

## **Synthesis and Anti-Inflammatory Activity of (Z)-4-(2-(3-Oxopiperazin-2-ylidene)acetyl)benzoic Acid**

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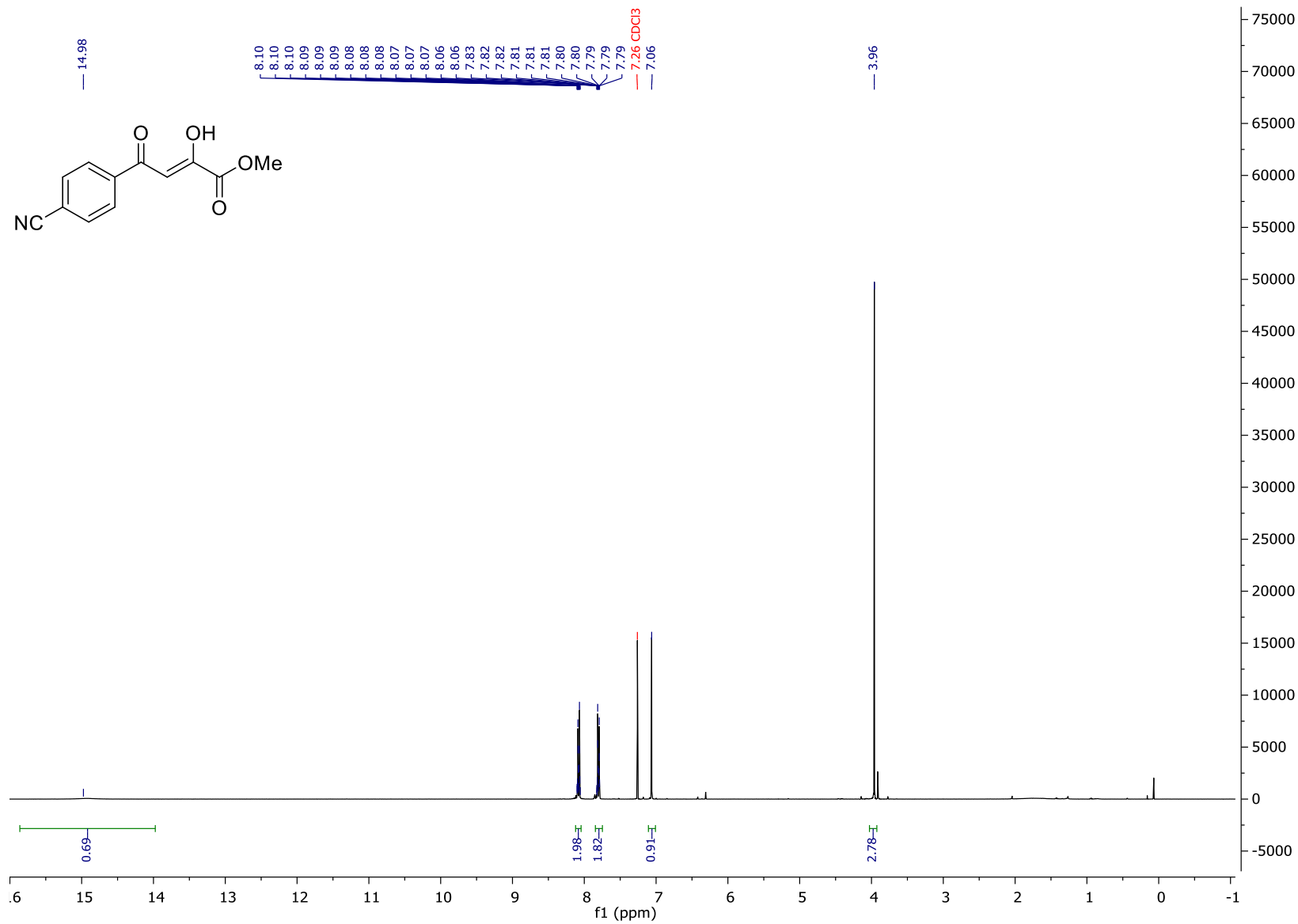
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## 1. X-ray analysis

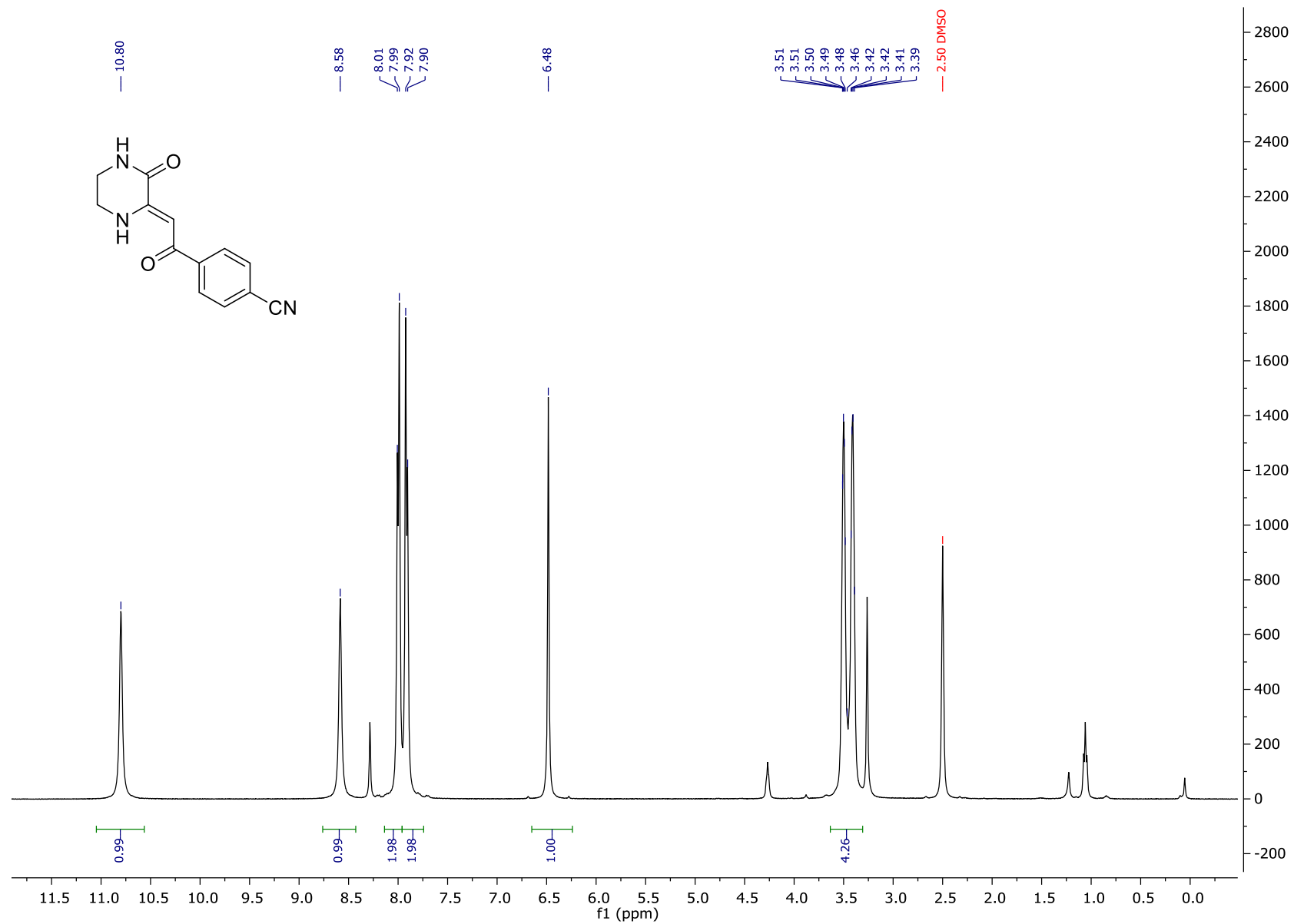
**Table S1.** Crystal data and structure refinement for piron and compound **3**.

| Compound                                  | <b>Piron</b>  | <b>3</b>  |
|---|---|---|
| CCDC                                      | 2314647   | 2314648   |
| Empirical formula                         | C <sub>13</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub> | C <sub>26</sub> H <sub>24</sub> N <sub>6</sub> O <sub>5</sub> |
| Formula weight                            | 230.26  | 500.51  |
| Temperature, K                            | 295(2)  | 293(2)  |
| Crystal system                            | monoclinic  | monoclinic  |
| Space group                               | C2/c  | P2 <sub>1</sub> /c  |
| a, Å                                      | 24.996(6)   | 11.589(3)   |
| b, Å                                      | 5.2350(8)   | 25.450(5)   |
| c, Å                                      | 18.116(3)   | 8.4635(17)  |
| α, °                                      | 90  | 90  |
| β, °                                      | 91.106(18)  | 99.40(2)  |
| γ, °                                      | 90  | 90  |
| Volume, Å <sup>3</sup>                    | 2370.1(8)   | 2462.8(10)  |
| Z   | 8   | 4   |
| Density (calculated), g/cm <sup>3</sup>   | 1.291   | 1.350   |
| Absorption coefficient, mm <sup>-1</sup>  | 0.089   | 0.096   |
| F(000)                                    | 976.0   | 1048.0  |
| Crystal size, mm <sup>3</sup>             | 0.5 × 0.25 × 0.12   | 0.56 × 0.41 × 0.06  |
| Radiation                                 | Mo Kα (λ = 0.71073)   | MoKα (λ = 0.71073)  |
| 2θ range for data collection, °           | 6.522 to 58.774   | 5.836 to 58.826   |
| Index ranges                              | -23 ≤ h ≤ 33, -6 ≤ k ≤ 7, -24 ≤ l ≤ 23                        | -15 ≤ h ≤ 11, -35 ≤ k ≤ 23, -11 ≤ l ≤ 11                      |
| Reflections collected                     | 9992  | 13980   |
| Independent reflections                   | 2930 [R <sub>int</sub> = 0.0331, R <sub>sigma</sub> = 0.0259] | 5819 [R <sub>int</sub> = 0.0309, R <sub>sigma</sub> = 0.0426] |
| Data/restraints/parameters                | 2930/5/182  | 5819/0/353  |
| Goodness-of-fit on F <sup>2</sup>         | 1.029   | 1.009   |
| Final R indexes [I ≥ 2σ (I)]              | R <sub>1</sub> = 0.0561, wR <sub>2</sub> = 0.1490             | R <sub>1</sub> = 0.0583, wR <sub>2</sub> = 0.1318             |
| Final R indexes [all data]                | R <sub>1</sub> = 0.0747, wR <sub>2</sub> = 0.1685             | R <sub>1</sub> = 0.0946, wR <sub>2</sub> = 0.1546             |
| Largest diff. peak/hole, eÅ <sup>-3</sup> | 0.17/-0.18  | 0.28/-0.28  |

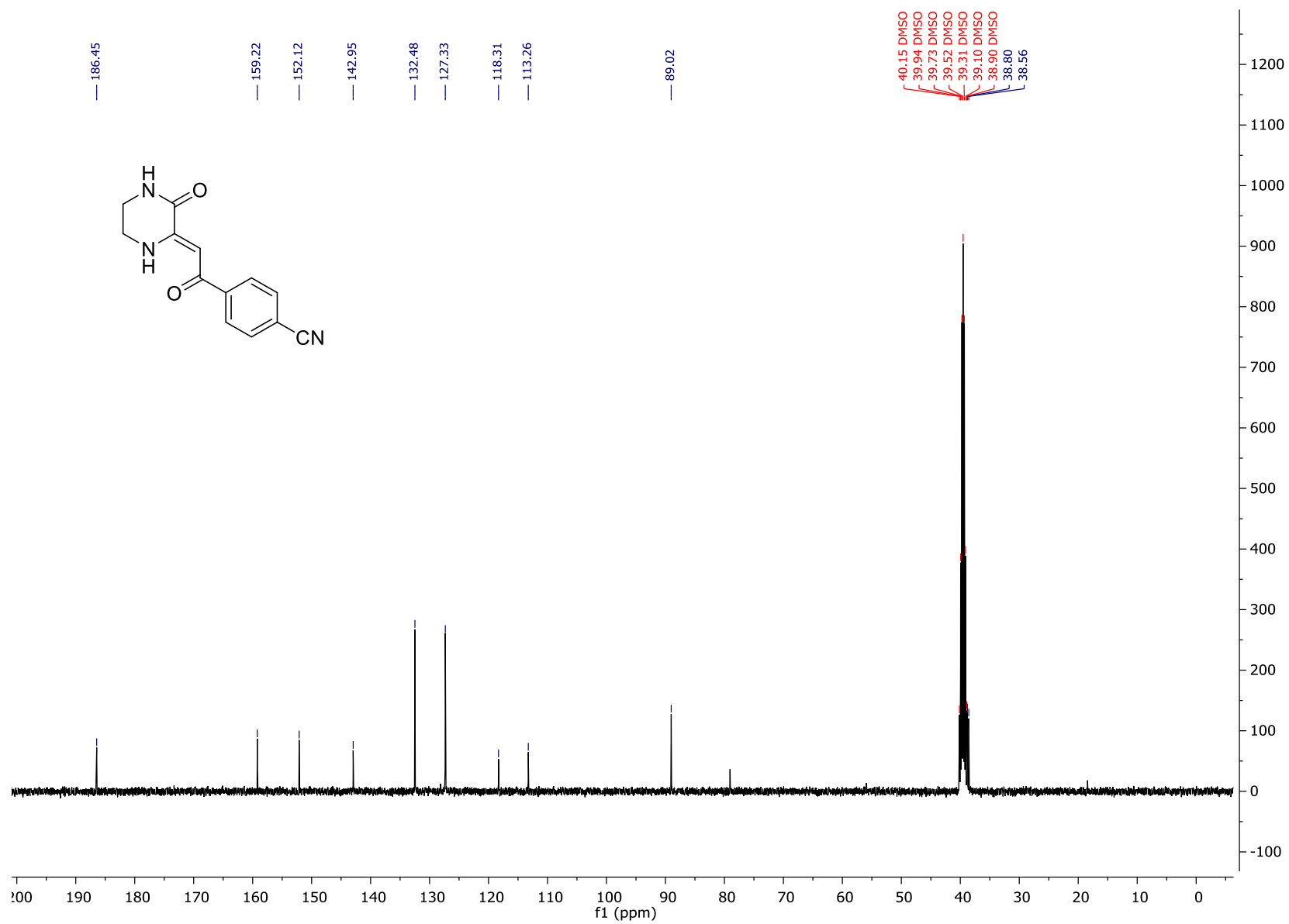
## 2. Copies of $^1\text{H}$ and $^{13}\text{C}$ NMR Spectra



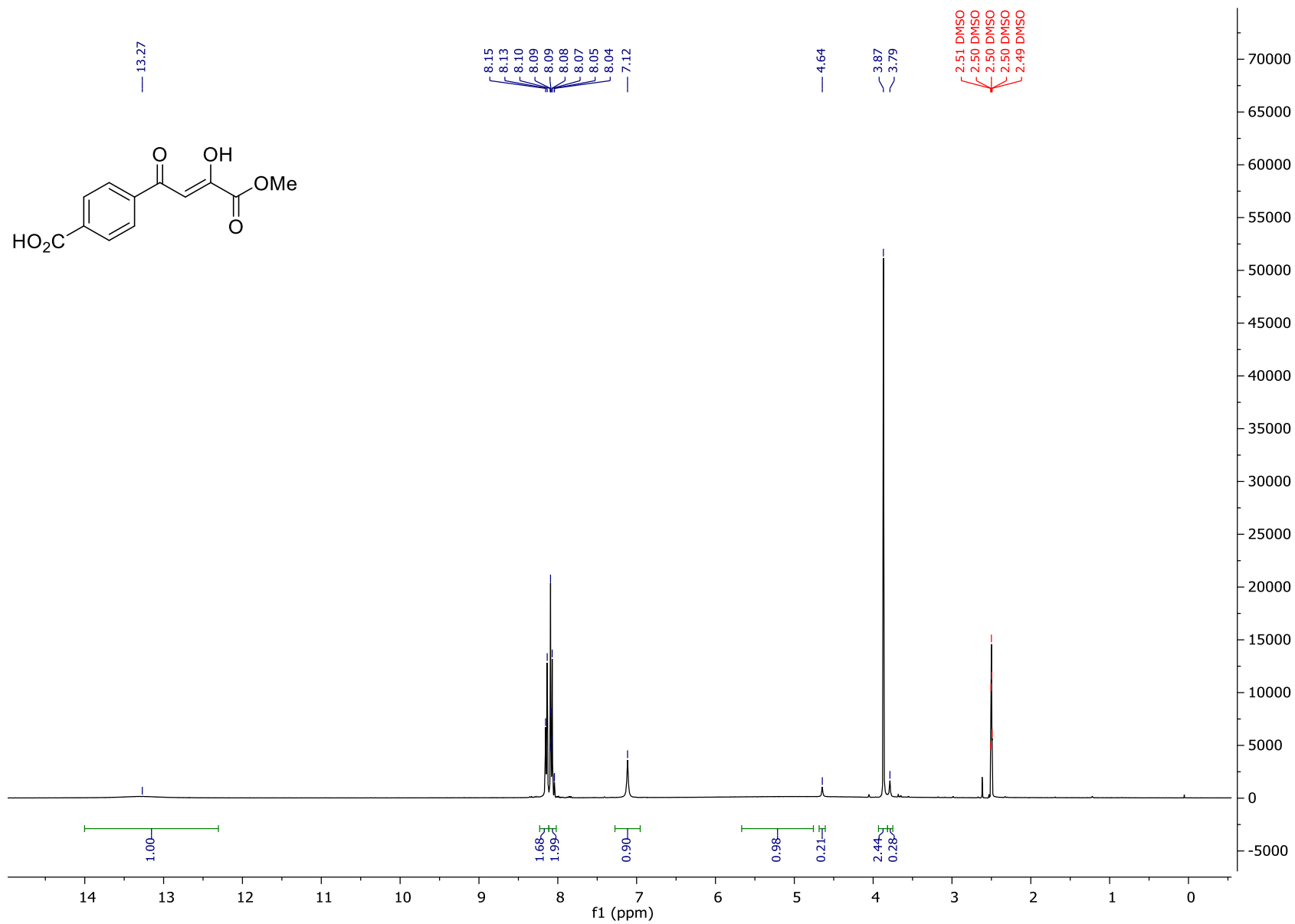
**Figure S1.**  $^1\text{H}$  NMR spectrum of compound 2.



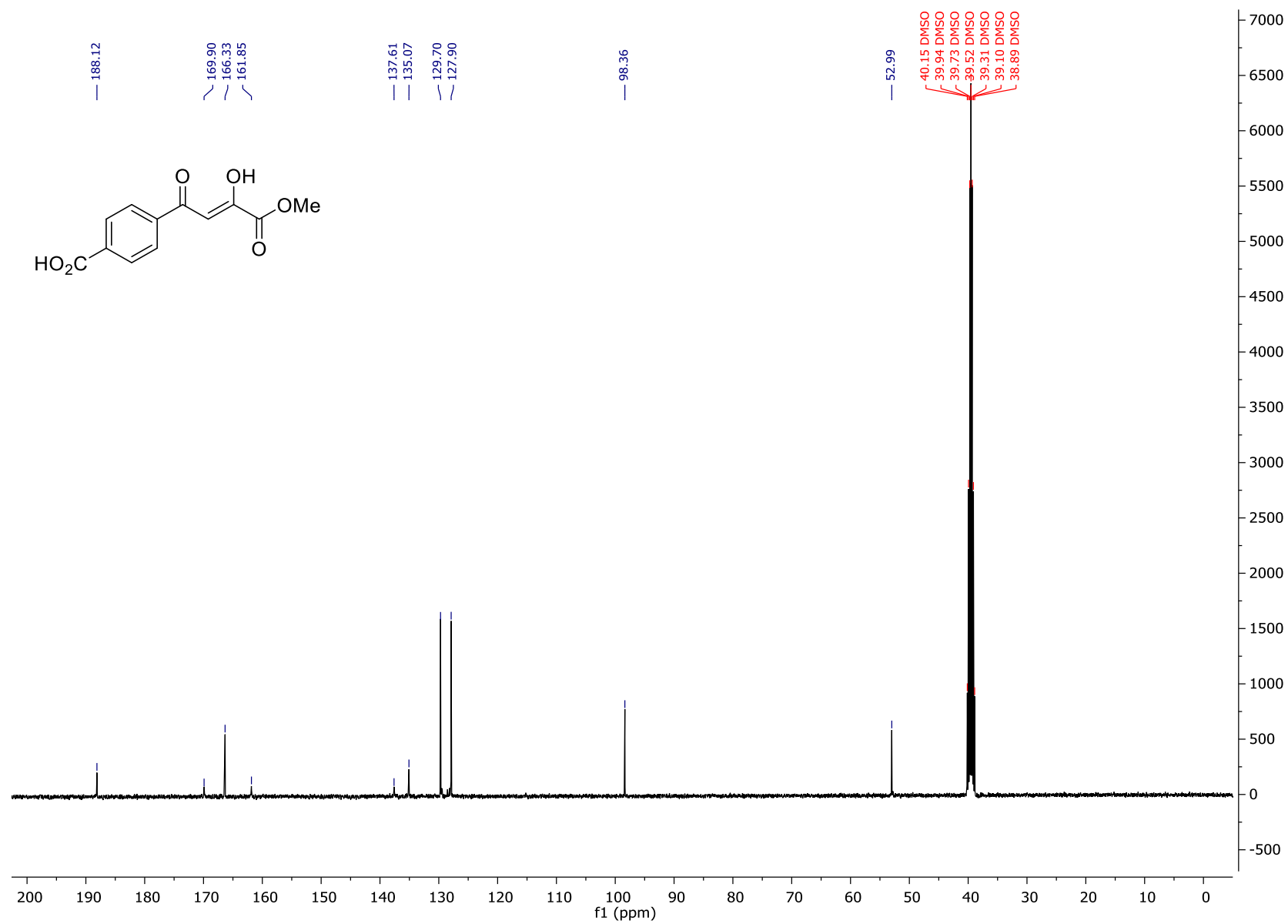
**Figure S2.** <sup>1</sup>H NMR spectrum of compound **3**.



**Figure S3.** <sup>13</sup>C NMR spectrum of compound 3.

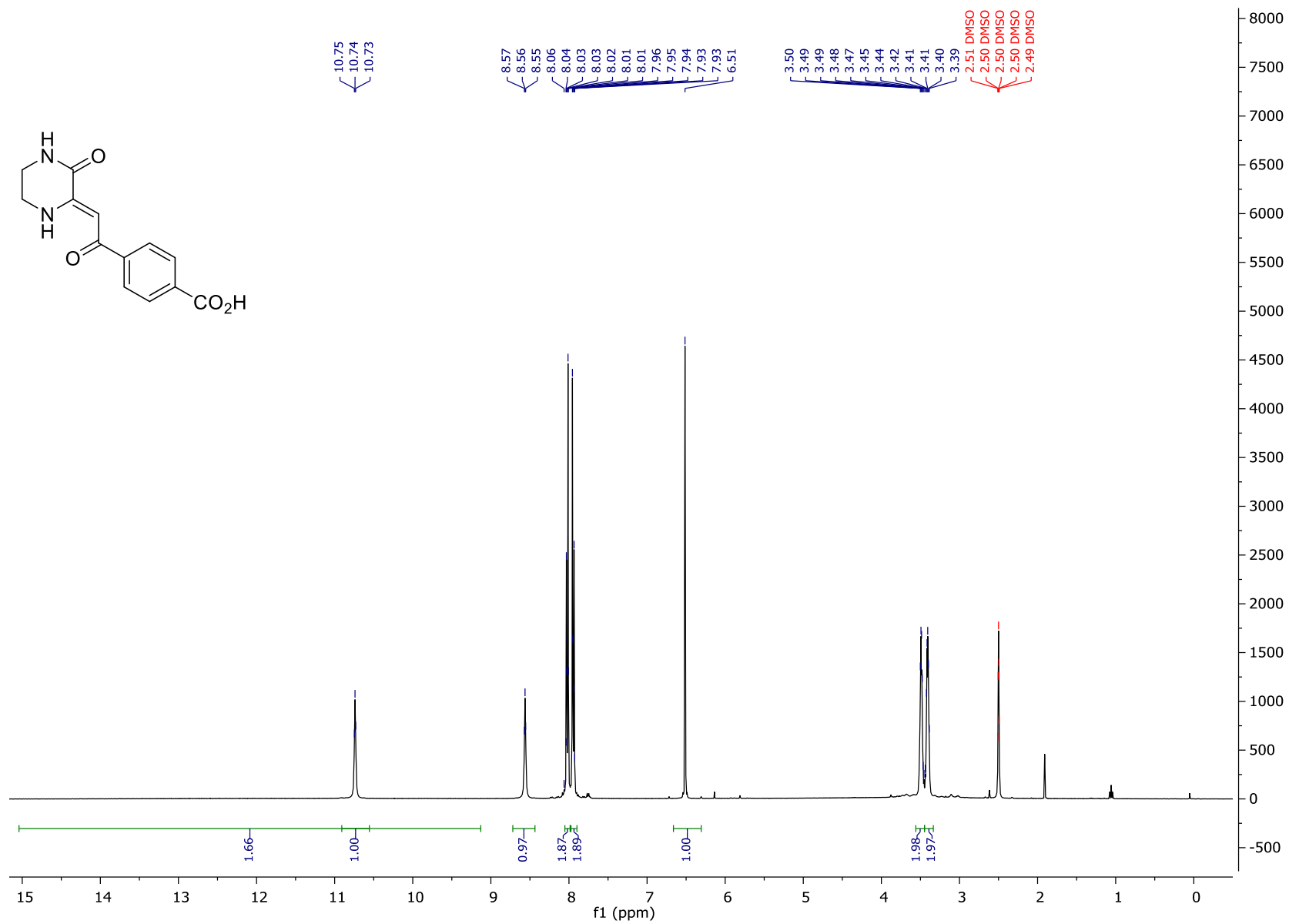


**Figure S4.** <sup>1</sup>H NMR spectrum of compound 4.

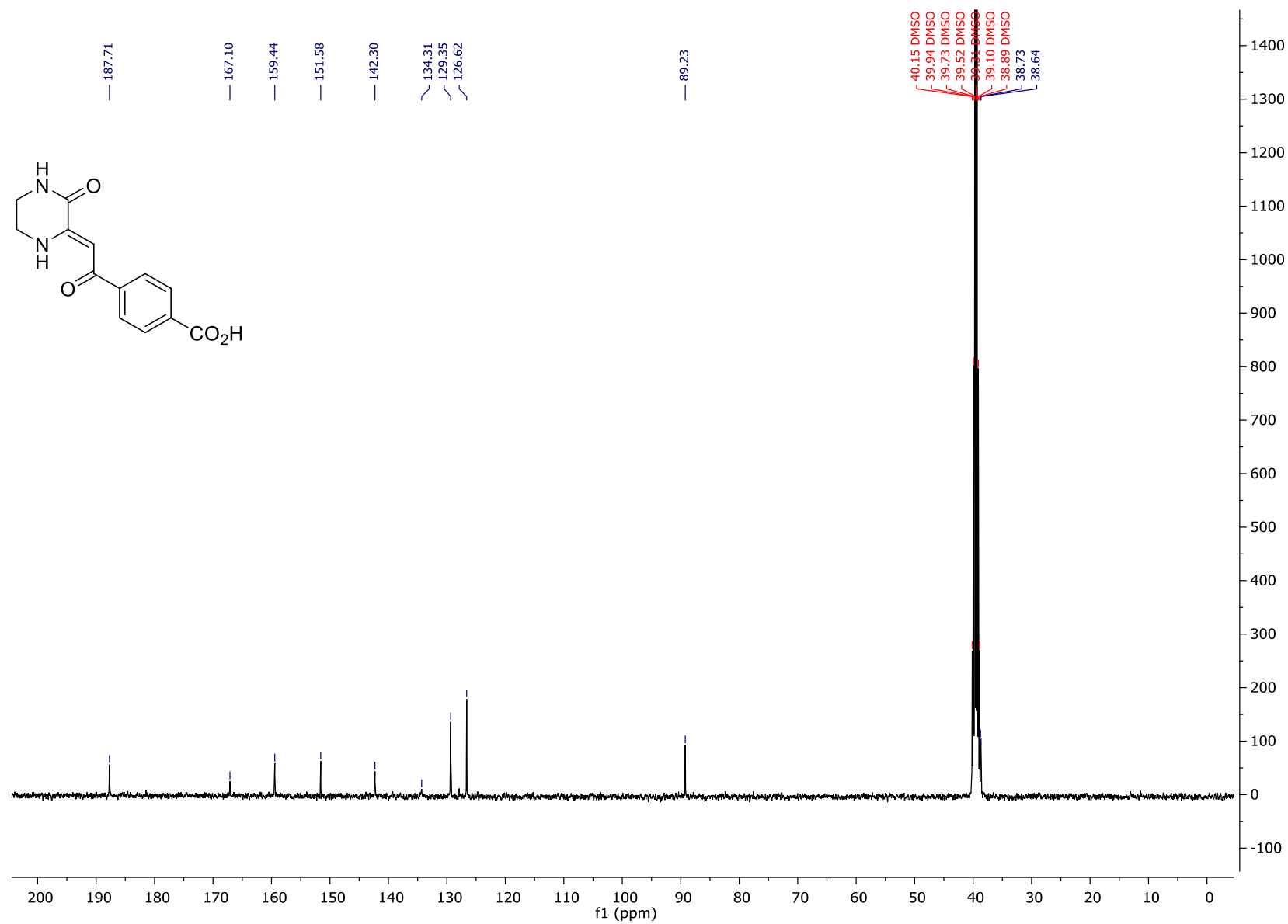


**Figure S5.** <sup>13</sup>C NMR spectrum of compound 4.





**Figure S6.** <sup>1</sup>H NMR spectrum of compound 1.



**Figure S7.** <sup>13</sup>C NMR spectrum of compound 1