Supplementary Data

This supplementary data is a part of a paper entitled "Identification of Anti-Inflammatory Components from *Launaea sarmentosa* Using *In Vitro* Cell Model".

Supplementary Data

Table S1. List of primers and primer sequences

No.	Gene name	Primer probes	Sequence
1	TNF-α	Forward	5′-TGTAGCCCACGTCGTAG-3′
		Reverse	5′-TGAGATCCATGCCGTT-3′
2	β-actin	Forward	5′-GAGGGGGTTGAGGTGT-3′
		Reverse	5′-TGTGCACTTTTATTGGTCTCA-3′

Table S2. Effect of *Launaea sarmentosa* and its fraction on NO secretion under LPS stimulation

Sample	NO production (μM)
Control	$22.66^{a} \pm 0.17$
LPS	$89.91^{b} \pm 0.51$
Ls crude extract	$71.77^{c} \pm 0.61$
Hex-frc	$68.17^{d} \pm 0.04$
EtOAc-frc	$64.52^{d} \pm 0.61$
Aq-frc	$72.85^{cf} \pm 0.29$
L-NAME	$75.30^{g} \pm 0.51$

Different superscript letters indicate significant differences compared to control group ($p < 0.05$)

Supplementary Spectroscopic Data of Compound 1

Taraxasteryl acetate (1). ^{1}H-NMR (600 MHz, $CDCl_3$), δ (ppm): 4.62 (1H, *dd*, *J* = 1.8 & 7.8 Hz, H-3), 4.50 (2H, *m*, H-30), 2.47 (1H, *m*, H-21a), 2.22 (1H, *m*, H-21b), 2.10 (1H, *m*, H-19), 1.73 (2H, *m*, H-1), 1.70 (1H, *m*, H-12a), 1.69 (2H, *m*, H-2), 1.67 (1H, *m*, H-15a), 1.63 (1H, *m*, H-13), 1.55 (2H, *s*, H-6 & H-11), 1.42 (2H, *m*, H-7), 1.37 (1H, *m*, H-9), 1.26 (1H, *m*, H-16a), 1.16 (1H, *m*, H-12b, H-16), 1.05 (3H, *s*, H-26), 1.02 (3H, *m*, H-29), 1.00 (1H, *m*, H-18), 0.97 (1H, *d*, *J* = 3.6 Hz, H-15b), 0.95 (3H, *m*, H-27), 0.88 (3H, *m*, H-25), 0.86 (3H, *m*, H-23), 0.85 (3H, *m*, H-28), 0.83 (3H, *m*, H-24), 0.81 (1H, *m*, H-5). ^{13}C-NMR (150 MHz, $CDCl_3$), δ (ppm): 171.0 (C-1'), 154.7 (C-20), 100.1 (C-30), 81.3 (C-1), 55.5 (C-5), 50.5 (C-9), 48.7 (C-18), 42.1 (C-14), 41.0 (C-8), 39.4 (C-19), 39.2 (C-13), 38.9 (C-22), 38.5 (C-1), 38.3 (C-16), 37.8 (C-4), 37.1 (C-10), 34.6 (C-17), 34.1 (C-7), 28.0 (C-23), 26.7 (C-15), 26.2 (C-12), 25.7 (C-21), 25.5 (C-29), 23.7 (C-2), 21.5 (C-11), 21.3 (C-2'), 19.5 (C-28), 18.2 (C-6), 16.5 (C-24), 16.4 (C-25), 15.9 (C-26), 14.8 (C-27).

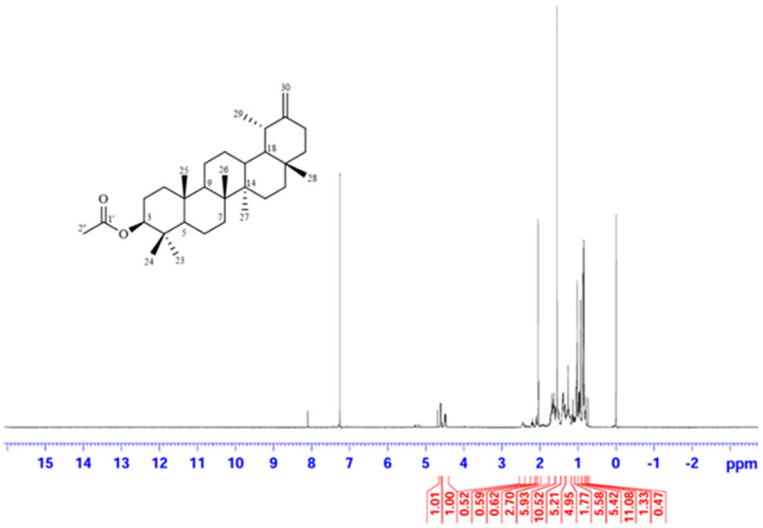

Fig S1. [1]H-NMR spectrum of compound **1**

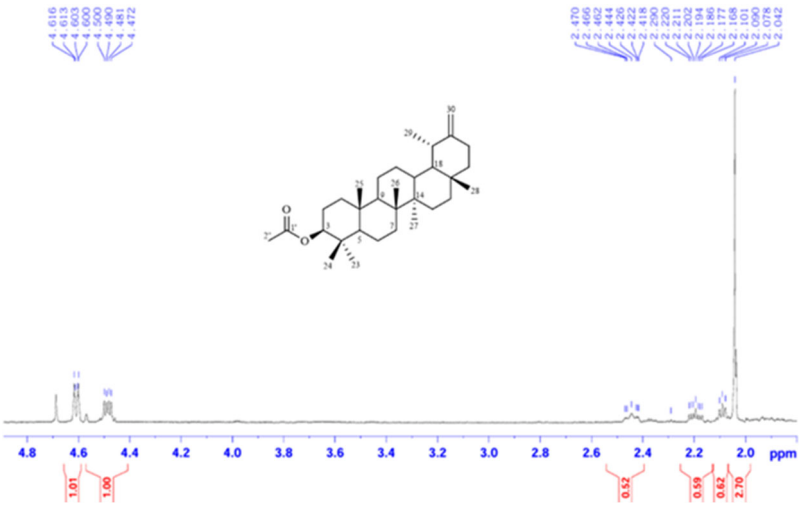

Fig S2. Expanded [1]H-NMR spectrum of compound **1** (2.0–4.8 ppm)

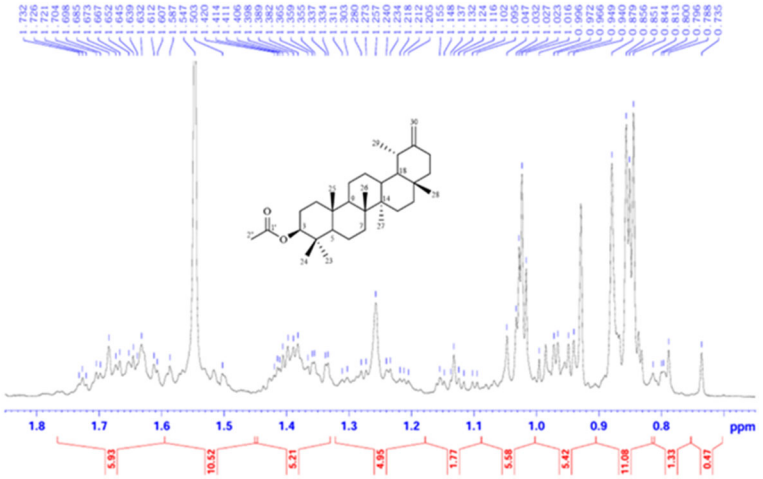

Fig S3. Expanded [1]H-NMR spectrum of compound **1** (0–1.8 ppm)

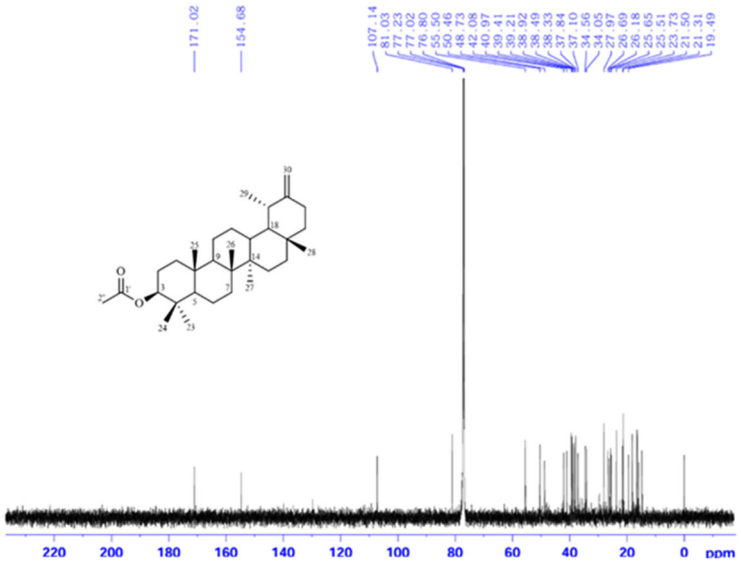

Fig S4. ^{13}C-NMR spectrum of compound **1**

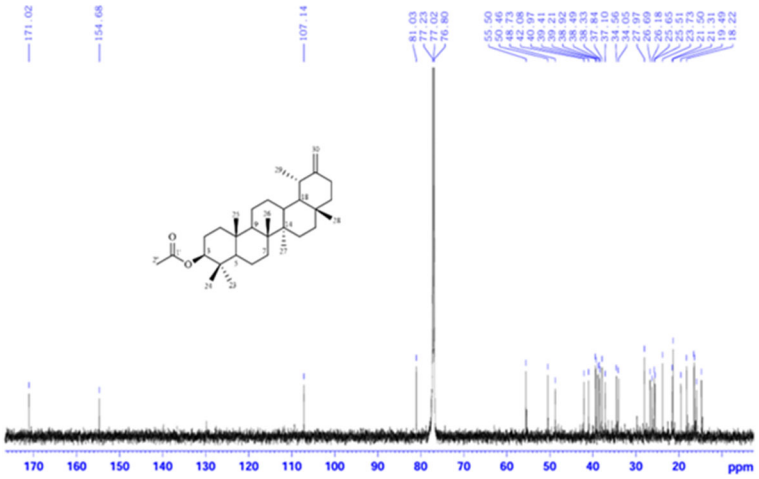

Fig S5. Expanded ^{13}C-NMR spectrum of compound **1** (0–170 ppm)

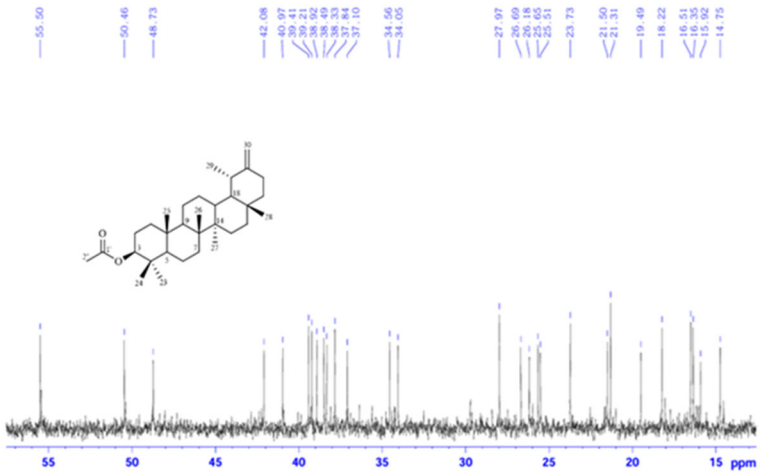

Fig S6. Expanded ^{13}C-NMR spectrum of compound **1** (15–55 ppm)

Supplementary Spectroscopic Data of Compound 2

Esculetin (2). ^{1}H-NMR (600 MHz, DMSO-d_6), δ (ppm): 7.86 (1H, *d*, *J* = 9.6 Hz, H-3), 6.78 (1H, *s*, H-5), 6.74 (1H, *s*, H-8), 6.16 (1H, *d*, *J* = 9.6 Hz, H-4). ^{13}C-NMR (150 MHz, DMSO-d_6, δc ppm): 160.7 (C-2), 150.4 (C-7), 148.5 (C-6), 144.4 (C-4), 142.8 (C-9), 112.3 (C-5), 111.5 (C-3), 110.7 (C-10), 102.6 (C-8).

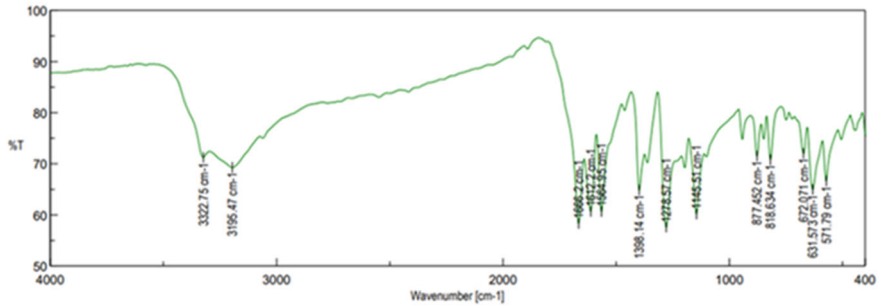

Fig S7. FTIR spectrum of compound **2**

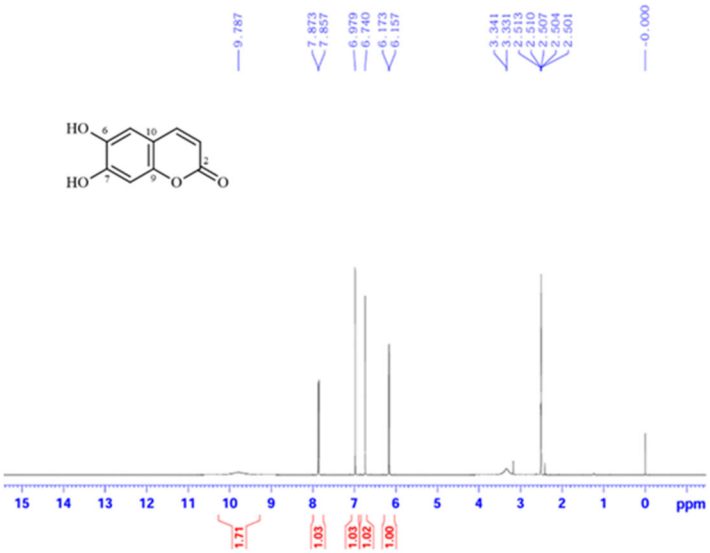

Fig S8. ^{1}H-NMR spectrum of compound **2**

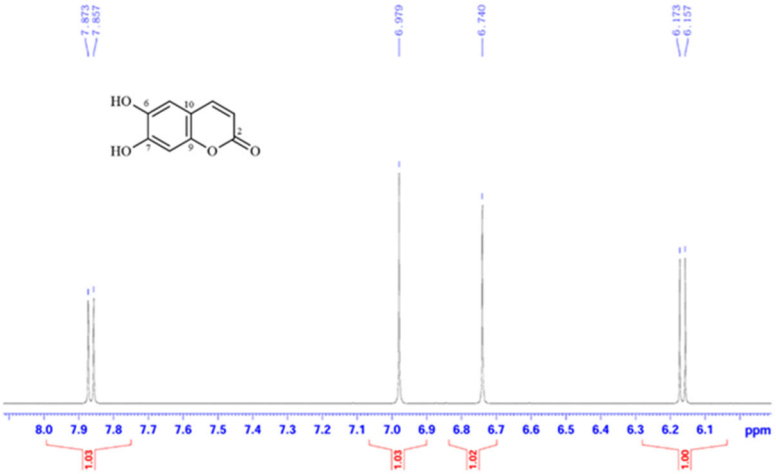

Fig S9. Expanded ^{1}H-NMR spectrum of compound **2** (6.1–8.0 ppm)

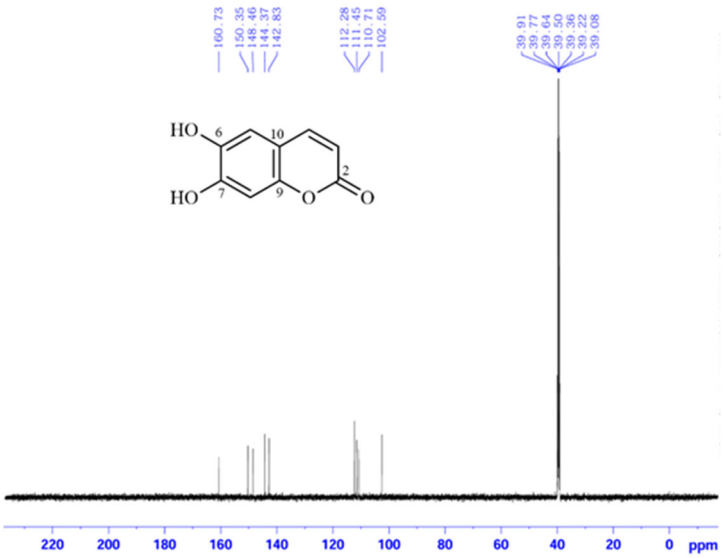

Fig S10. ^{13}C-NMR spectrum of compound **2** (0–220 ppm)

Fig S11. Expanded ^{13}C-NMR spectrum of compound **2** (105–150 ppm)

Supplementary Spectroscopic Data of Compound 3

Pyrimidine-2,4-dione (3). ^{1}H-NMR (600 MHz, DMSO-d_6), δ (ppm): 11.04 (2H, *s*, H-1, H-3), 7.36 (1H, *d*, *J* = 7.6 Hz, H-6), 5.49 (1H, *d*, *J* = 7.6 Hz, H-5). ^{13}C-NMR (150 MHz, DMSO-d_6), δc (ppm): 166.2 (C-4), 153.0 (C-1), 143.8 (C-6), 101.7 (C-5).

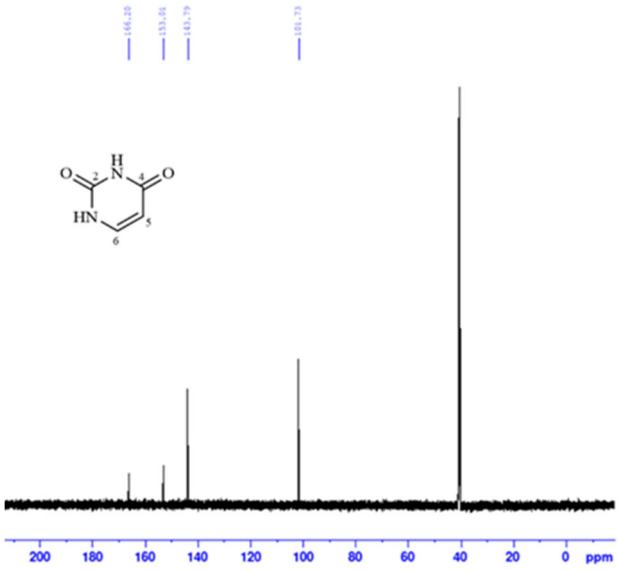

Fig S12. ^{1}H-NMR spectrum of compound **3**

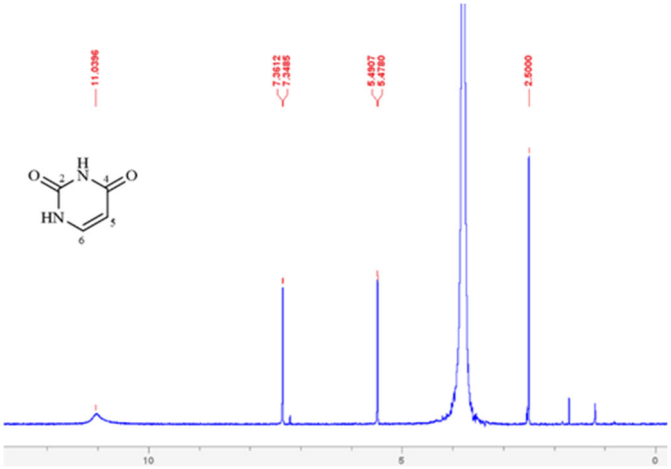

Fig S13. ^{13}C-NMR spectrum of compound **3**

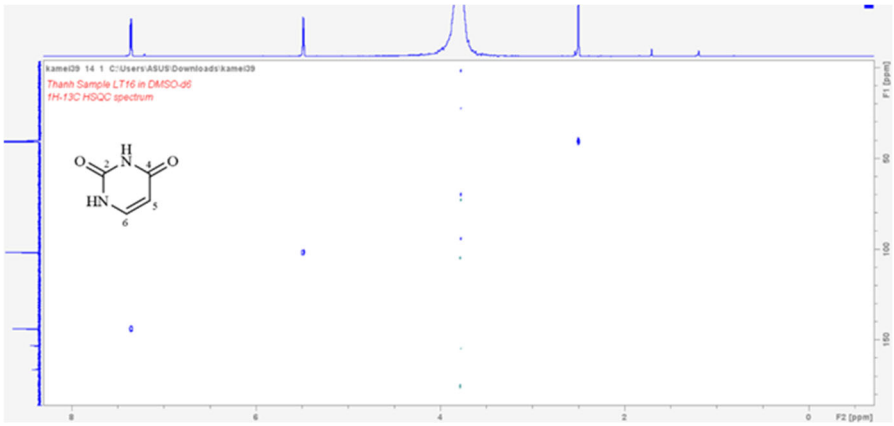

Fig S14. HSQC spectrum of compound **3**

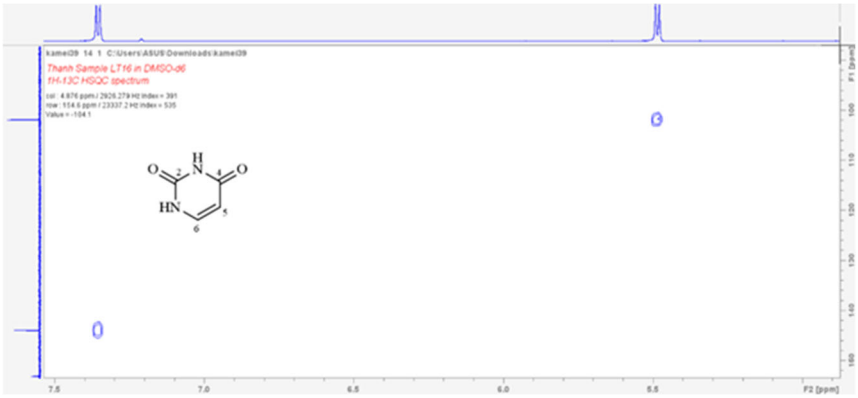

Fig S15. Expanded HSQC spectrum of compound **3**

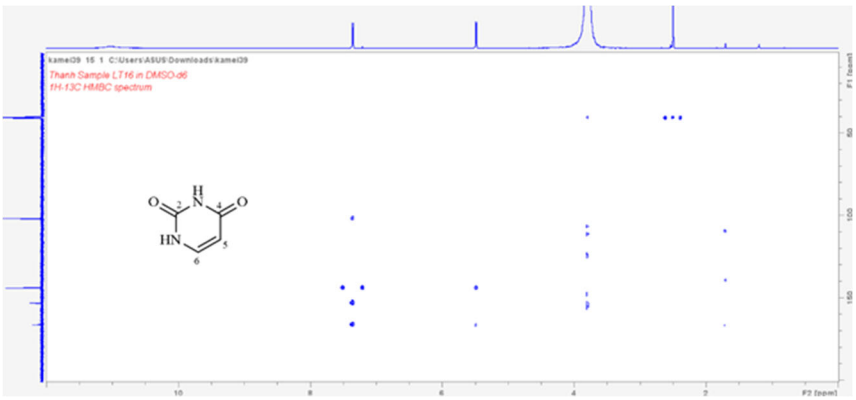

Fig S16. HMBC spectrum of compound **3**

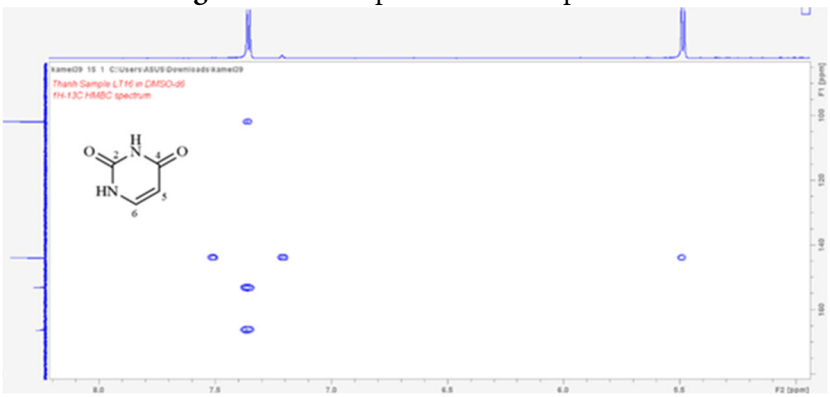

Fig S17. Expanded HMBC spectrum of compound **3**

Supplementary Spectroscopic Data of Compound 4

5-Hydroxypyrolidin-2-on (4). ^{1}H-NMR (600 MHz, DMSO-d_6), δ (ppm): 5.17 (1H, *dd*, *J* = 6.6 & 1.2 Hz, H-5), 2.48 (2H, *m*, *J* = 16.8, 9.6 & 3.0 Hz, H-3a), 2.37 (2H, *m*, H-4a), 2.19 (2H, *m*, H-3b), 2.03 (2H, *m*, H-4b). ^{13}C-NMR (150 MHz, DMSO-d_6), δ (ppm): 181.4 (C-2), 85.3 (C-5), 29.8 (C-4), 29.2 (C-3).

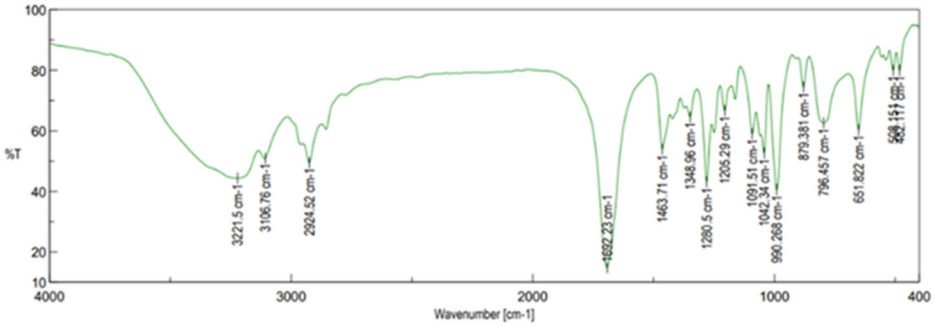

Fig S18. FT-IR spectrum of compound **4**

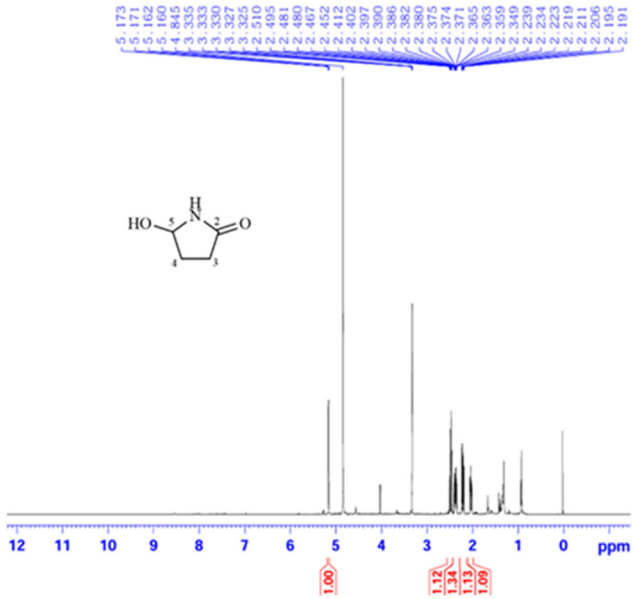

Fig S19. ^{1}H-NMR spectrum of compound **4**

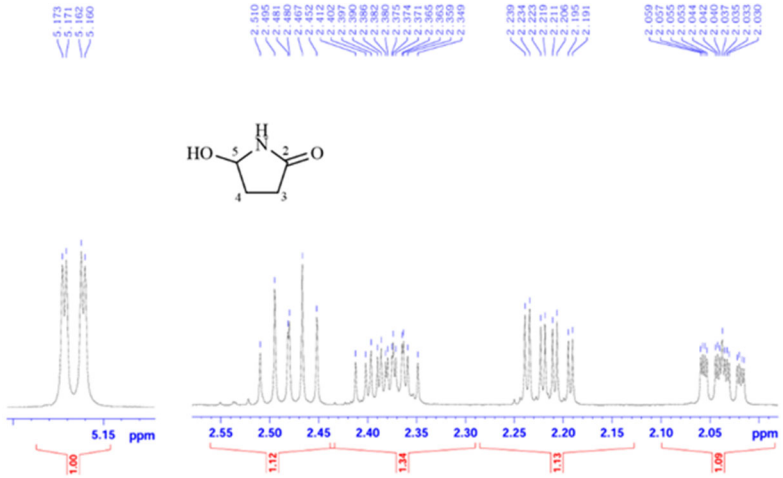

Fig S20. Expanded ^{1}H-NMR spectrum of compound **4**

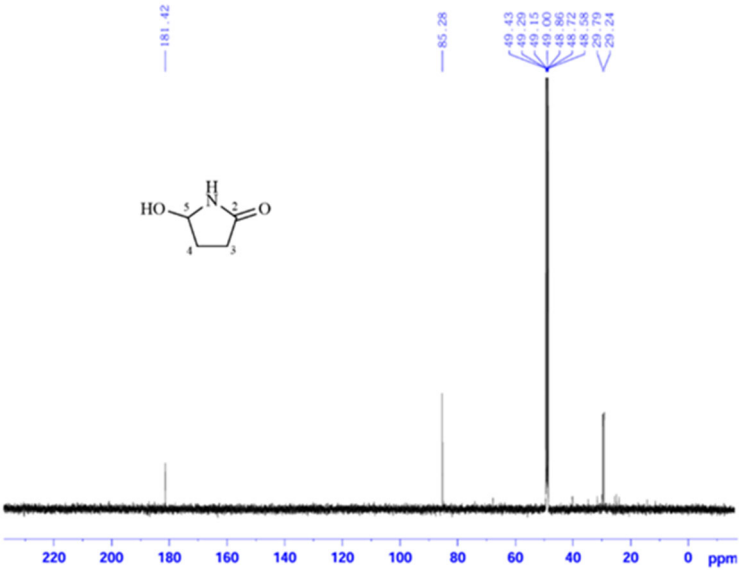

Fig S21. ^{13}C-NMR spectrum of compound **4**