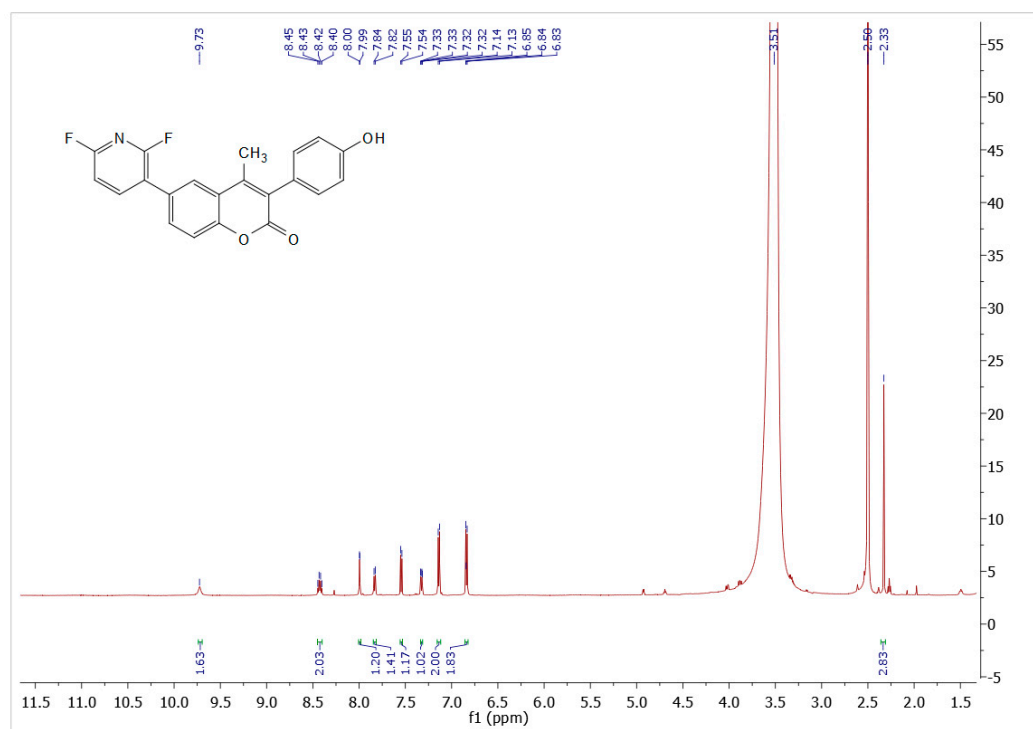


**Figure S14.**  $^1\text{H}$  NMR spectrum of **4f** (300 MHz,  $\text{DMSO-d}_6$ ).

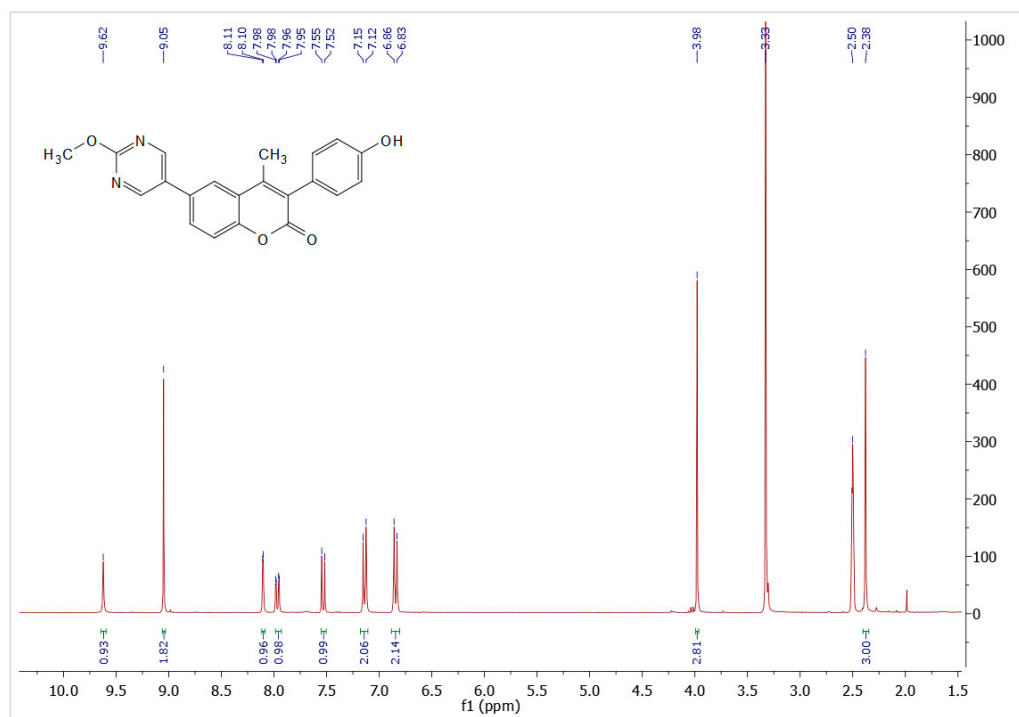




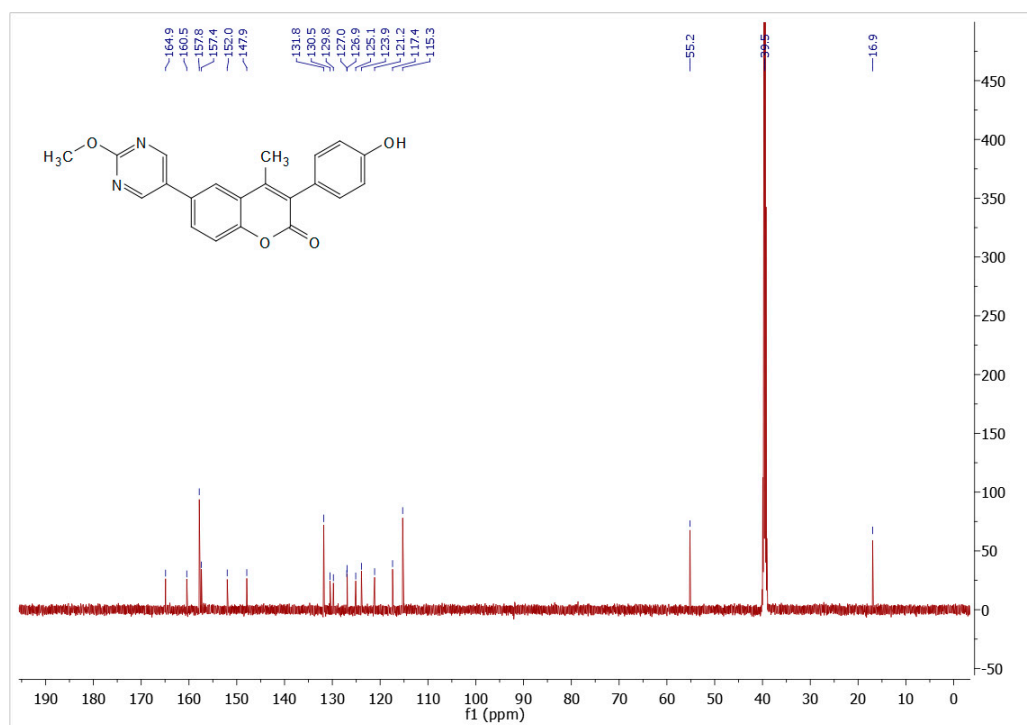
**Figure S15.**  $^{13}\text{C}$  NMR spectrum of **4f** (75 MHz,  $\text{DMSO-d}_6$ ).



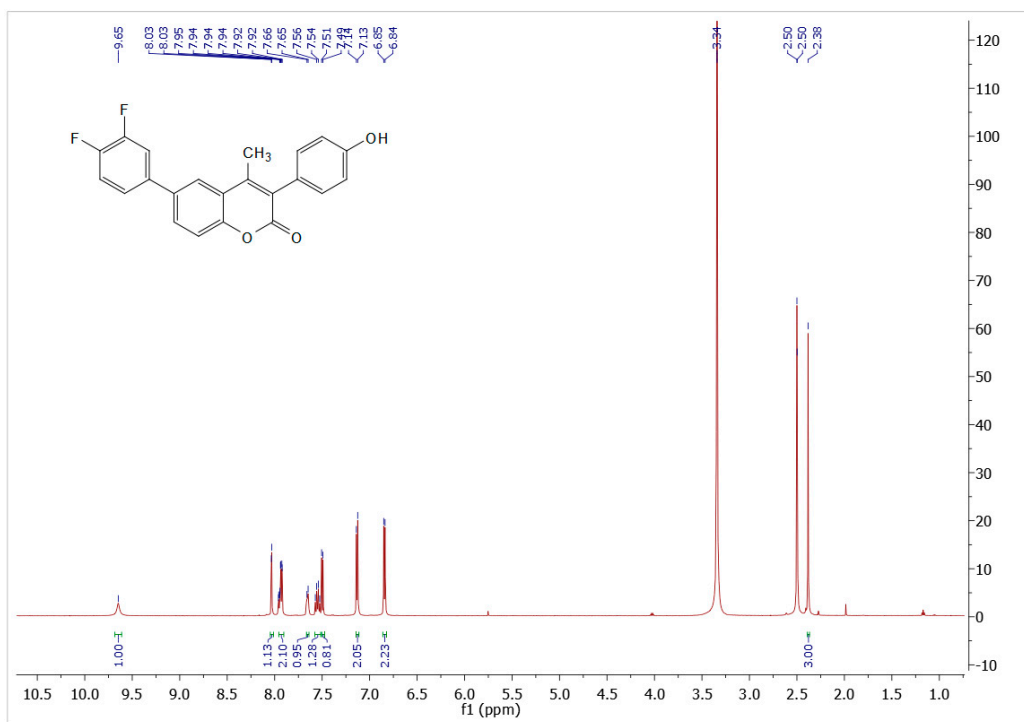
**Figure S16.**  $^1\text{H}$  NMR spectrum of **4g** (600 MHz,  $\text{DMSO-d}_6$ ).



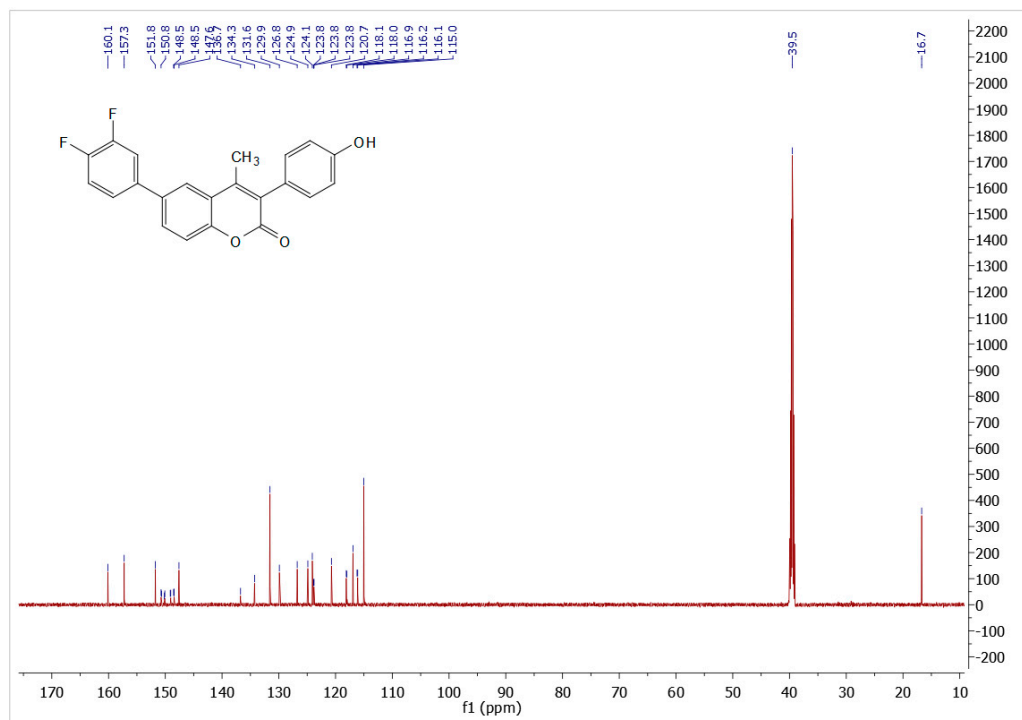
**Figure S17.** <sup>1</sup>H NMR spectrum of **4h** (300 MHz, DMSO-d<sub>6</sub>).



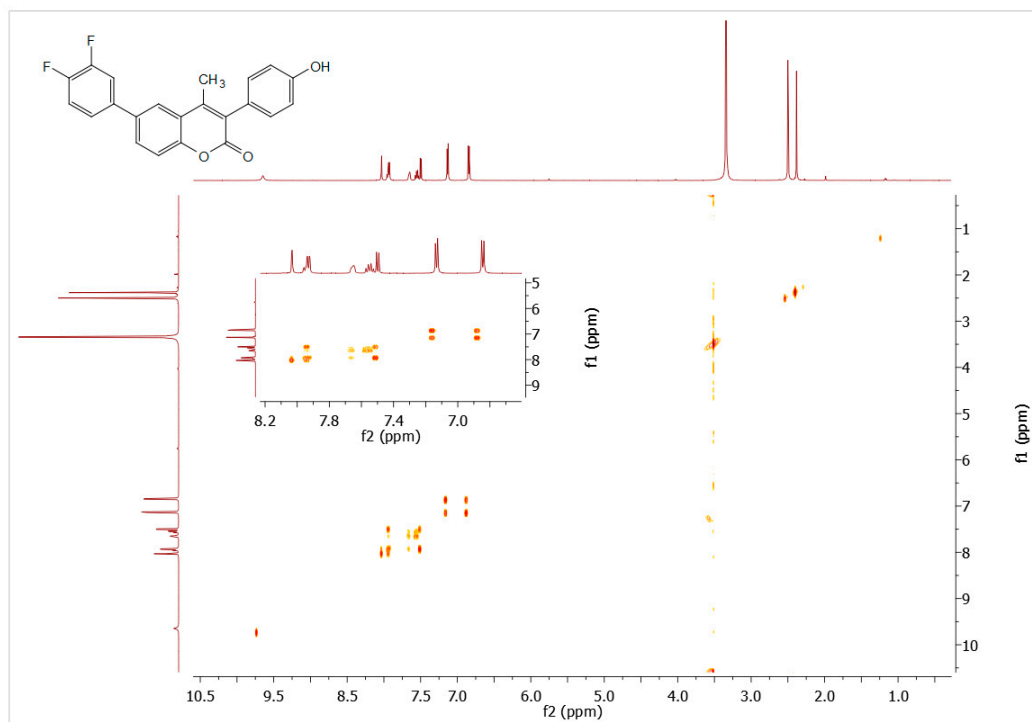
**Figure S18.** <sup>13</sup>C NMR spectrum of **4h** (150 MHz, DMSO-d<sub>6</sub>).



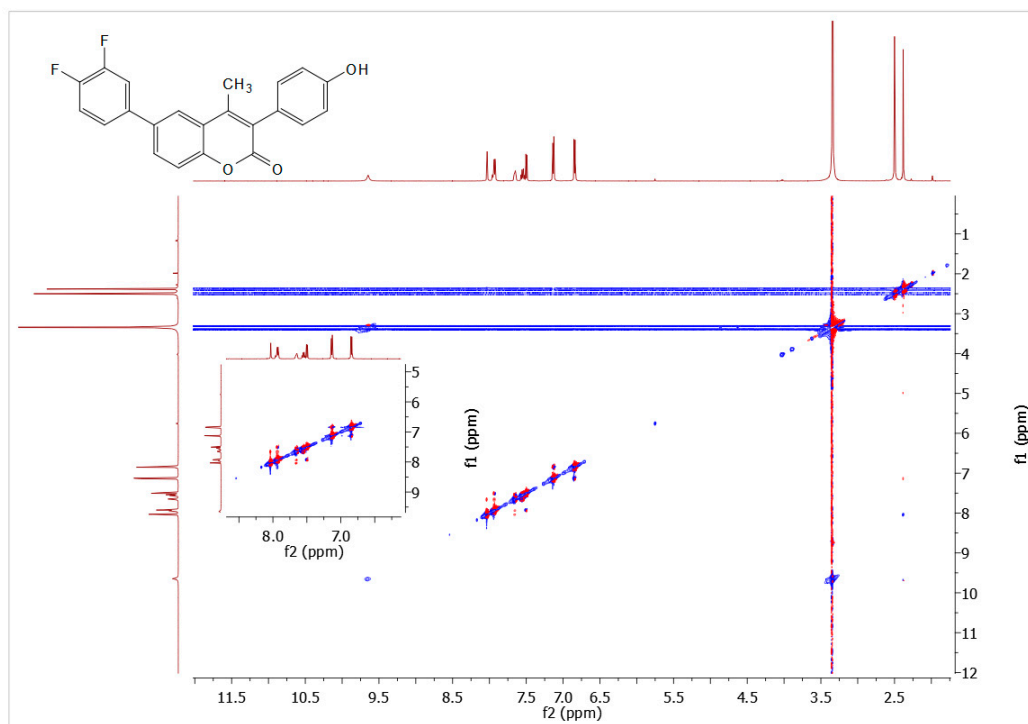
**Figure S19.** <sup>1</sup>H NMR spectrum of **4i** (600 MHz, DMSO-d<sub>6</sub>).



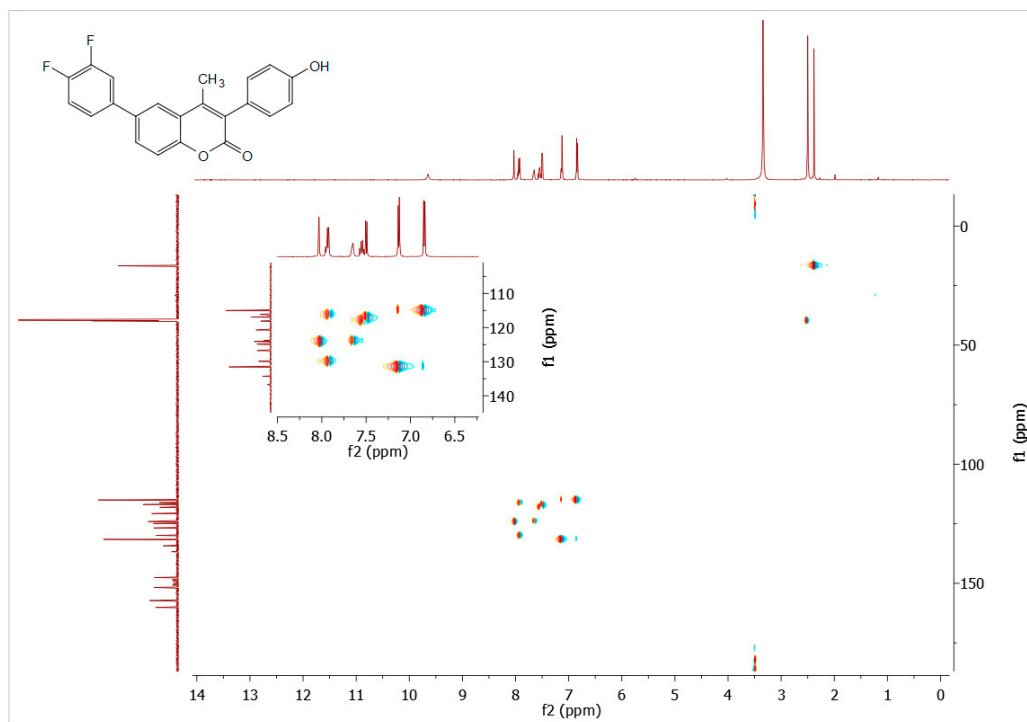
**Figure S20.** <sup>13</sup>C NMR spectrum of **4i** (150 MHz, DMSO-d<sub>6</sub>).



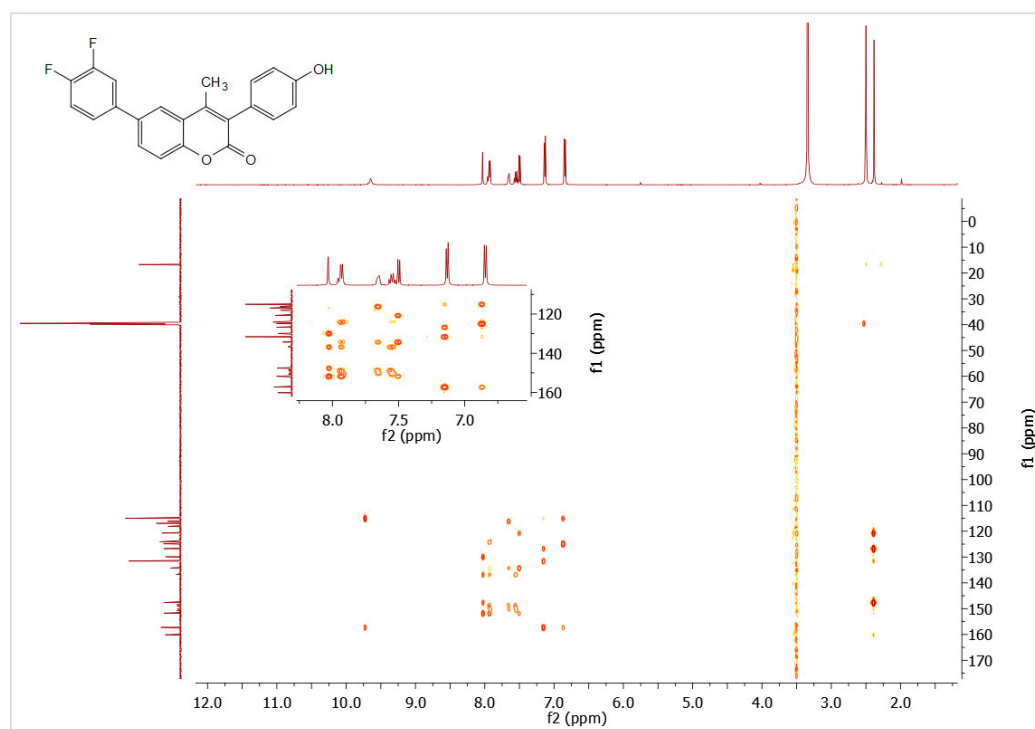
**Figure S21.**  $^1\text{H}$ - $^1\text{H}$  COSY NMR spectrum of **4i** ( $\text{DMSO-d}_6$ ).



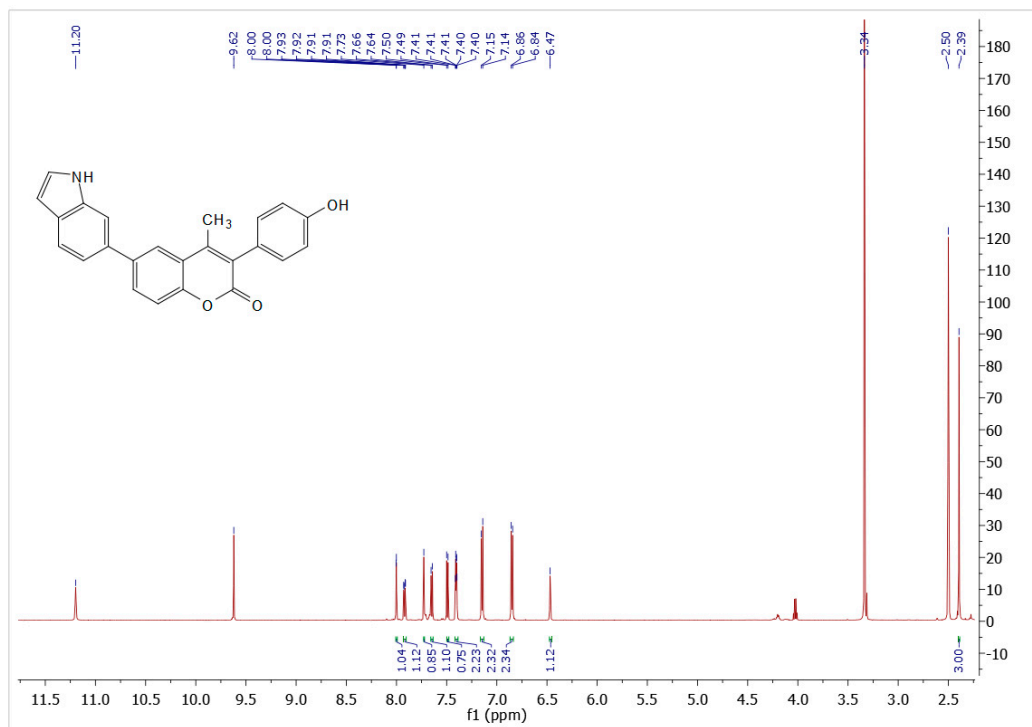
**Figure S22.**  $^1\text{H}$ - $^1\text{H}$  NOESY NMR spectrum of **4i** ( $\text{DMSO-d}_6$ ).



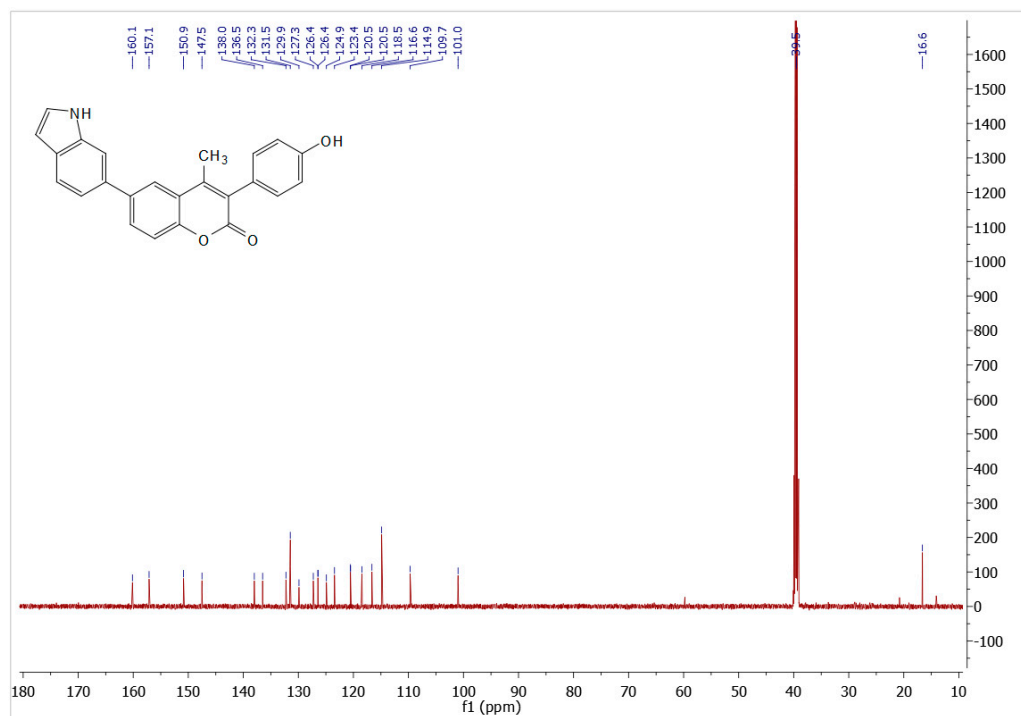
**Figure S23.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC NMR spectrum of **4i** ( $\text{DMSO-d}_6$ ).



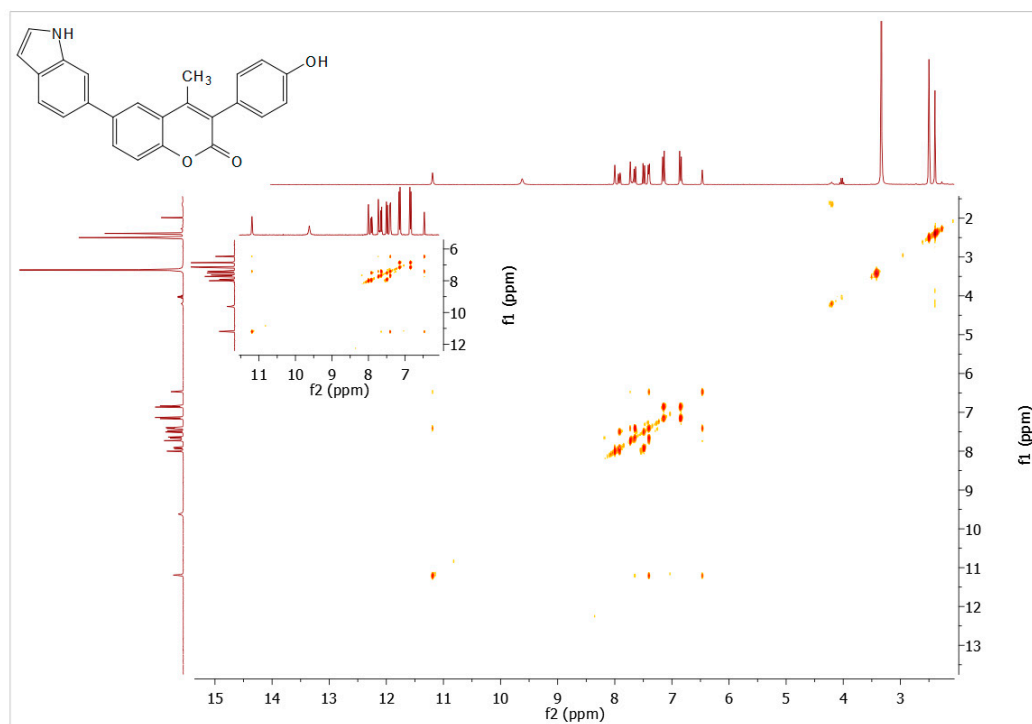
**Figure S24.**  $^1\text{H}$ - $^{13}\text{C}$  HMBC NMR spectrum of **4i** ( $\text{DMSO-d}_6$ ).



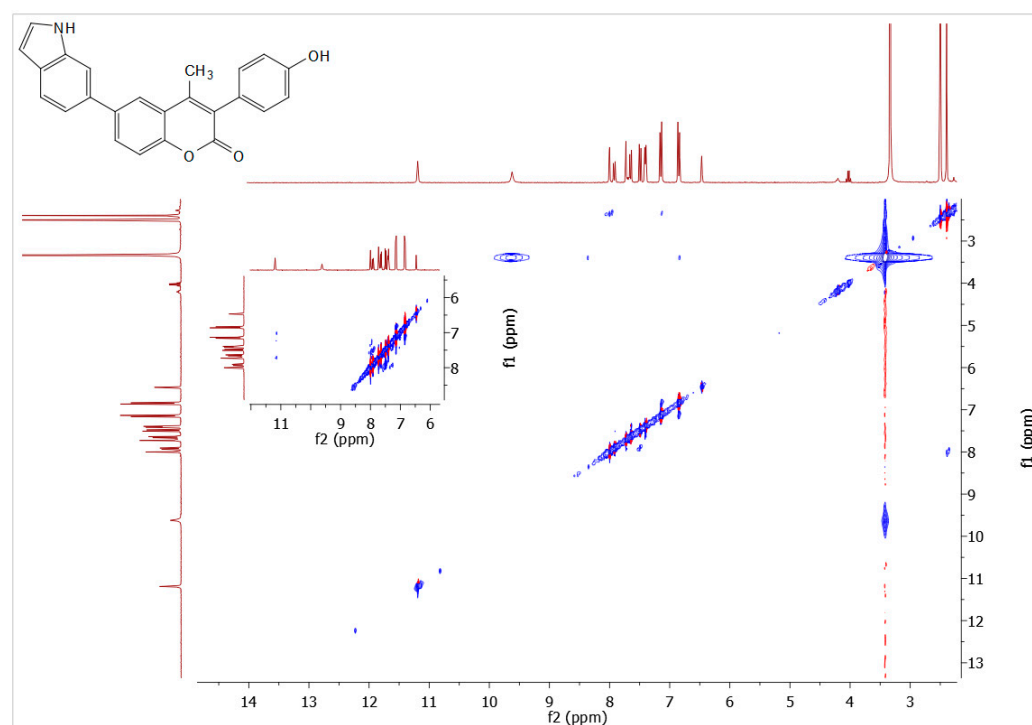
**Figure S25.** <sup>1</sup>H NMR spectrum of **4j** (600 MHz, DMSO-d<sub>6</sub>).



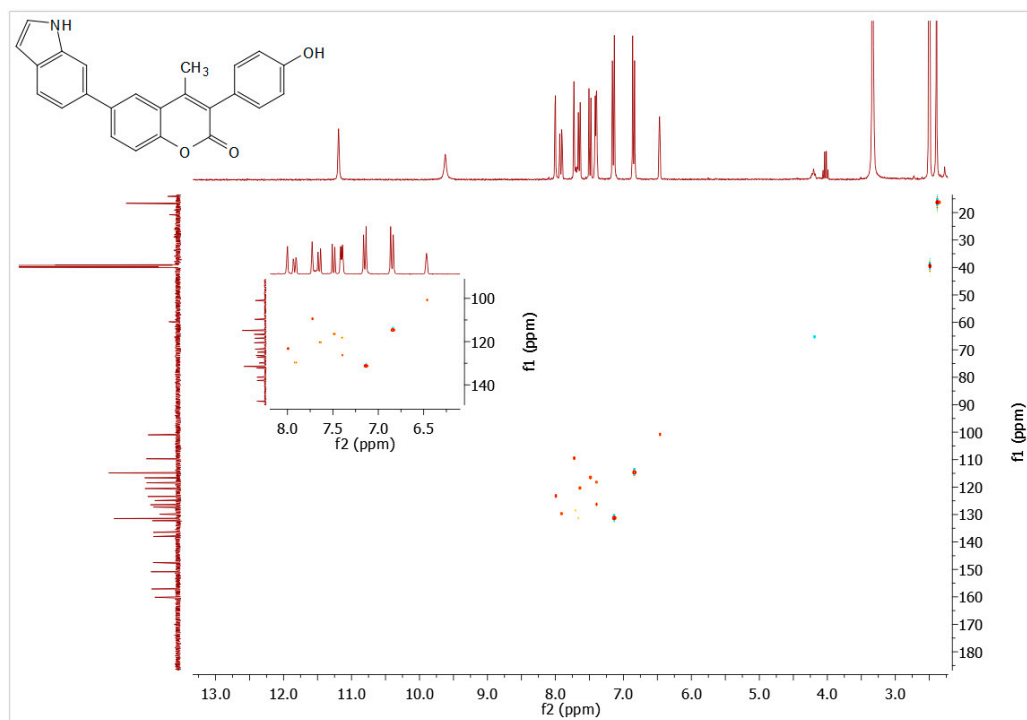
**Figure S26.** <sup>13</sup>C NMR spectrum of **4j** (150 MHz, DMSO-d<sub>6</sub>).



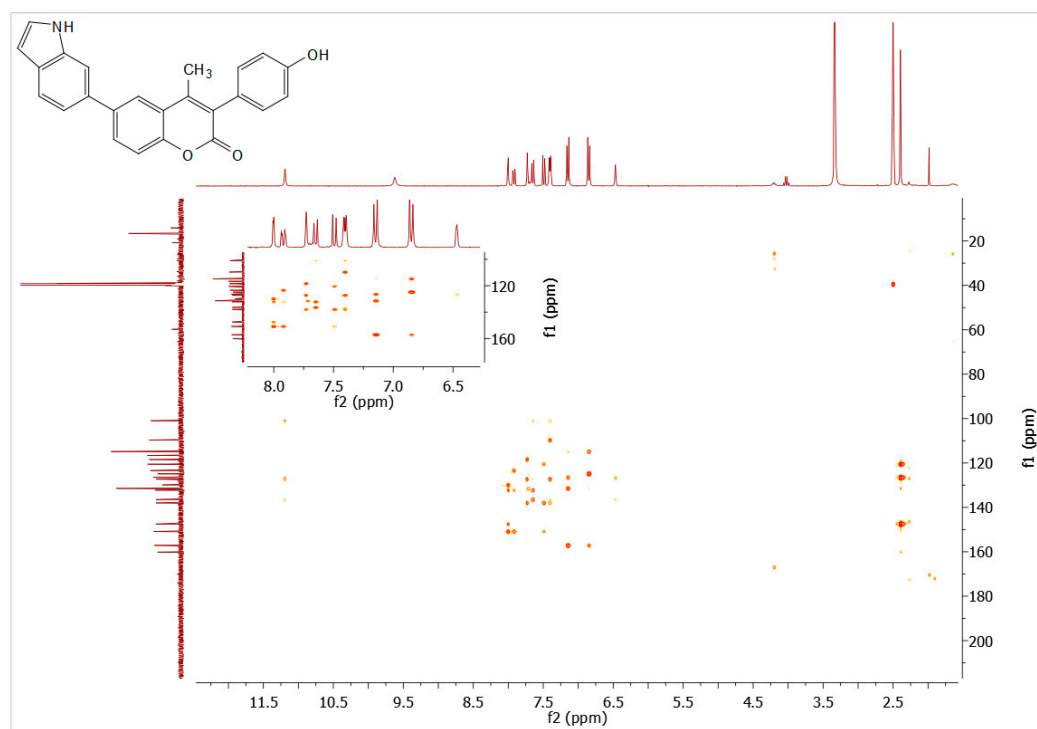
**Figure S27.**  $^1\text{H}$ - $^1\text{H}$  COSY NMR spectrum of **4j** (DMSO- $\text{d}_6$ ).



**Figure S28.**  $^1\text{H}$ - $^1\text{H}$  NOESY NMR spectrum of **4j** (DMSO- $\text{d}_6$ ).



**Figure S29.**  $^1\text{H}$ - $^{13}\text{C}$  HSQC NMR spectrum of **4j** (DMSO- $\text{d}_6$ ).



**Figure S30.**  $^1\text{H}$ - $^{13}\text{C}$  HMBC NMR spectrum of **4j** (DMSO- $\text{d}_6$ ).



## HR-MS data

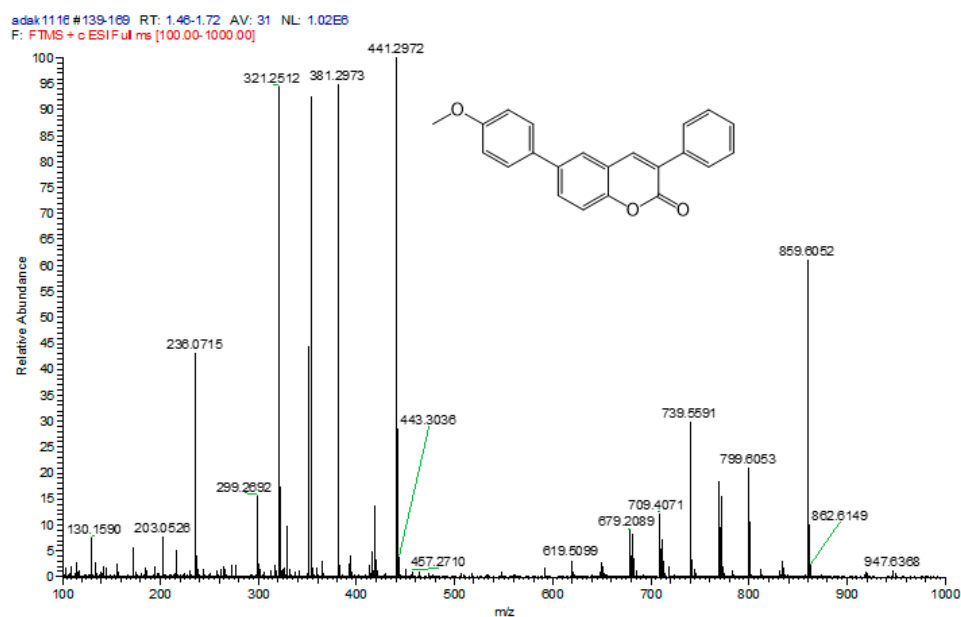


Figure S31. HR-MS spectrum of **4a**.

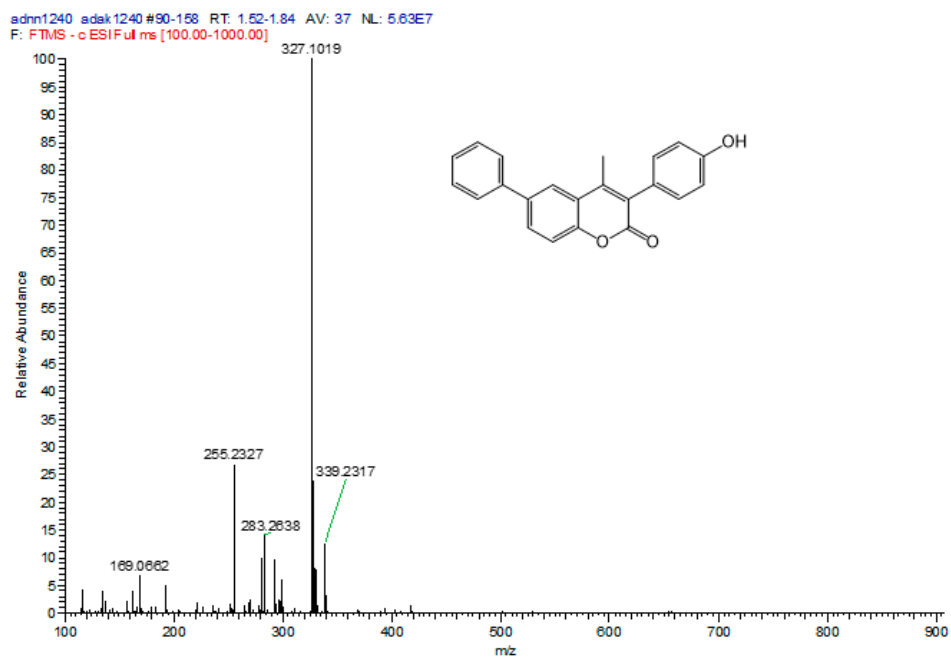


Figure S32. HR-MS spectrum of **4b**.

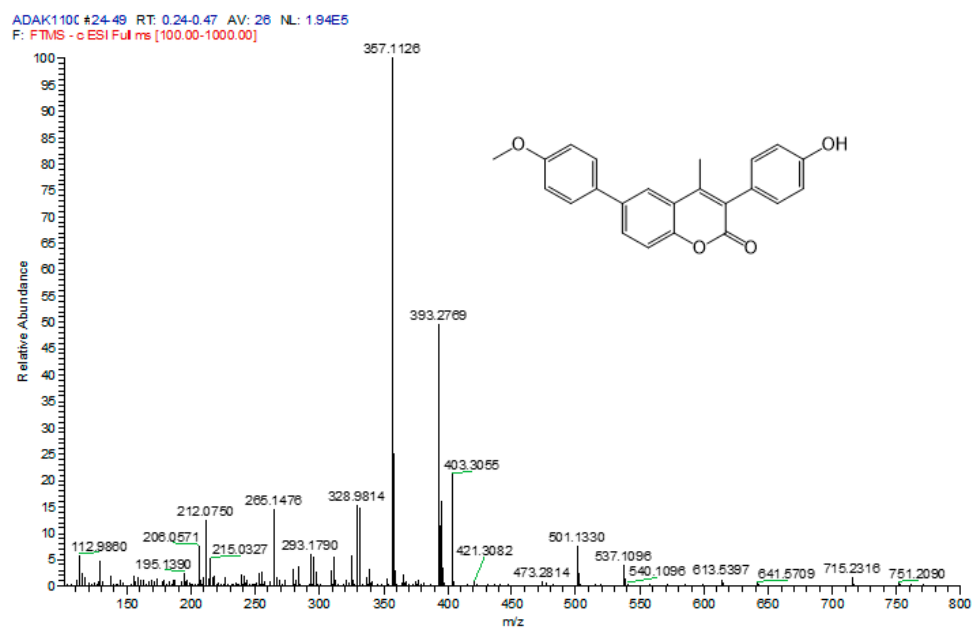


Figure S33. HR-MS spectrum of 4c.

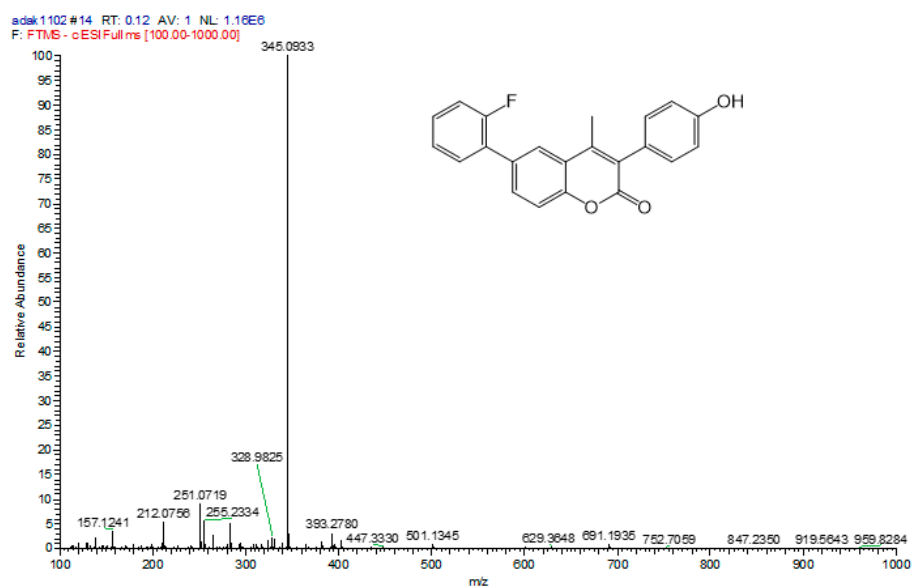
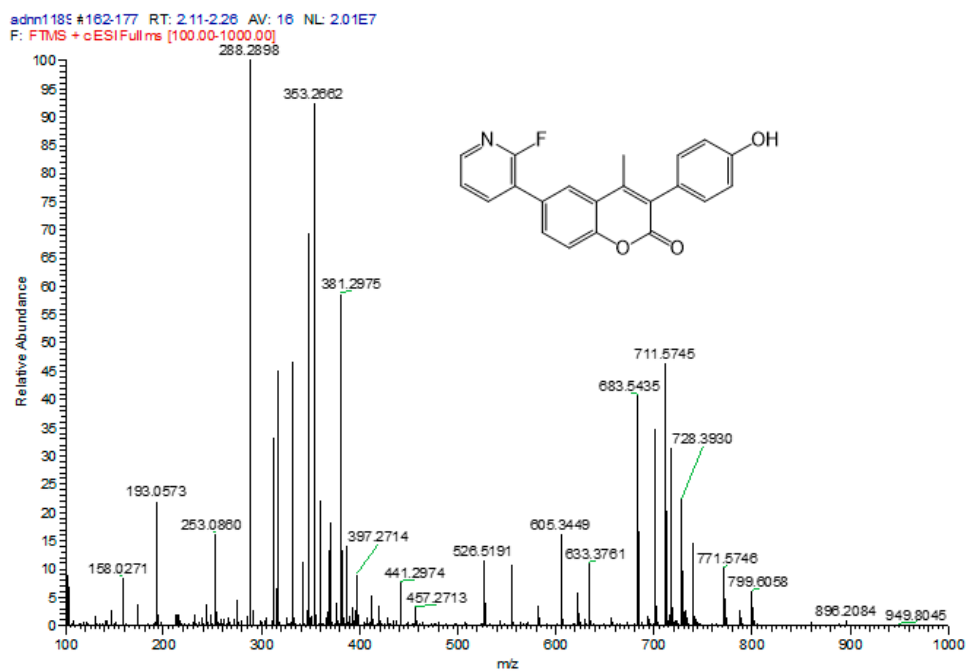
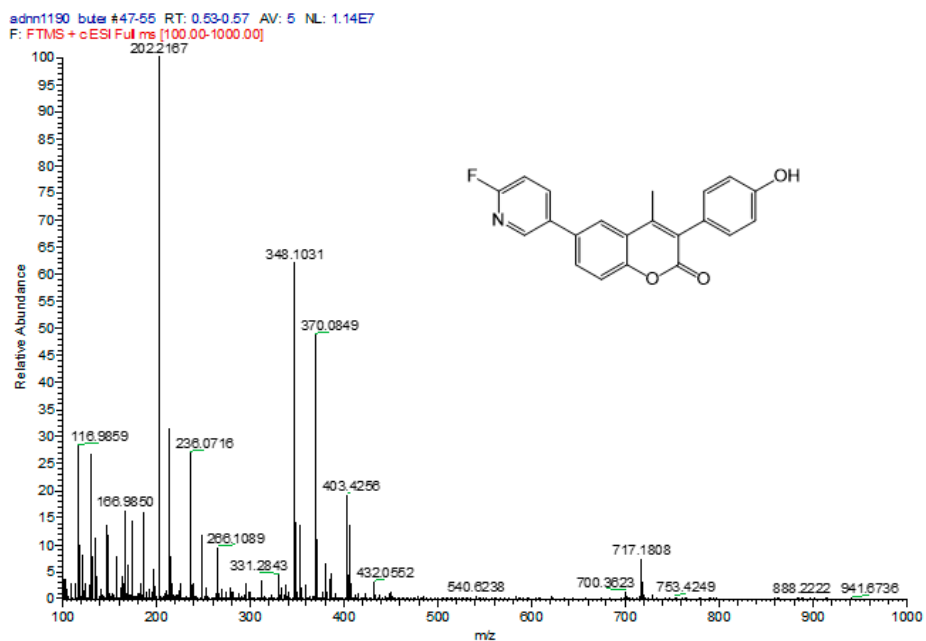


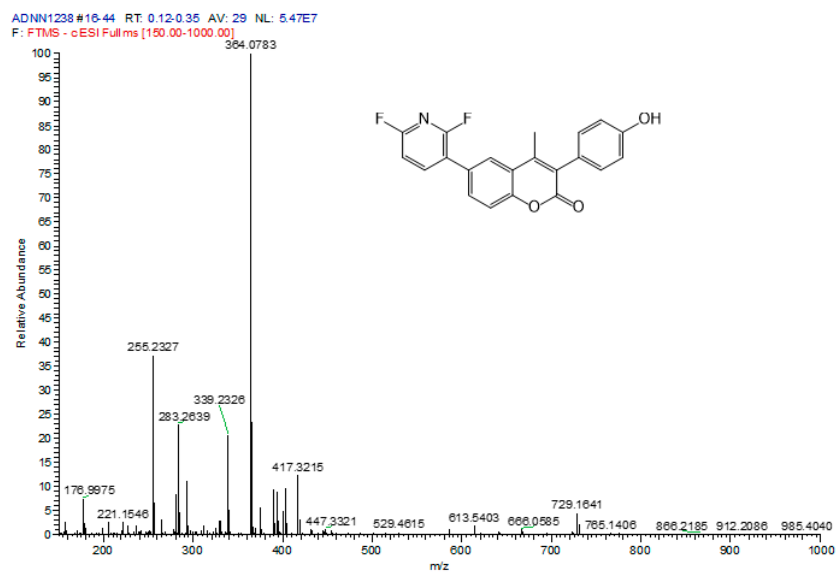
Figure S34. HR-MS spectrum of 4d.



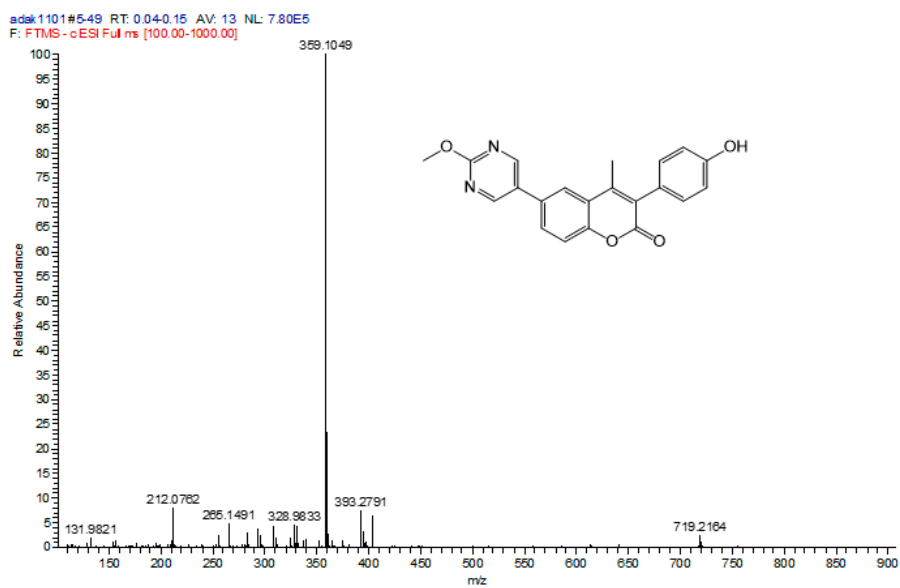
**Figure S35.** HR-MS spectrum of **4e**.



**Figure S36.** HR-MS spectrum of **4f**.



**Figure S37.** HR-MS spectrum of **4g**.



**Figure S38.** HR-MS spectrum of **4h**.

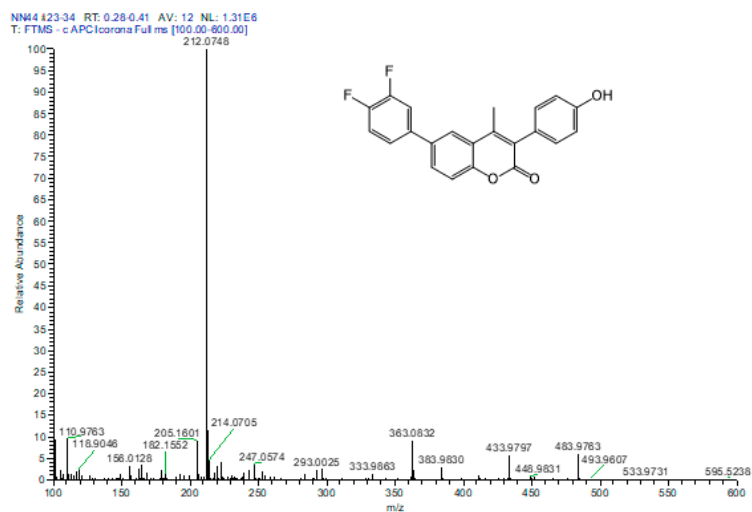


Figure S39. HR-MS spectrum of **4i**.

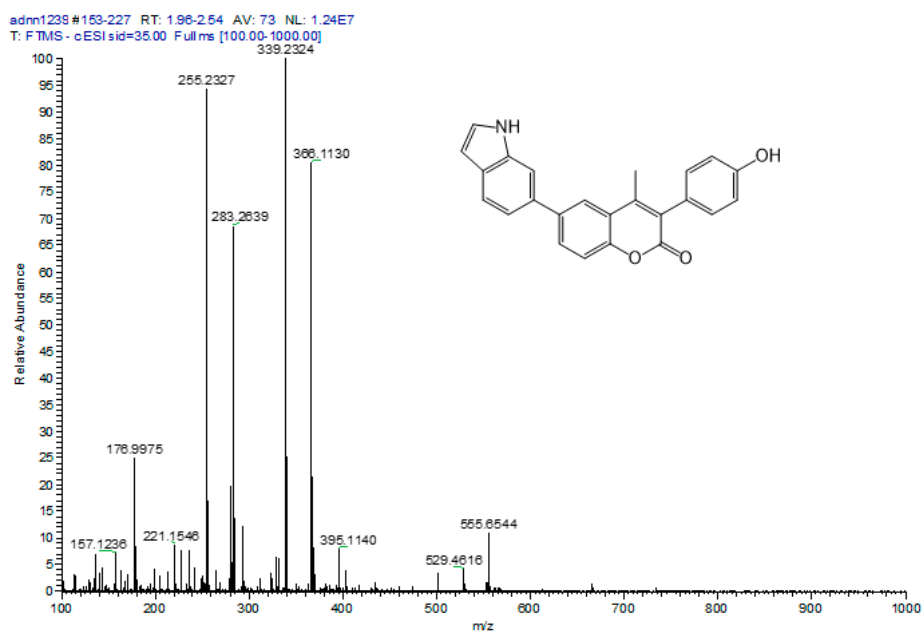


Figure S40. HR-MS spectrum of **4j**.