**Supplementary**

# Enhypyrazinones A and B, Pyrazinone Natural Products from a Marine-derived Myxobacterium *Enhygromyxa* sp.

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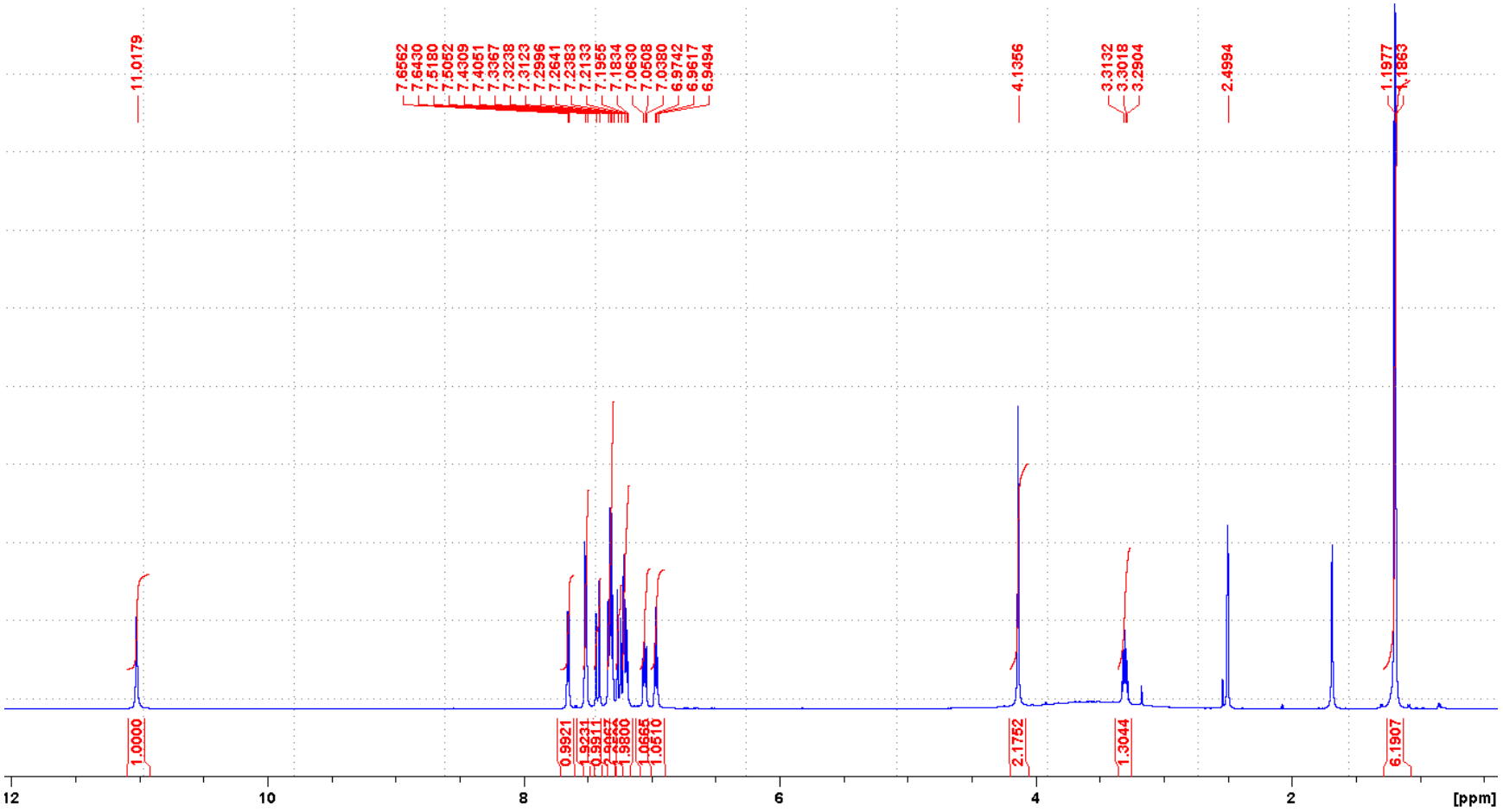

**Figure S2.** $^{13}$C NMR spectrum of enhypyrazinone A (**1**; 125 MHz, DMSO-$d_6$)

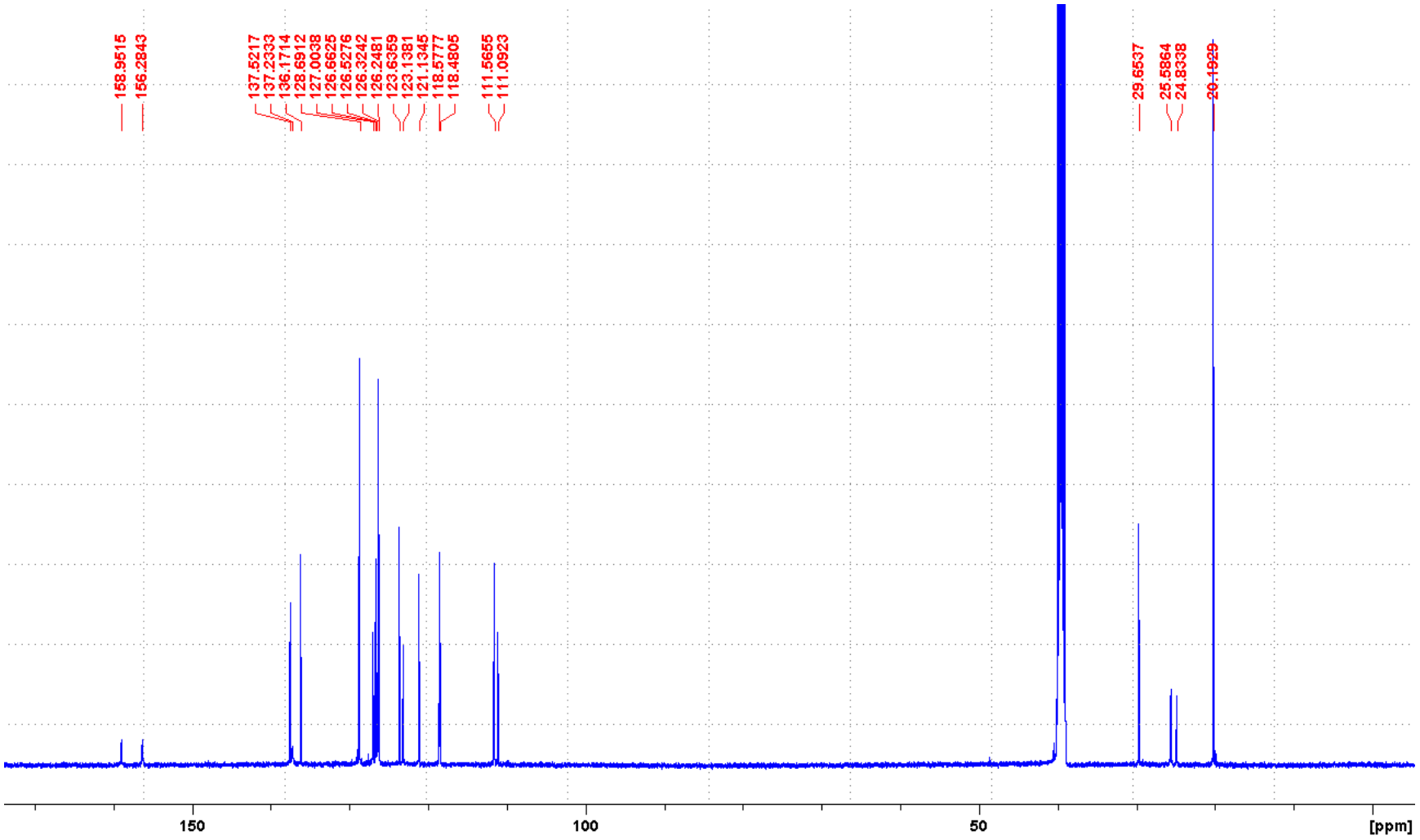

**Figure S3.** gCOSY spectrum of enhypyrazinone A (**1**; 600 MHz, DMSO-$d_6$)

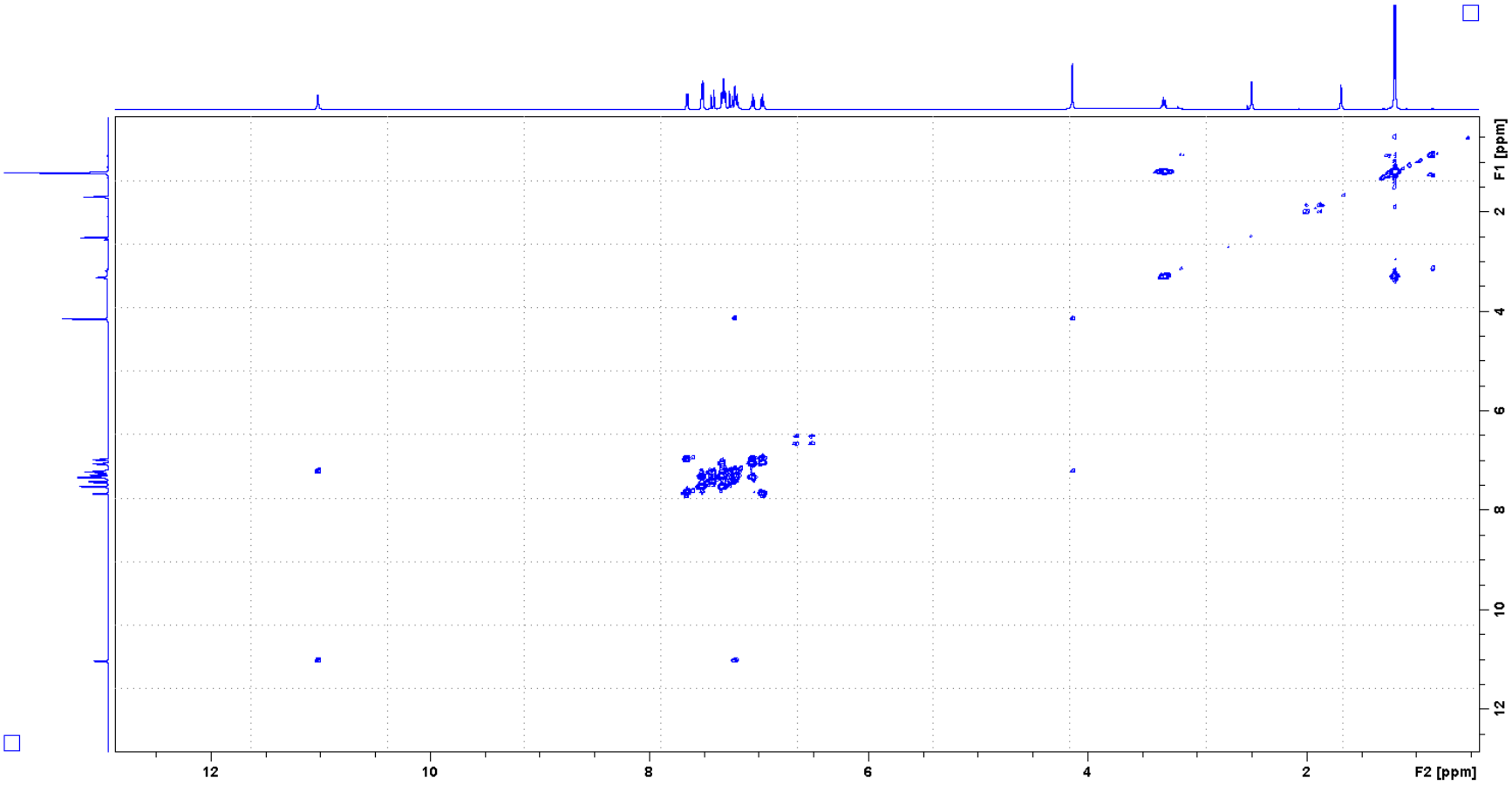

**Figure S4.** gHSQC spectrum of enhypyrazinone A (**1**; 600 MHz, DMSO-$d_6$)

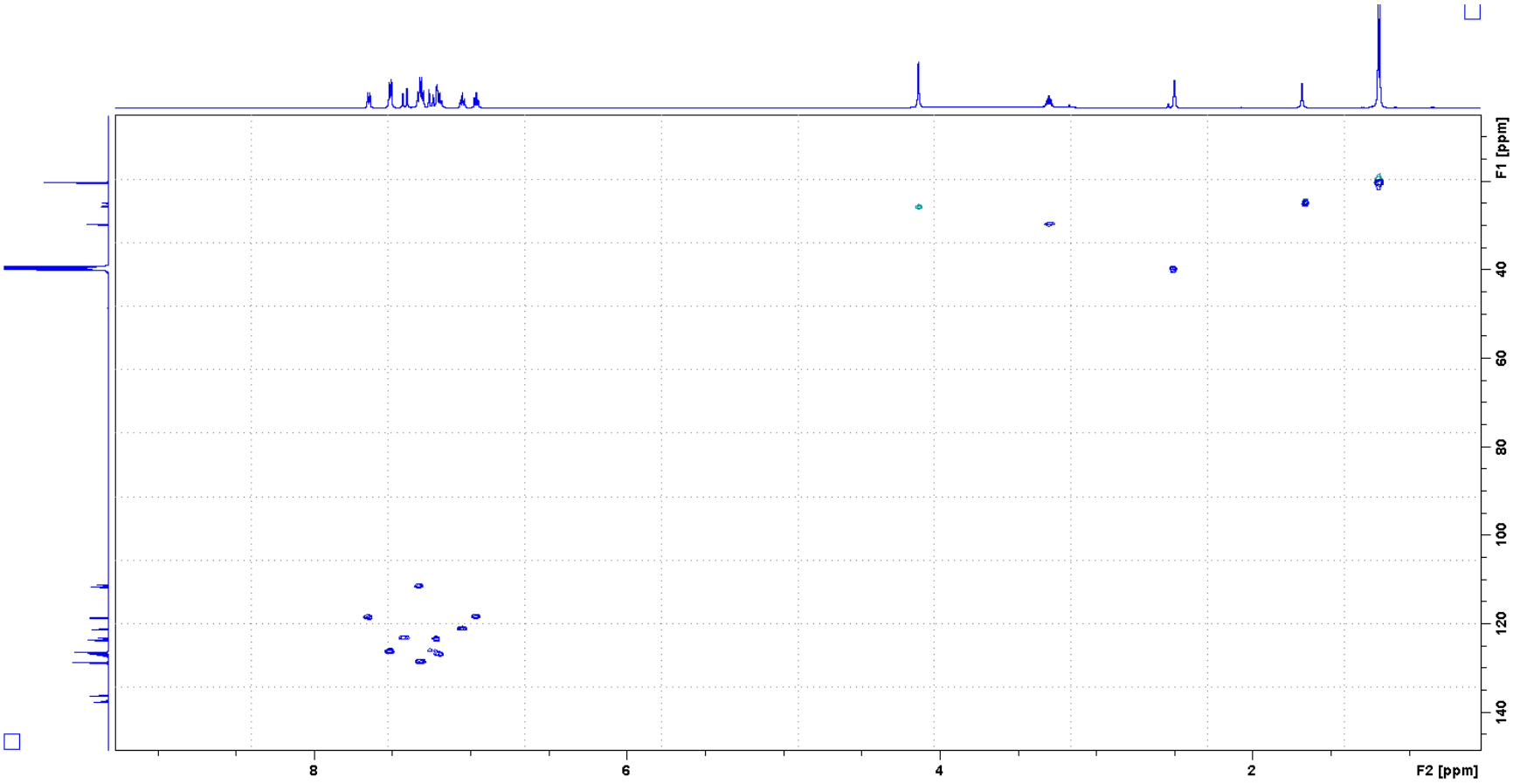

**Figure S5.** gHMBC spectrum of enhypyrazinone A (**1**; 600 MHz, DMSO-$d_6$)

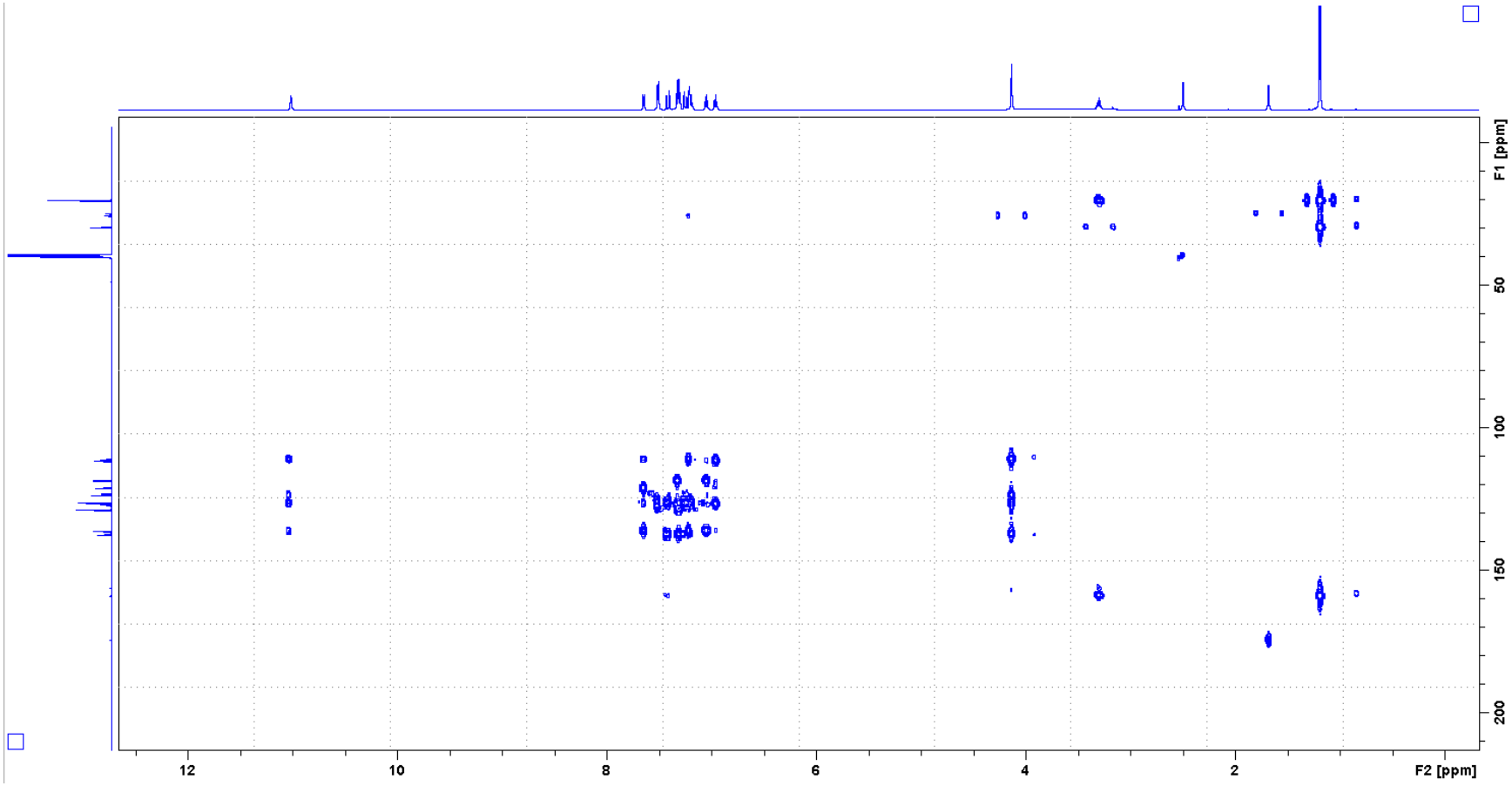

**Figure S6.** $^{1}H$-$^{15}N$ HMBC spectrum of enhypyrazinone A (**1**; 600 MHz, DMSO-$d_6$)

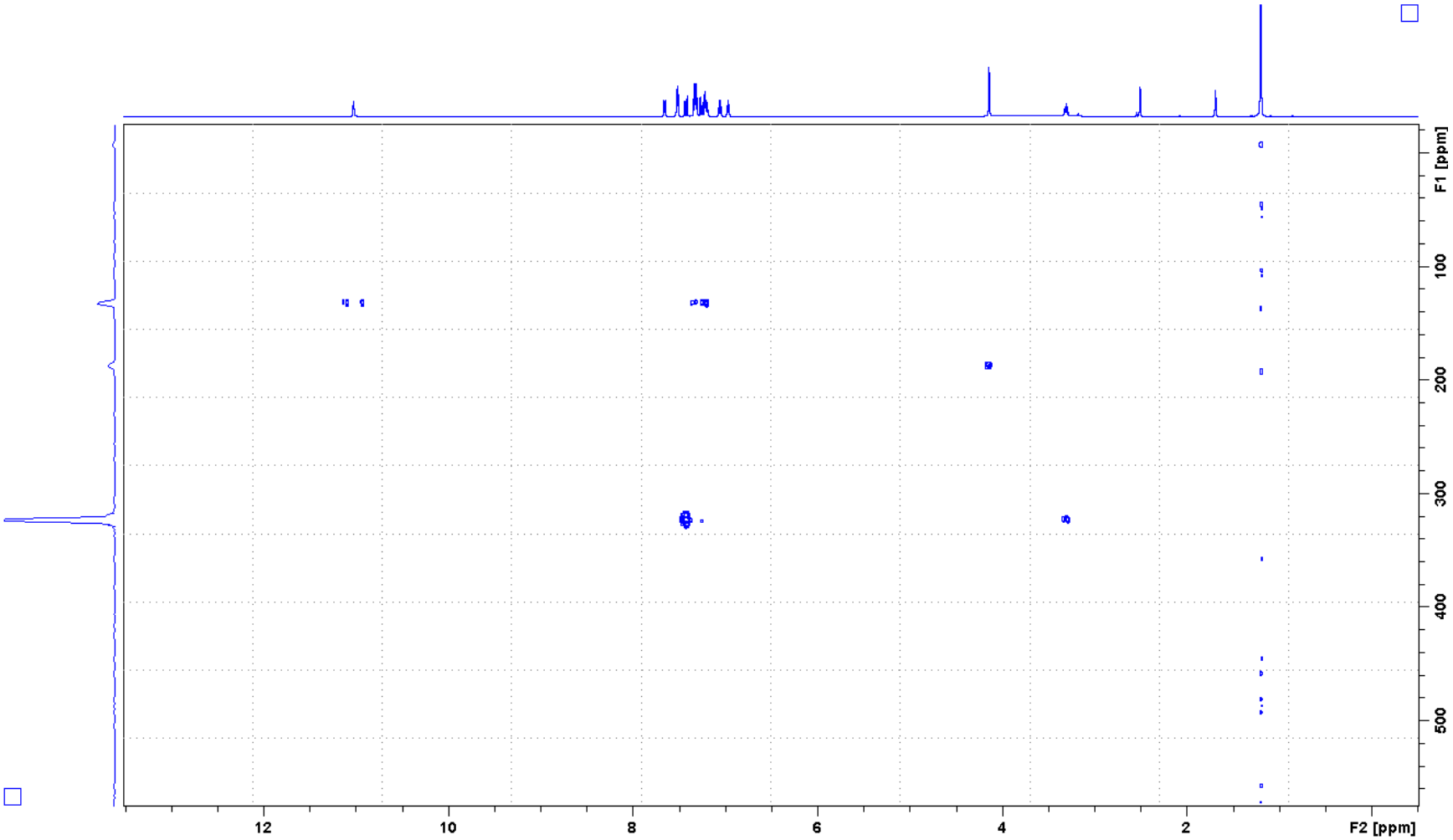

**Figure S7.** Positive ion HRESIMS of enhypyrazinone A (**1**)

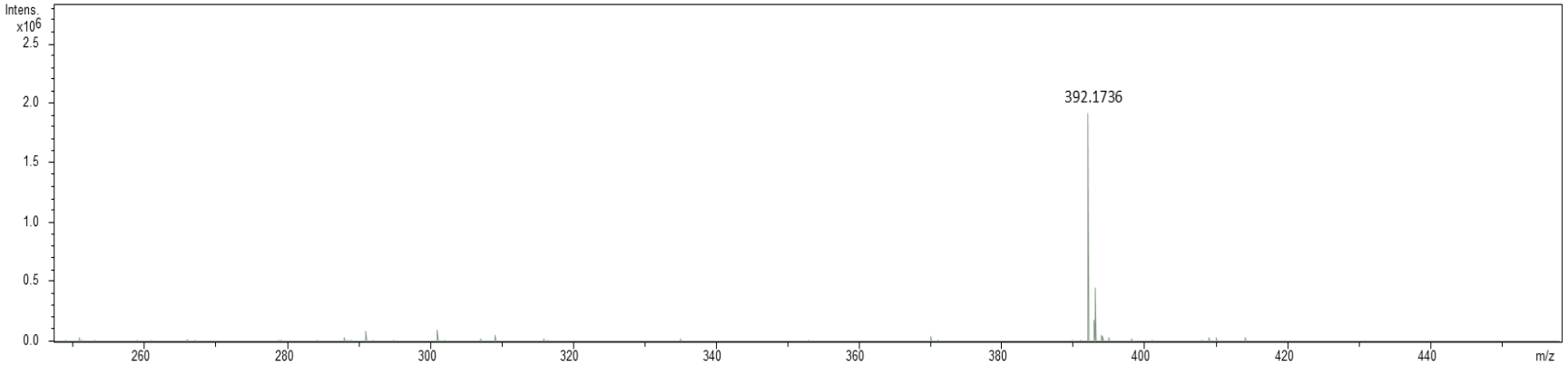

**Figure S8.** $^{1}$H NMR spectrum of enhypyrazinone B (**2**; 500 MHz, $CDCl_3/CD_3OD$ 1:1)

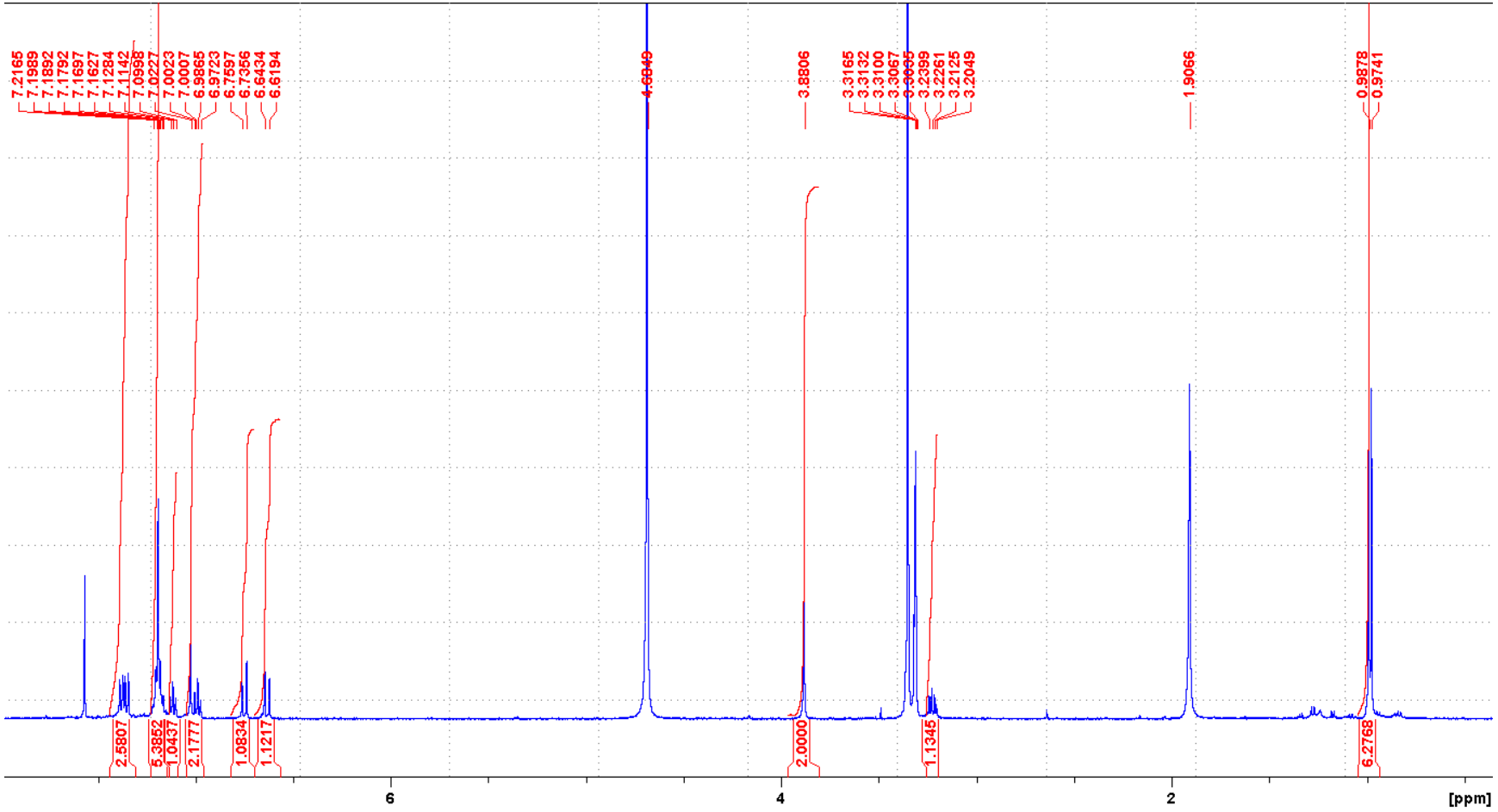

**Figure S9.** $^{13}C$ NMR spectrum of enhypyrazinone B (**2**; 125 MHz, $CDCl_3/CD_3OD$ 1:1)

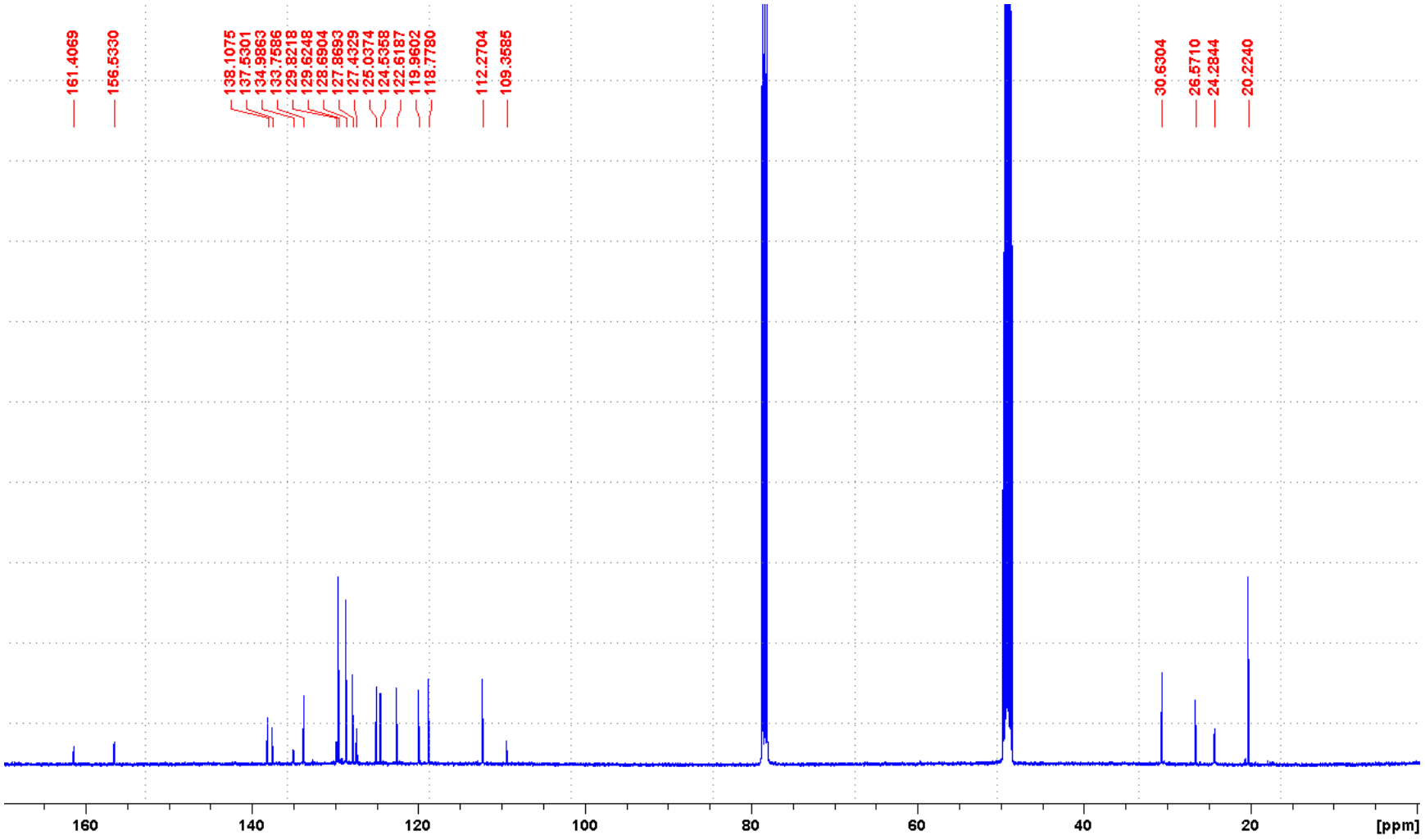

**Figure S10.** gCOSY spectrum of enhypyrazinone B (**2**; 500 MHz, $CDCl_3/CD_3OD$ 1:1)

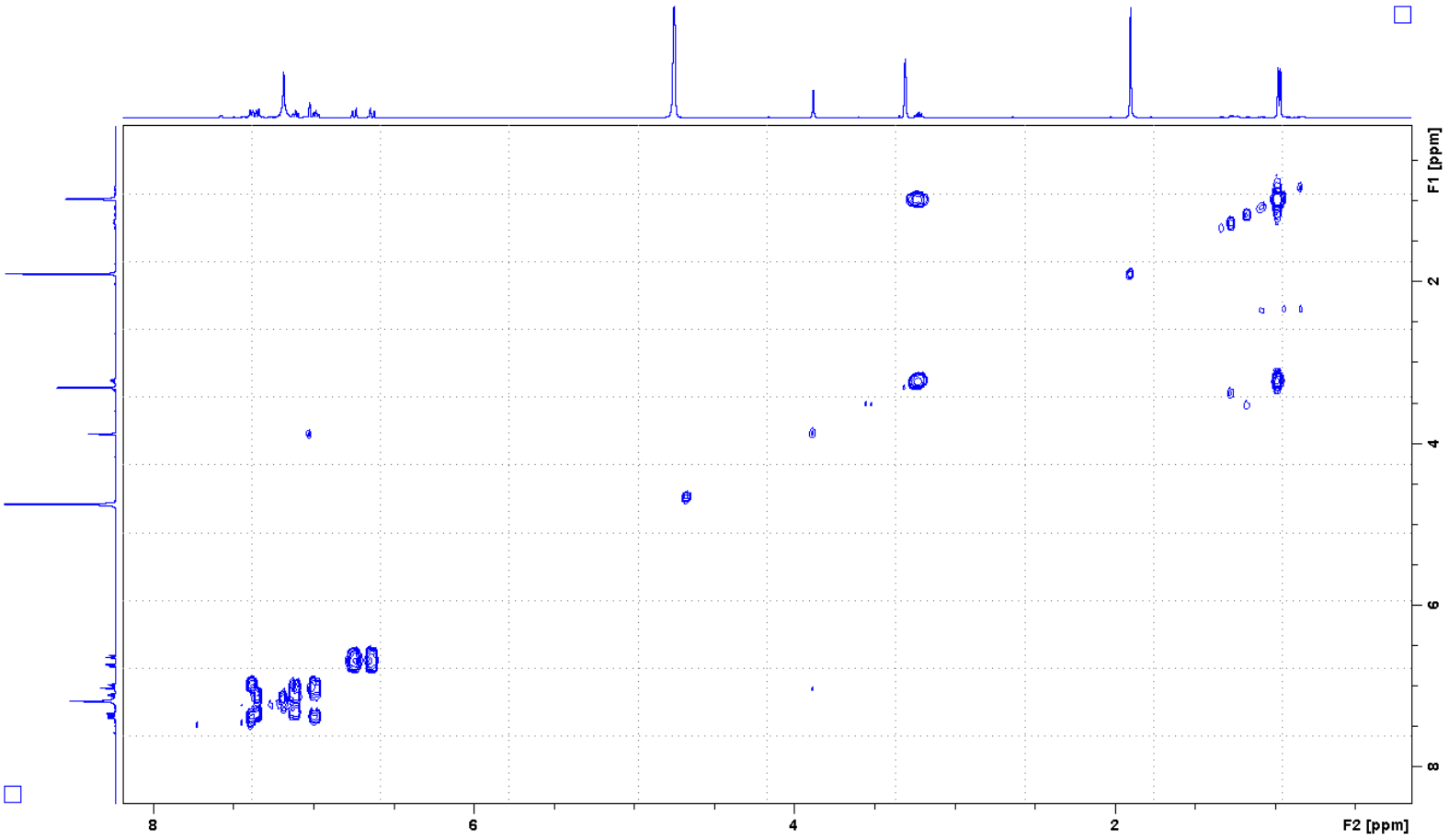

**Figure S11.** gHSQC spectrum of enhypyrazinone B (**2**; 500 MHz, $CDCl_3/CD_3OD$ 1:1)

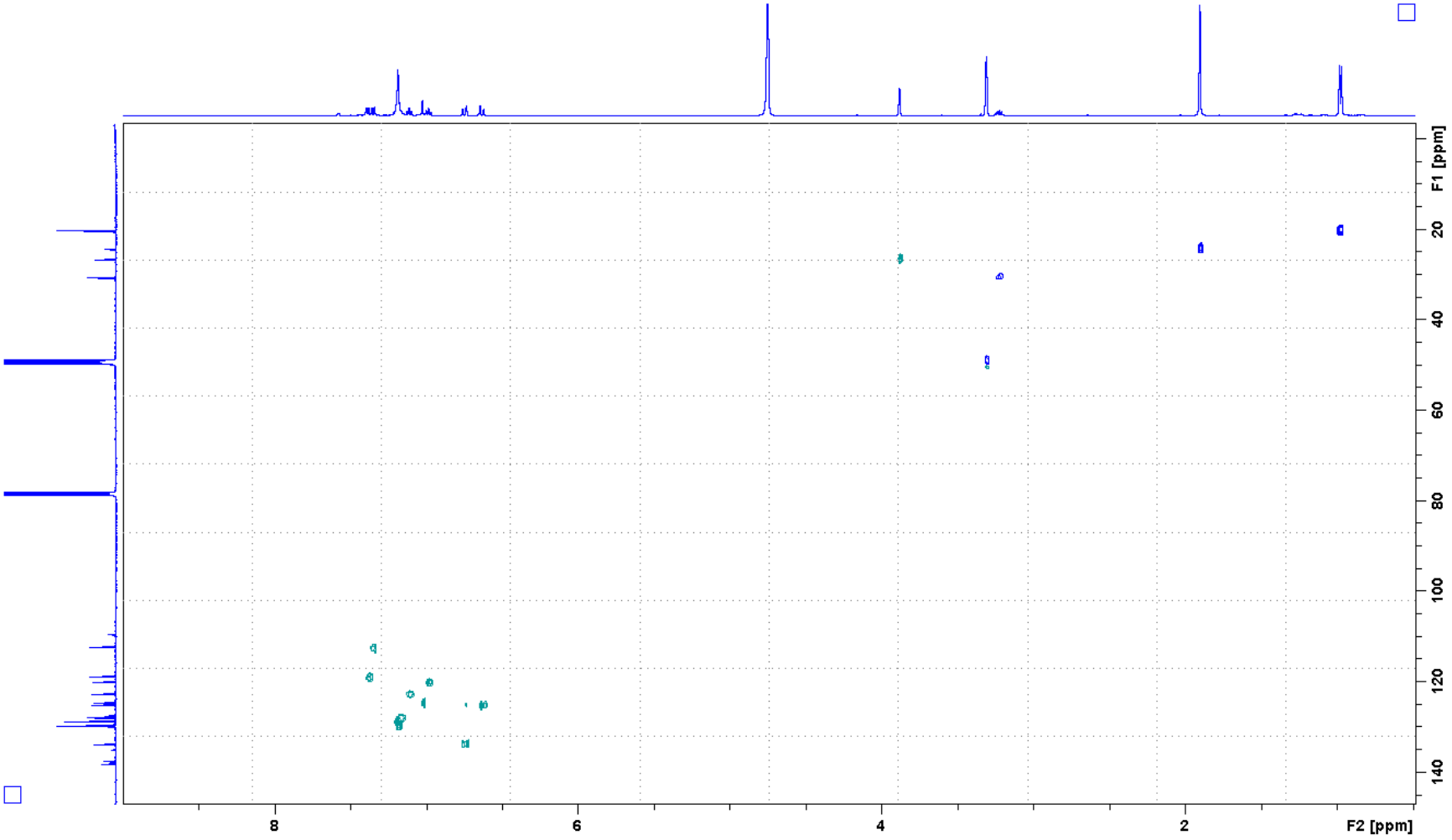

**Figure S12.** gHMBC spectrum of enhypyrazinone B (**2**; 500 MHz, $CDCl_3/CD_3OD$ 1:1)

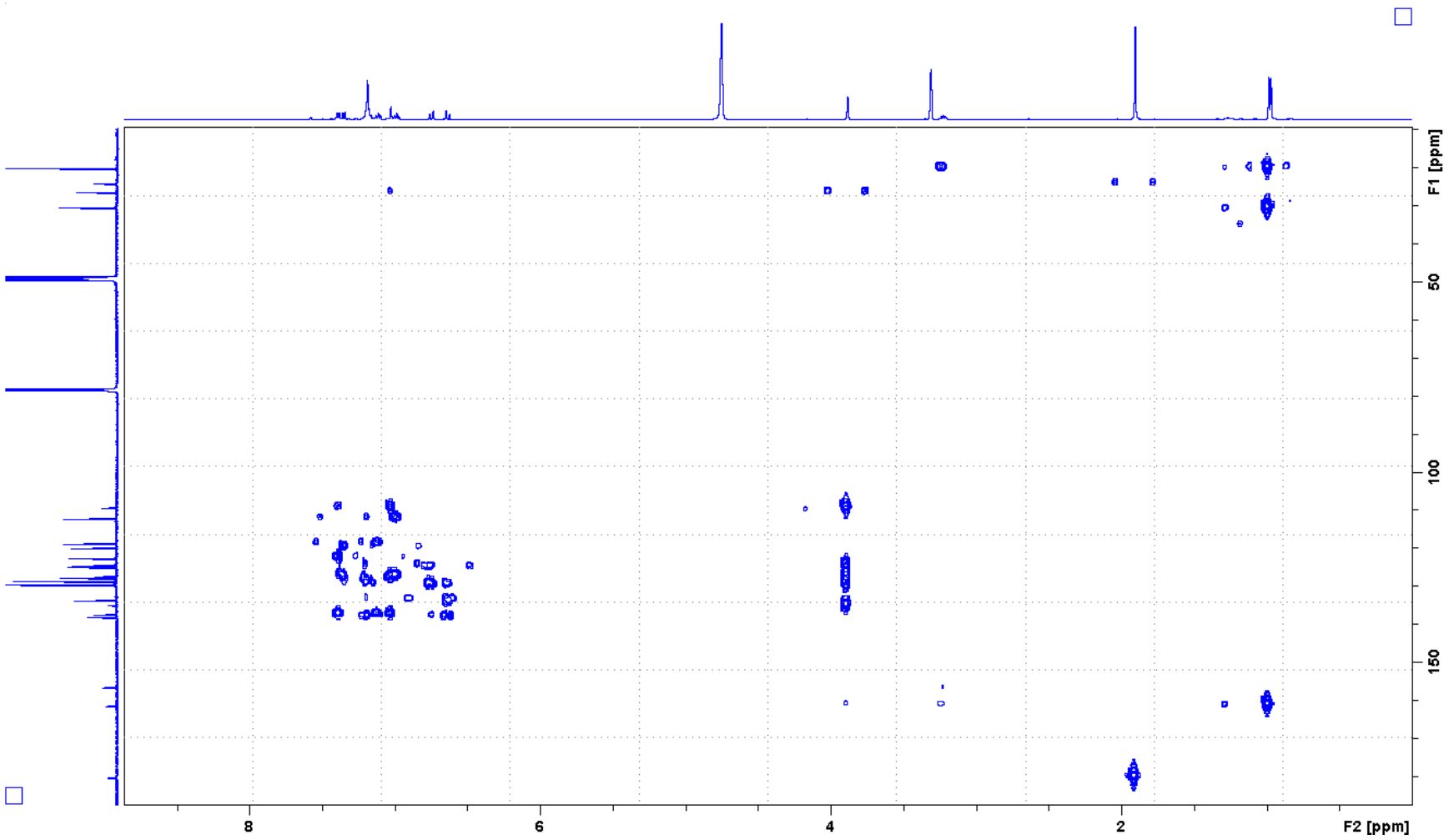

**Figure S13.** $^{1}H$-$^{15}N$ HMBC Spectrum of enhypyrazinone B (**2**; 500 MHz, $CDCl_3/CD_3OD$ 1:1)

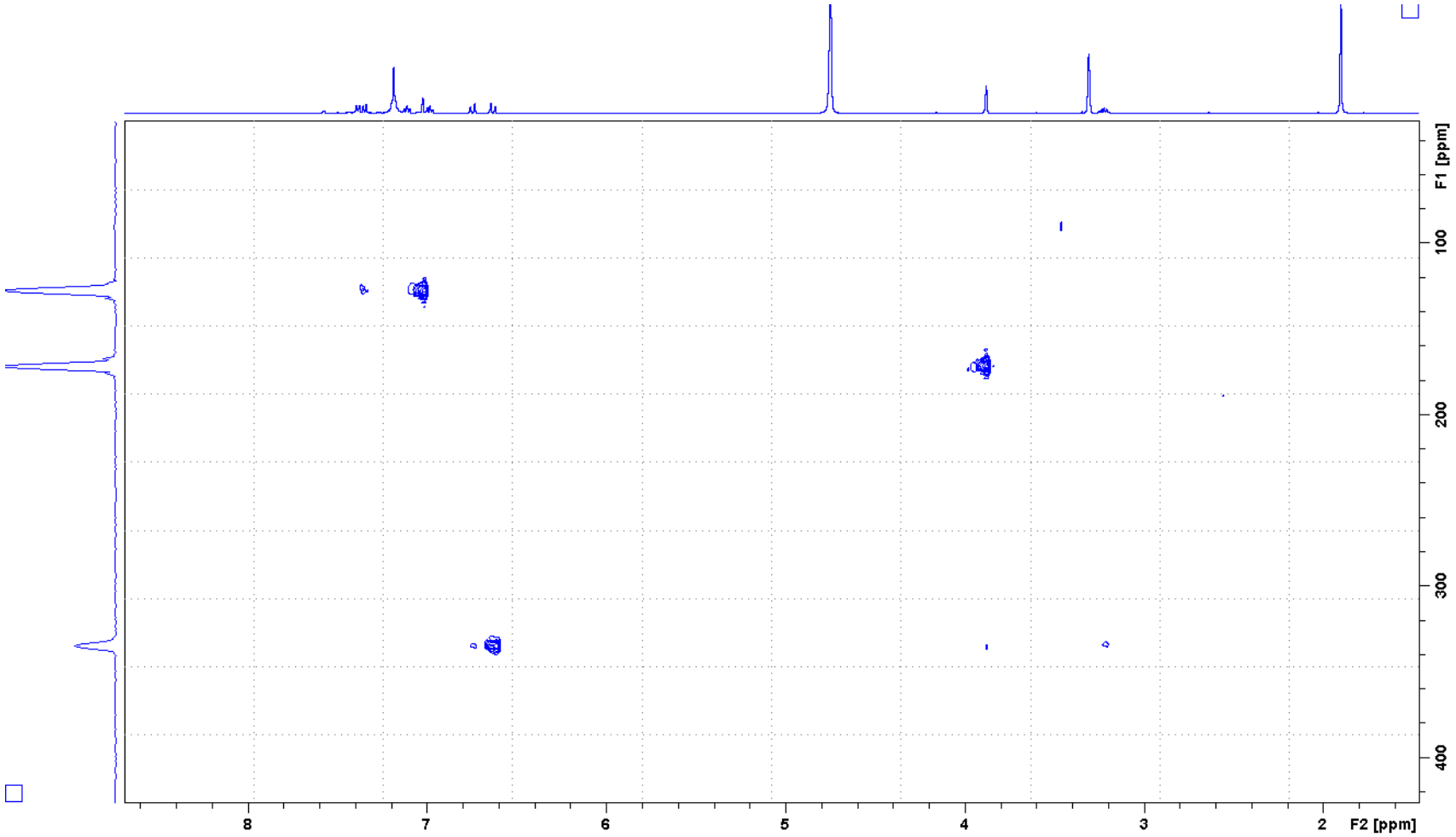

**Figure S14.** $^{1}$H NMR spectrum of enhypyrazinone B (**2**; 500 MHz, DMSO-$d_6$)

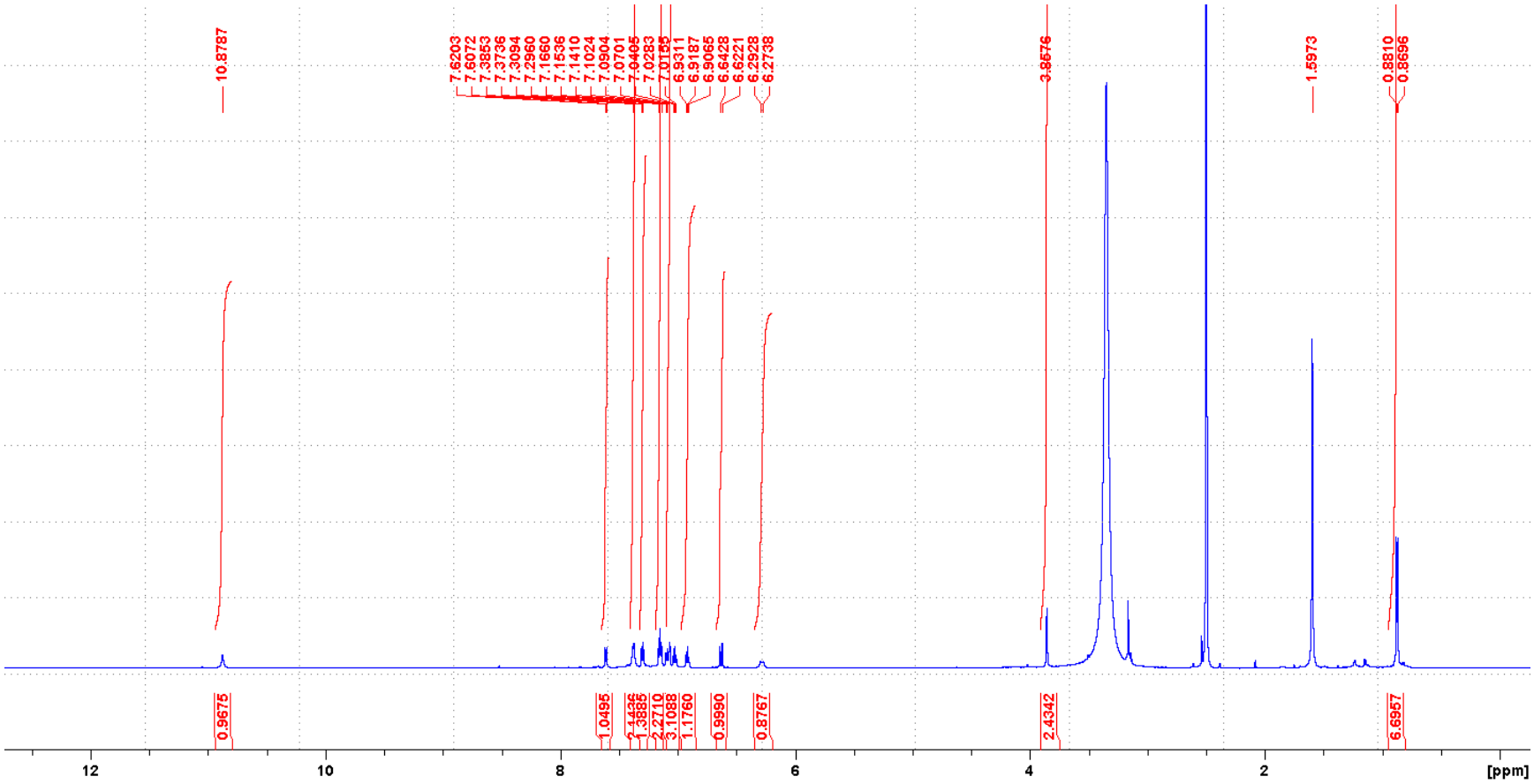

**Figure S15.** $^{13}$C NMR spectrum of enhypyrazinone B (**2**; 125 MHz, DMSO-$d_6$)

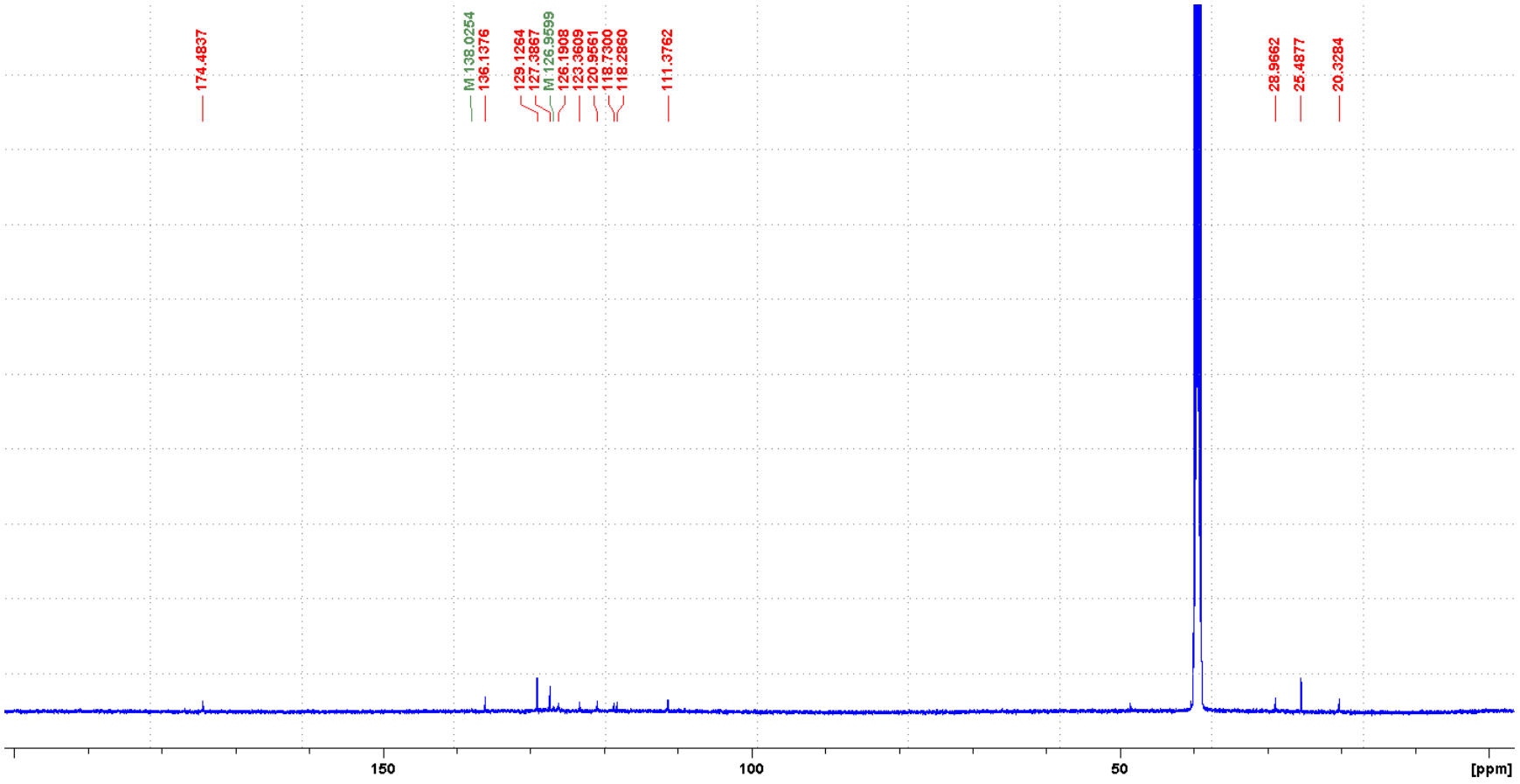

**Figure S16.** gCOSY spectrum of enhypyrazinone B (**2**; 500 MHz, DMSO-$d_6$)

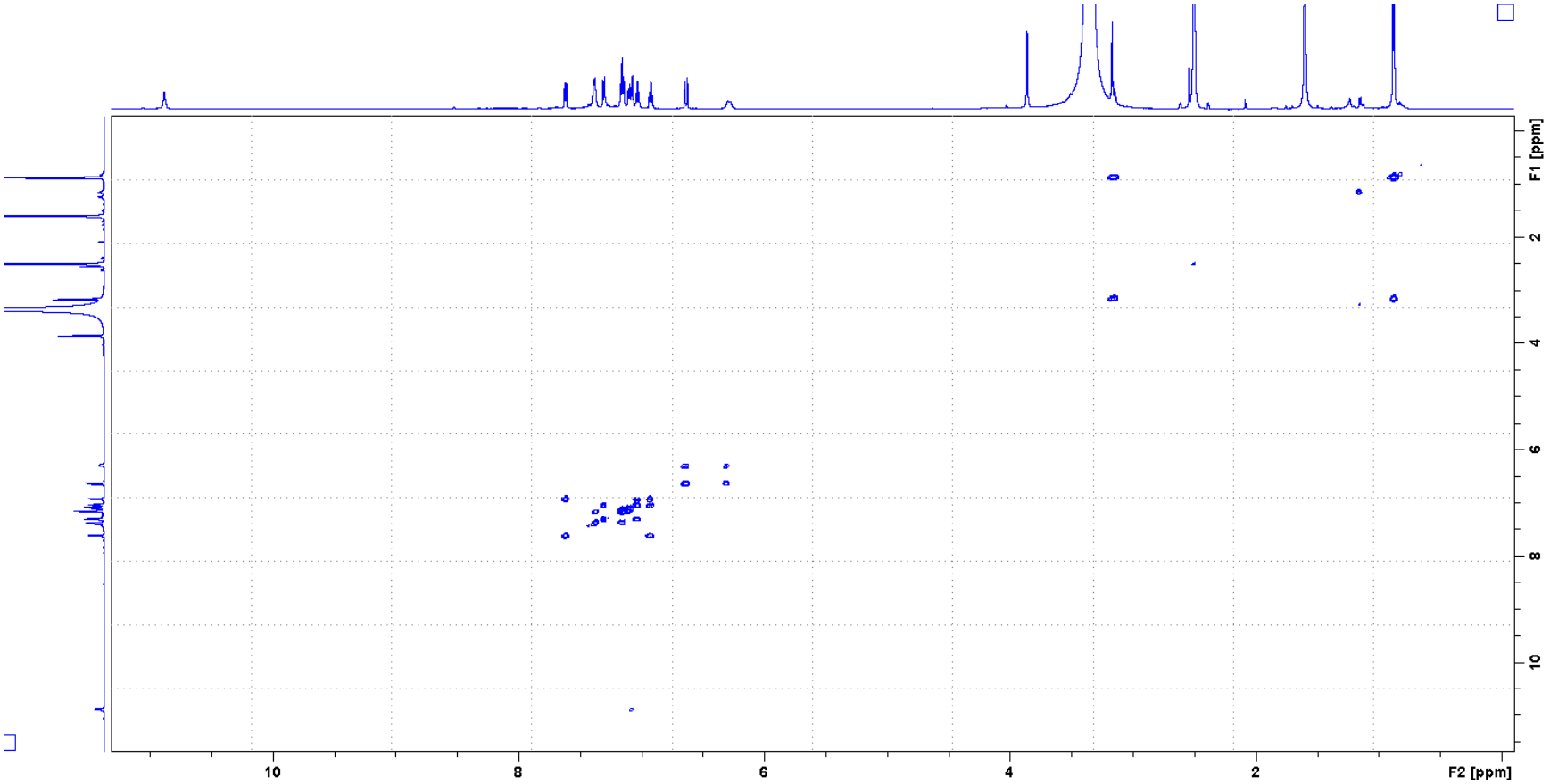

**Figure S17.** gHSQC spectrum of enhypyrazinone B (**2**; 500 MHz, DMSO-$d_6$)

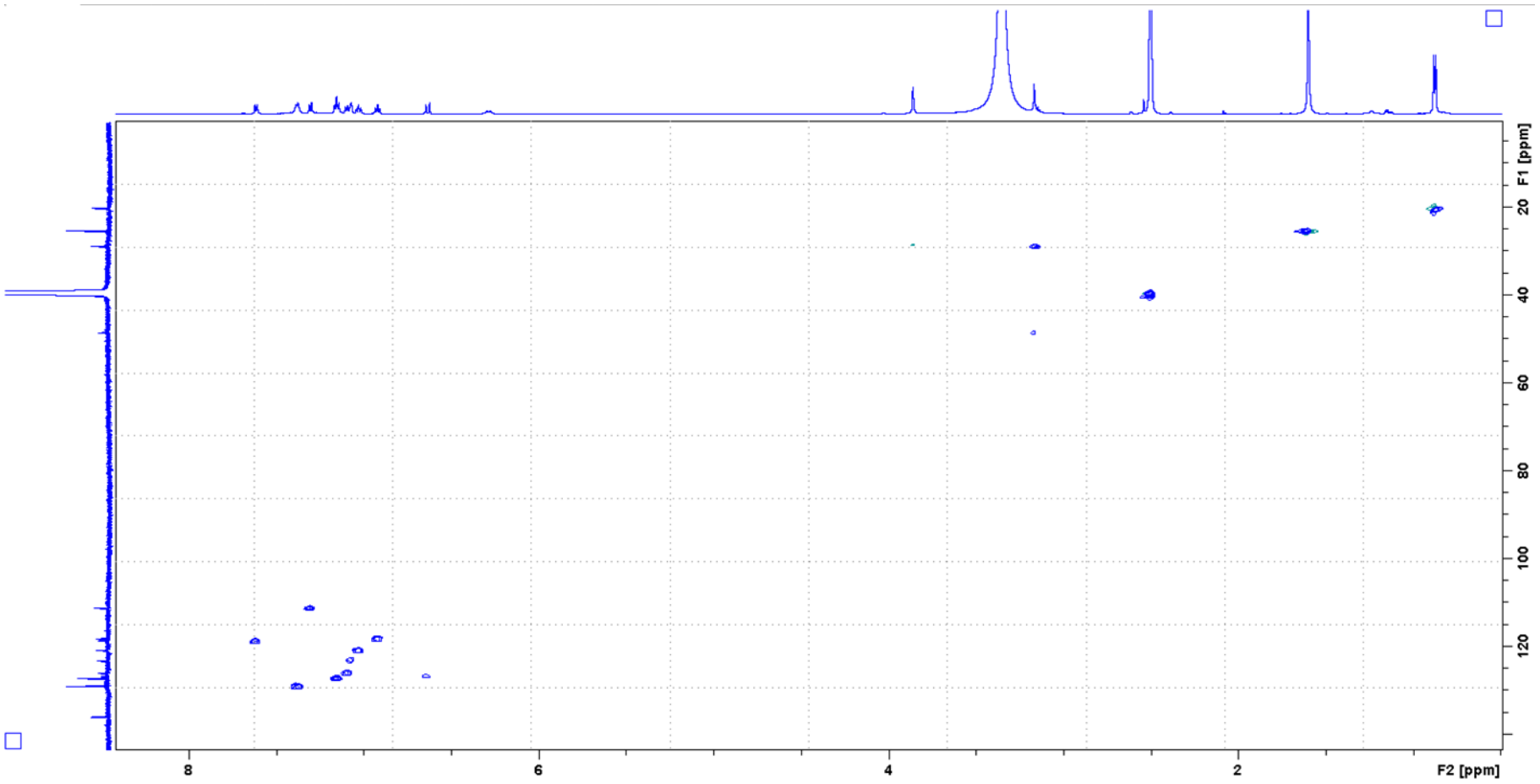

**Figure S18.** gHMBC spectrum of enhypyrazinone B (**2**; 500 MHz, DMSO-$d_6$)

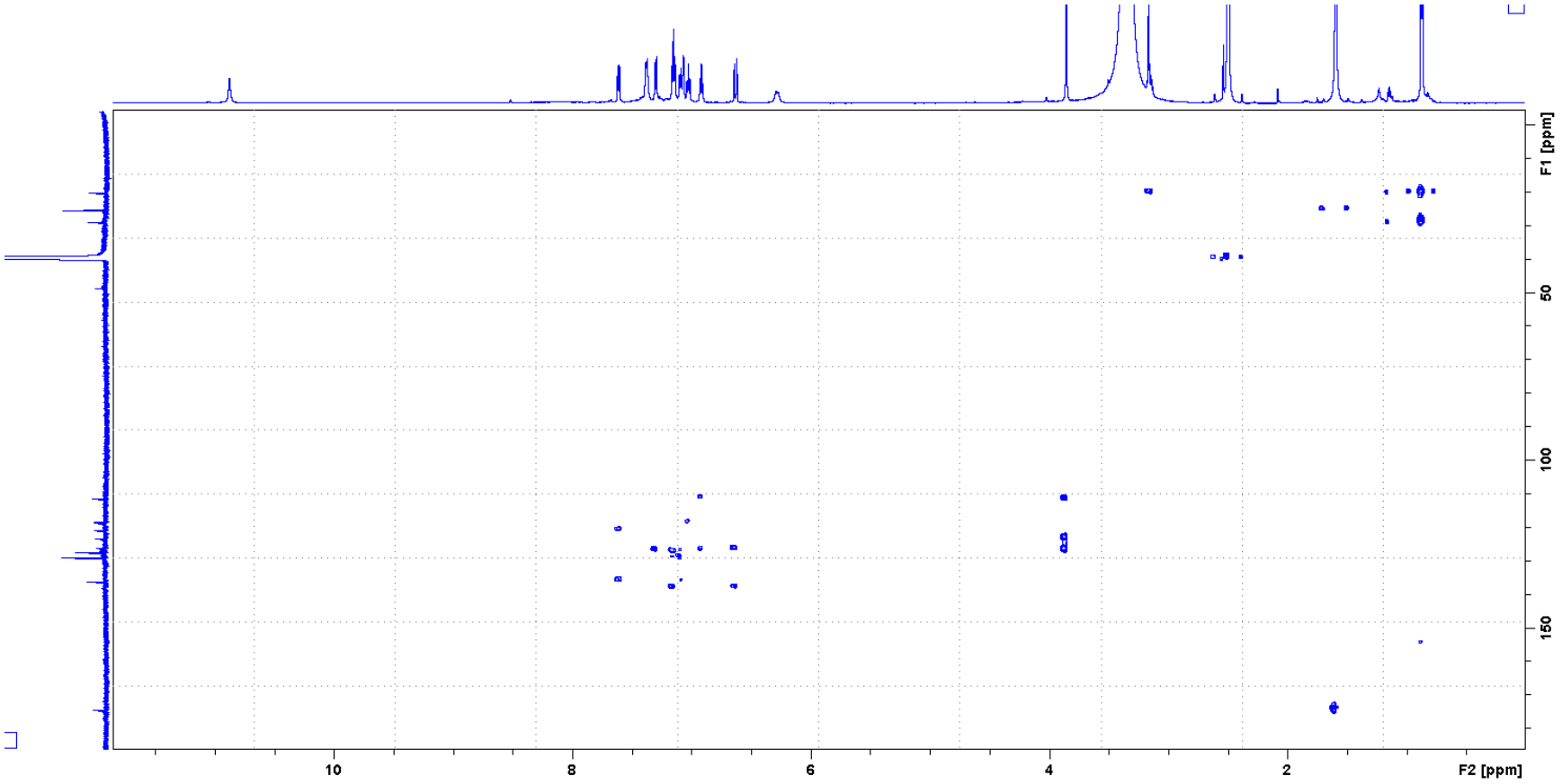

**Figure S19.** $^{1}H$-$^{15}N$ HMBC spectrum of enhypyrazinone B (**2**; 500 MHz, DMSO-$d_6$)

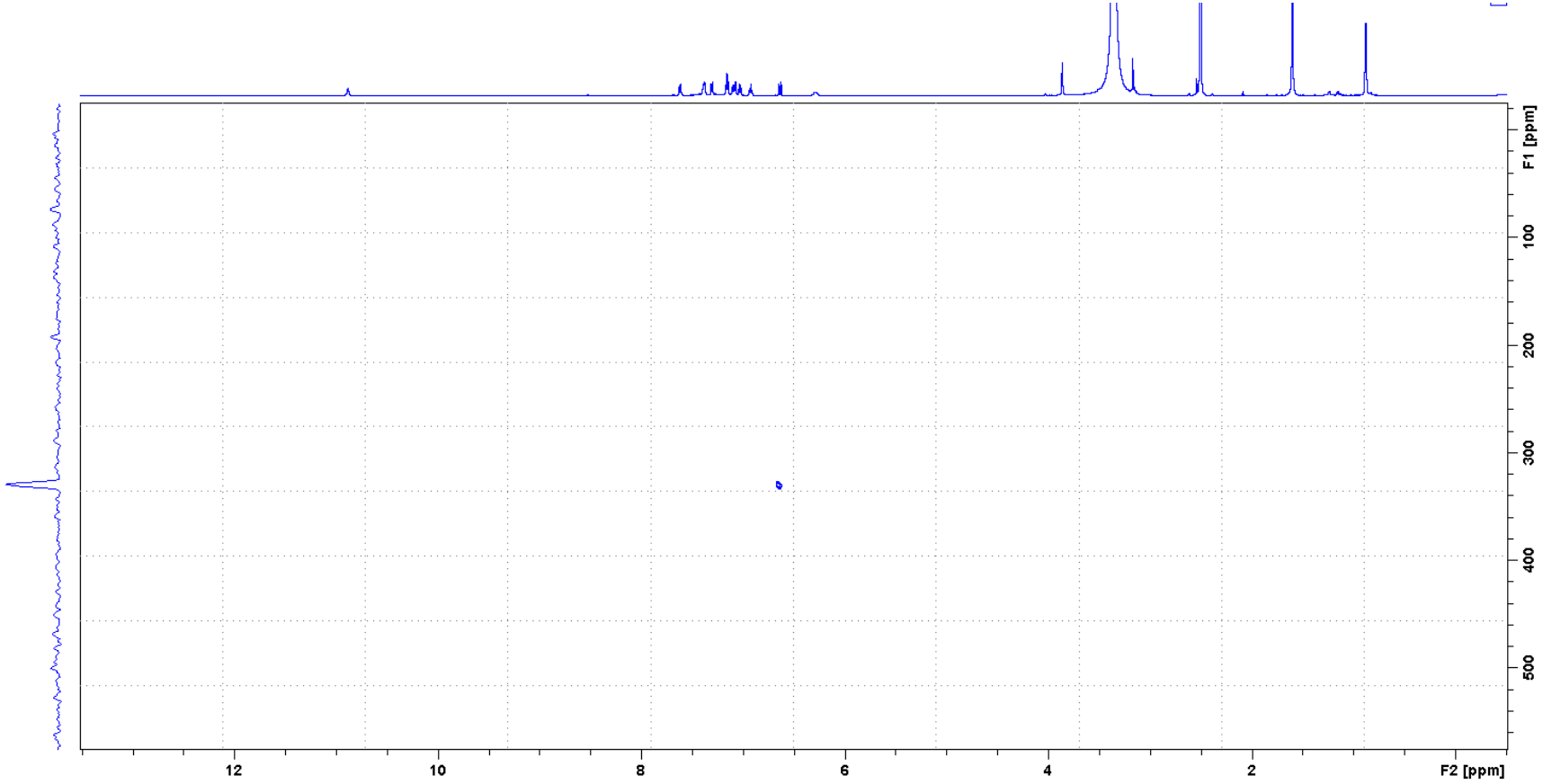

**Figure S20.** Positive ion HRESIMS of enhypyrazinone B (**2**)

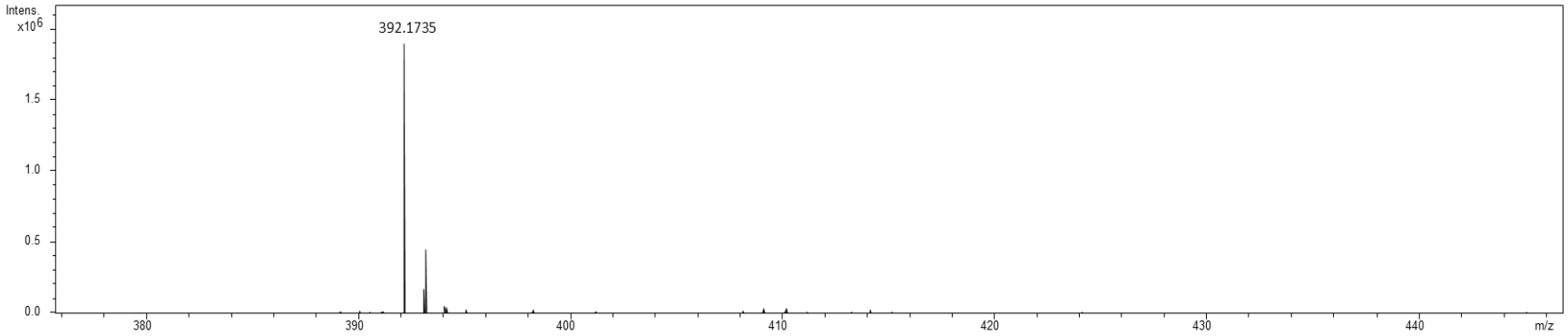

**Table 1.** $^{1}H$ and $^{13}C$ NMR data for enhypyrazinone B (**2**) (500 MHz for $^{1}H$, 125 MHz for $^{13}C$, $CDCl_3/CD_3OD$ 1:1).

| Positon | $\delta_C$, mult. | $\delta_H$ (*J* in Hz) | $^{1}H$-$^{1}H$ COSY | $^{1}H$-$^{13}C$ HMBC[a] | $\delta_N$[b] | $^{1}H$-$^{15}N$ HMBC[c] |
|---|---|---|---|---|---|---|
| 1 | 156.5, qC | | | | | |
| 2 | | | | | 172.1 | |
| 3 | 135.0, qC | | | | | |
| 4 | 129.8, qC | | | | | |
| 5 | | | | | 335.1 | |
| 6 | 161.4, qC | | | | | |
| 7 | 26.6, $CH_2$ | 3.88, s | 9 | 3, 4, 8, 9, 16 | | 2 |
| 8 | 109.4, qC | | | | | |
| 9 | 124.5, CH | 7.03, s | 7 | 8, 11, 16 | | 10 |
| 10 | | | | | 127.7 | |
| 11 | 137.5, qC | | | | | |
| 12 | 112.3, CH | 7.35, d (8.0) | 13 | 14, 16 | | 10 (weak) |
| 13 | 122.6, CH | 7.11, t (8.0) | | 11, 15 | | |
| 14 | 120.0, CH | 6.99, t (8.0) | 15 | 12, 15 | | |
| 15 | 118.8, CH | 7.39, d (8.0) | 14 | 8, 11, 13 | | |
| 16 | 127.4, qC | | | | | |
| 17 | 125.0, CH | 6.64, d (12.0) | 18 | 3, 4, 18, 19 | | 5 |
| 18 | 133.8, CH | 6.75, d (12.0) | 17 | 4, 17, 19 | | |
| 19 | 138.1, qC | | | | | |
| 20 | 129.6, CH | 7.19, m | | 18, 19, 21 | | |
| 21 | 128.7, CH | 7.22, m | | 22 | | |
| 22 | 127.9, CH | 7.16, m | | 20, 24 | | |
| 23 | 128.7, CH | 7.22, m | | 24 | | |
| 24 | 129.6, CH | 7.19, m | | 18, 19, 23 | | |
| 25 | 30.6, CH | 3.22, m | 26, 27 | 6, 26, 27 | | 5 (weak) |
| 26 | 20.2, $CH_3$ | 0.98, d (6.8) | 25 | 6, 25, 27 | | |
| 27 | 20.2, $CH_3$ | 0.98, d (6.8) | 25 | 6, 25, 26 | | |

[a]HMBC correlations are from proton(s) to the indicated carbon.
[b]The chemical shifts of $^{15}N$ were determined by $^{1}H$-$^{15}N$-HMBC.
[c]HMBC correlations are from proton(s) to the indicated nitrogen