

Supplementary Information

Dibenzofurans from *Cladonia corniculata* Ahti and Kashiw inhibit key enzymes involved in inflammation and gout: An *in vitro* approach

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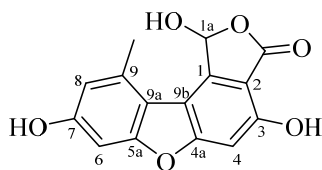
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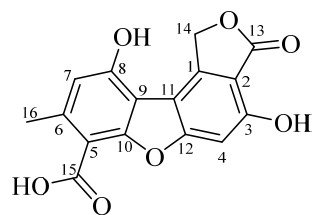


Alectosarmentin (1)

Table S1 – ^1H and ^{13}C spectral data of alectosarmentin(1).

| Carbon No. | 1 NMR data (400 MHz, DMSO- d_6) | | AlectosarmentinNMR data (125.7 MHz, DMSO- d_6) ¹ | |
|------------|---------------------------------------|-----------------------------------|---|-----------------------------------|
| | ^1H (δ , ppm) | ^{13}C (δ , ppm) | ^1H (δ , ppm) | ^{13}C (δ , ppm) |
| 1 | - | 138.567 | - | 141.3 |
| 1a | 1.883 (s, 1-H) 8.907 (s, 1-Ar-OH) | 97.177 | 6.92 (1H, d, $J = 7.0$ Hz) 8.05 (D ₂ O exchanged) | 96.4 |
| 2 | - | 108.934 | - | 107.8 |
| 3 | 9.474 (s, 1-Ar-OH) | 162.440 | 10.81 (D ₂ O exchanged) | 155.0/161.0 |
| 4 | 7.819 (s, 1-Ar-H) | 102.937 | 7.11 (1H, s) | 99.8 |
| 4a | - | 164.821 | - | 155.0/161.0 |
| 5a | - | 159.770 | - | 157.9 |
| 6 | 7.609-7.612 (d, 1-Ar-H, $J = 1.2$ Hz) | 97.214 | 6.82 (1H, br d, $J = 1.9$ Hz) | 95.5 |
| 7 | 9.122 (s, 1-Ar-OH) | 160.380 | 9.90 (D ₂ O exchanged) | 157.4 |
| 8 | 7.205-7.208 (d, 1-Ar-H, $J = 1.2$ Hz) | 112.169 | 6.64 (1H, d, $J = 1.9$ Hz) | 113.8 |
| 9 | 3.458 (s, 3-Ar-Me) | 22.345 (Ar-Me) 132.486 (Ar-H) | 2.74 (s, 3-Ar-Me) | 20.7 (Ar-Me) 133.6 (Ar-H) |
| 9a | - | 112.382 | - | 112.9 |
| 9b | - | 112.360 | - | 112.2 |
| | - | 168.277 (C=O) | - | 167.1 (C=O) |

“-” indicates no signal

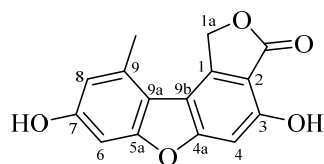


Porphyrilic acid (2)

Table S2 – ^1H and ^{13}C spectral data of porphyrilic acid (2).

| Carbon No. | 2 NMR data (400 MHz, DMSO- d_6) | | Porphyrilic acid NMR data (400 MHz, DMSO- d_6) | |
|------------|---------------------------------------|-----------------------------------|--|--|
| | ^1H (δ , ppm) | ^{13}C (δ , ppm) | ^1H (δ , ppm) ² | ^{13}C (δ , ppm) ³ |
| 1 | - | 112.590 | - | 109.3 |
| 2 | - | 144.306 | - | 142.6 |
| 3 | 7.783 (s, 1-Ar-OH) | 167.416 | Not given | 159.8 |
| 4 | 6.867 (s, 1-Ar-H) | 98.612 | 7.08 | 98.1 |
| 5 | - | 139.965 | - | 139.3 |
| 6 | - | 112.544 | - | 108.6 |
| 7 | 6.211 (s, 1-Ar-H) | 113.887 | 6.65 | 111.9 |
| 8 | 7.783 (s, 1-Ar-OH) | 157.162 | Not given | 152.9 |
| 9 | - | 104.312 | - | 107.9 |
| 10 | - | 163.991 | - | 156.6 |
| 11 | - | 163.365 | - | 156.3 |
| 12 | - | 105.555 | - | 107.9 |
| 13 | - | 173.818 | - | 168.6 |
| 14 | 5.919 (s, 2H) | 71.870 | 5.62 | 69.1 |
| 15 | 7.264 (s, 1-COOH) | 172.345 | Not given | 166.3 |
| 16 | 2.853 (s, 1-H) | 22.392 | 2.50 | 21.2 |

“-” indicates no signal



Strepsilin (3)

Table S3 – ^1H and ^{13}C spectral data of strepsilin(3).

| Carbon No. | 3 NMR data (400 MHz, DMSO- d_6) | | StrepsilinNMR data (125.7 MHz, DMSO- d_6) ¹ | |
|------------|---------------------------------------|-----------------------------------|--|-----------------------------------|
| | ^1H (δ , ppm) | ^{13}C (δ , ppm) | ^1H (δ , ppm) | ^{13}C (δ , ppm) |
| 1 | - | 139.743 | - | 141.5 |
| 1a | 5.783 (s, 2H) | 71.312 | 5.83 (2H, s) | 69.4 |
| 2 | - | 103.372 | - | 107.3 |
| 3 | 7.596 (s, 1-Ar-OH) | 162.029 | Not given | 155.4/157.1/160.5 |
| 4 | 7.962 (s, 1-Ar-H) | 99.534 | 7.06 (1H, s) | 98.2 |
| 4a | - | 161.479 | - | 155.4/157.1/160.5 |
| 5a | - | 159.305 | - | 157.5 |
| 6 | 7.089-7.092 (d, 1-Ar-H, $J = 1.2$ Hz) | 97.581 | 6.83 (1H, d, $J = 2.0$ Hz) | 95.6 |
| 7 | 7.265 (s, 1-Ar-OH) | 160.022 | Not given | 157.5 |
| 8 | 6.685-6.688 (d, 1-Ar-H, $J = 1.2$ Hz) | 112.223 | 6.63 (1H, d, $J = 2.0$ Hz) | 113.6 |
| 9 | 2.919 (s, 3-Ar-Me) | 22.437 (Ar-Me) 132.617 (Ar-H) | 2.67 (s, 3-Ar-Me) | 20.4 (Ar-Me) 131.9 (Ar-H) |
| 9a | - | 112.711 | - | 113.4 |
| 9b | - | 112.955 | - | 110.9 |
| | - | 173.260 (C=O) | - | 168.8 (C=O) |

"-" indicates no signal