Supporting Information

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Isolation of Undescribed Biflavonoid from *Potamogeton pusillus* L. and Antidiabetic Activity Properties

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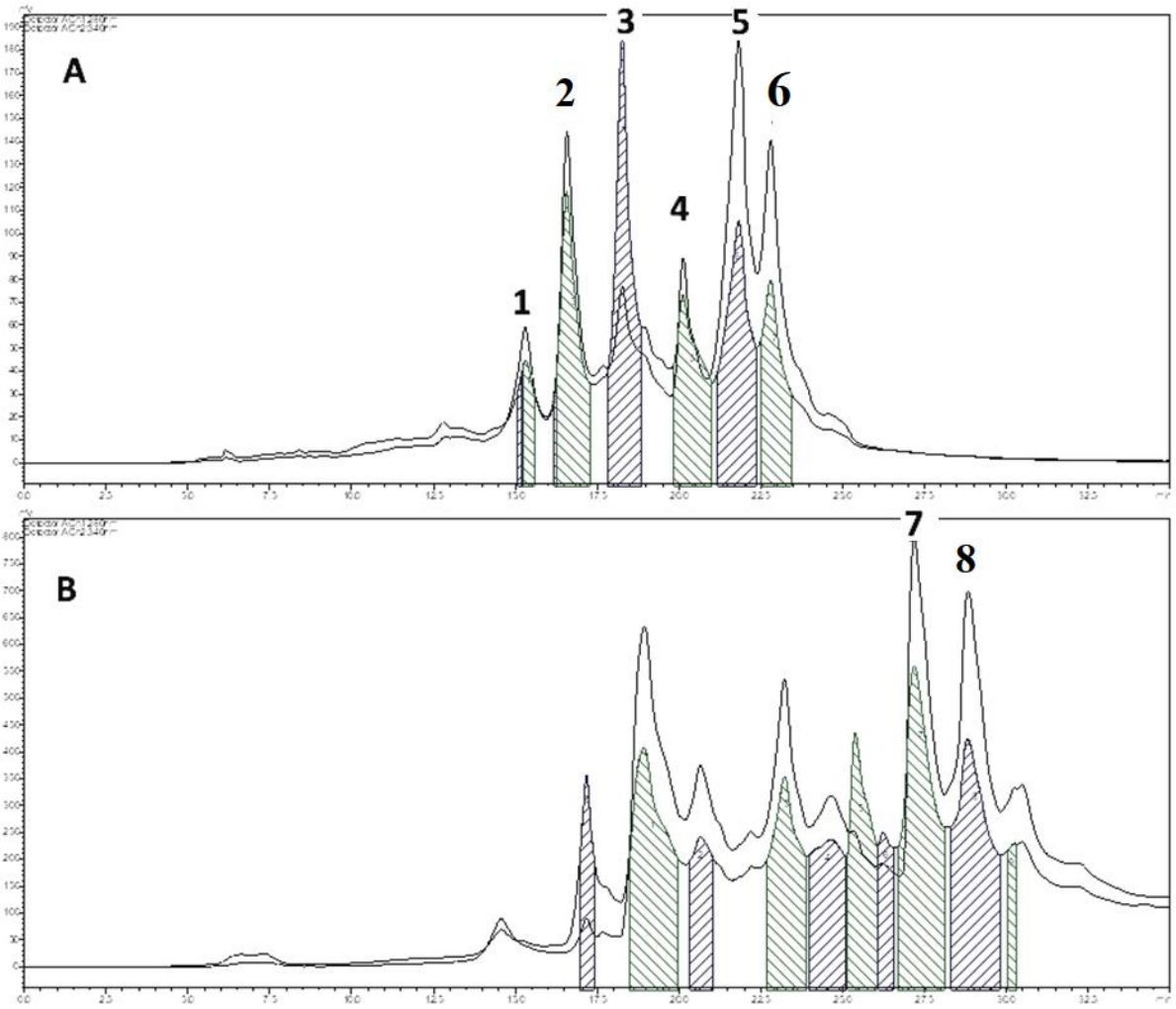

Figure S1: Prep-HPLC chromatogram of EtOAc (B) and ButOH (A) fractions of *P. pusillus*.

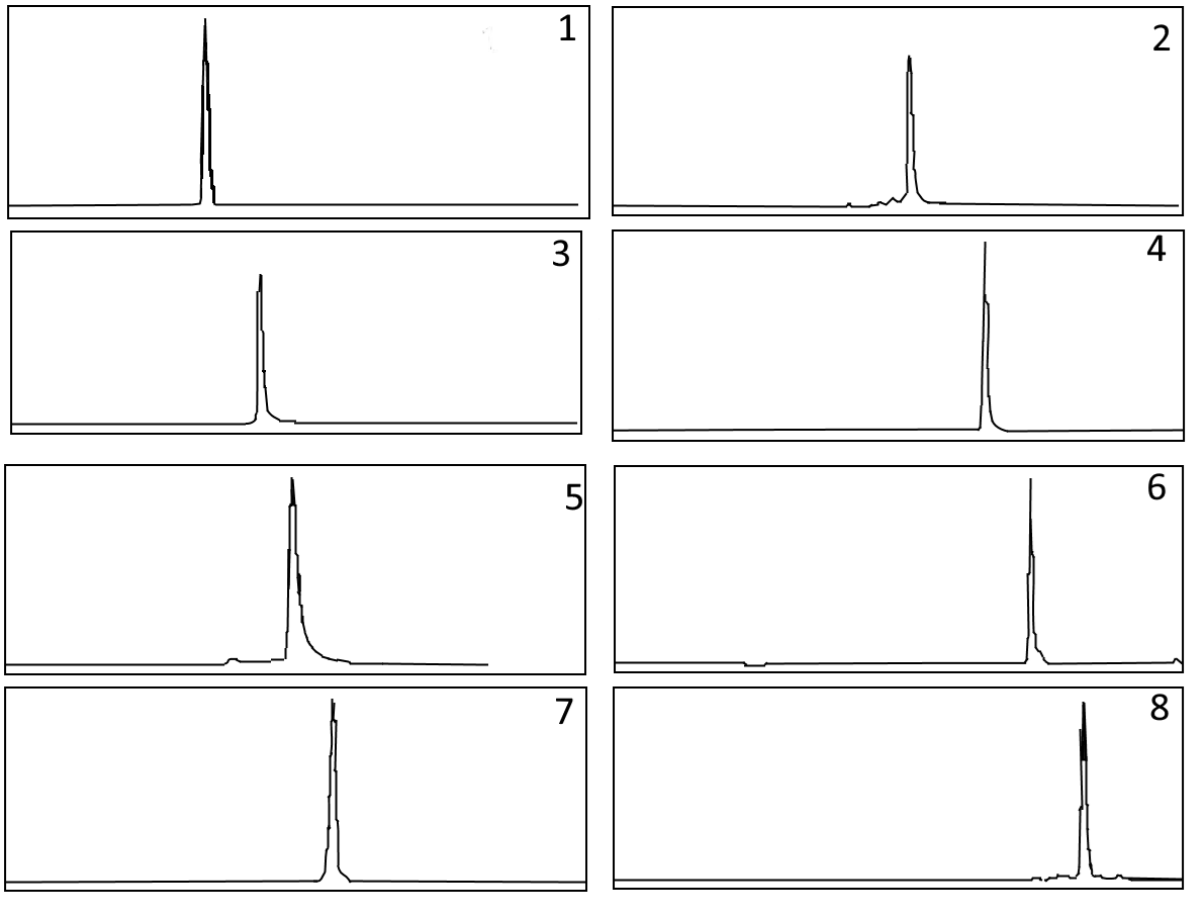

Figure S2: Analytical HPLC chromatograms of isolated molecules **(1-8)**.

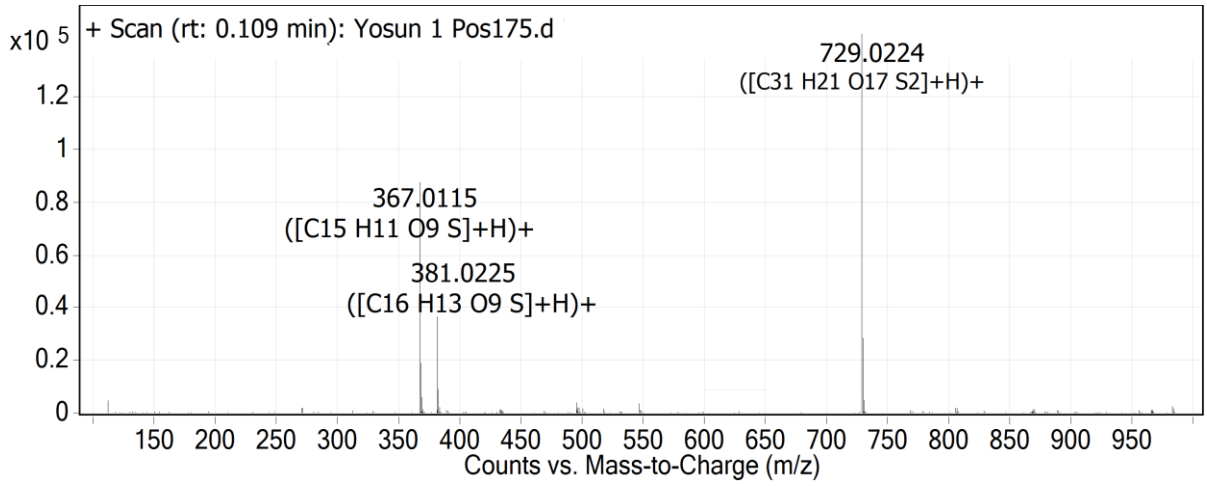

Figure S3: LC-Q-TOF/MS spectrum of **1** (pusillin A)

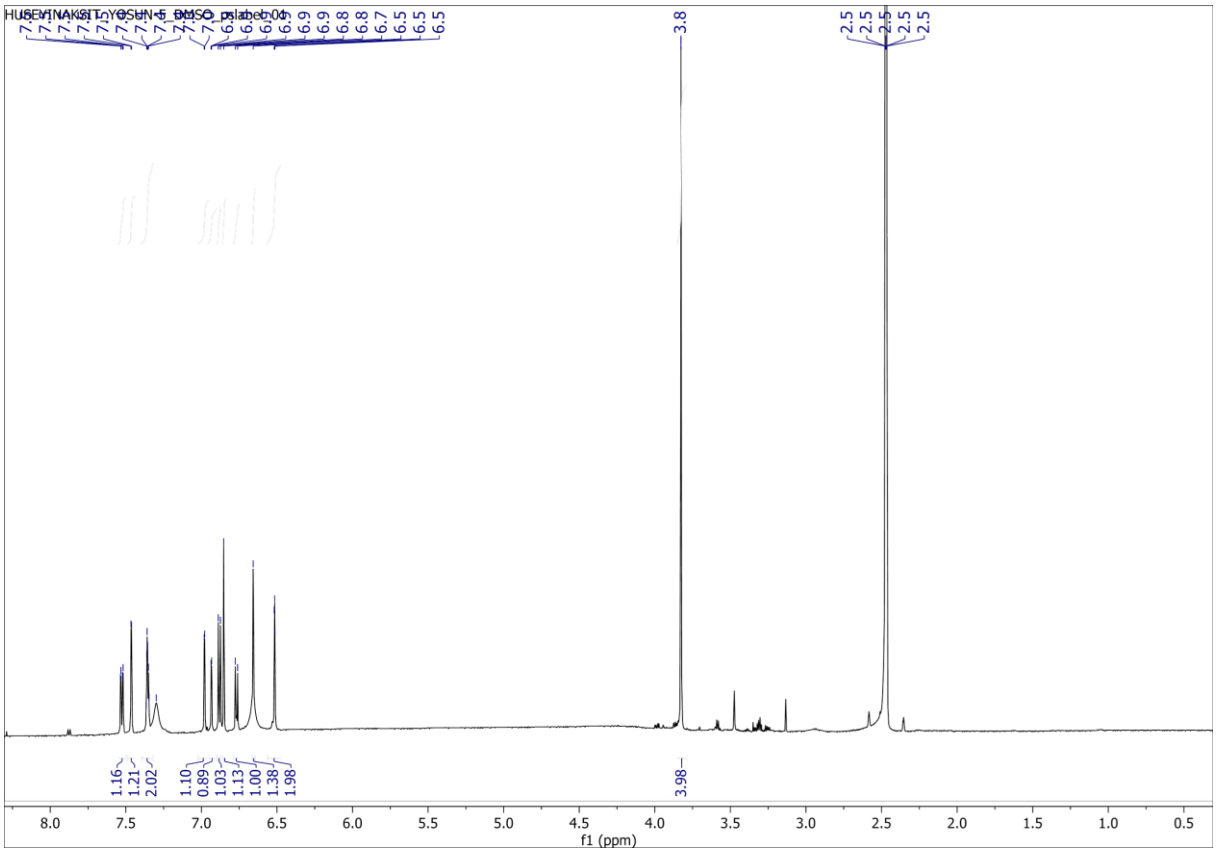

Figure S4: ^{1}H-NMR (600 MHz, DMSO-d6) spectrum of **1** (pusillin A)

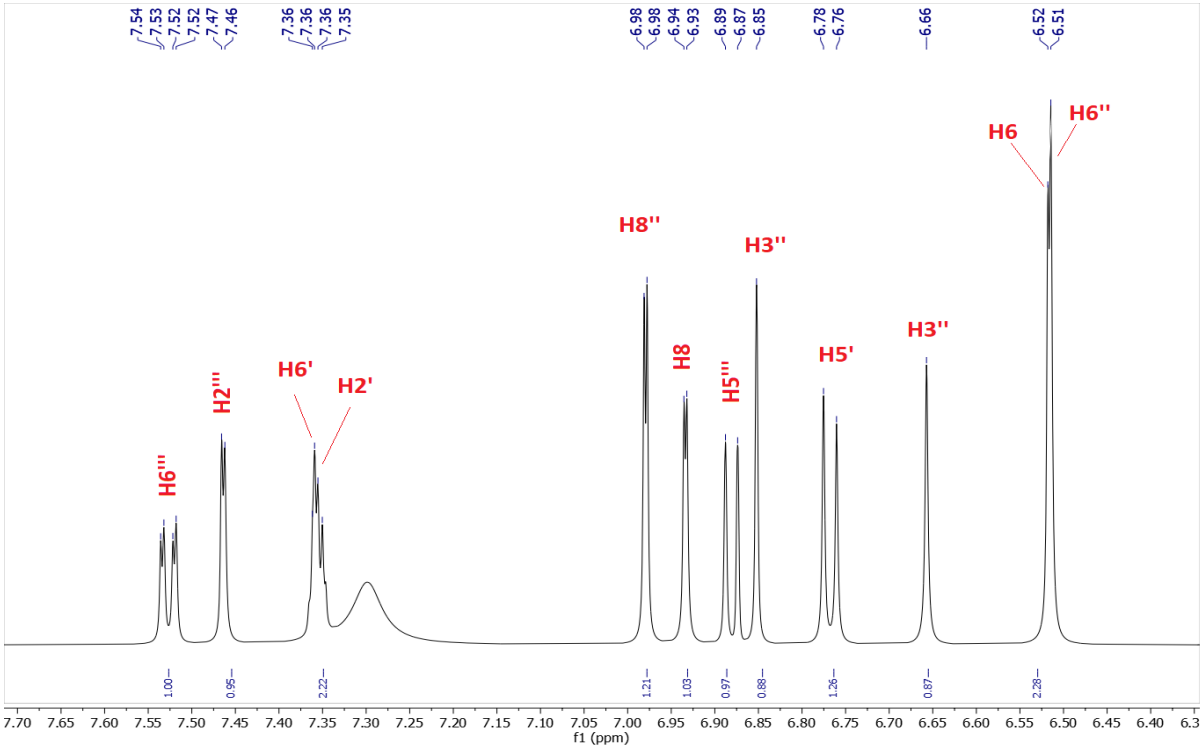

Figure S5: ^{1}H-NMR (600 MHz, DMSO-d6) spectrum of 1 (pusillin A) (expanded)

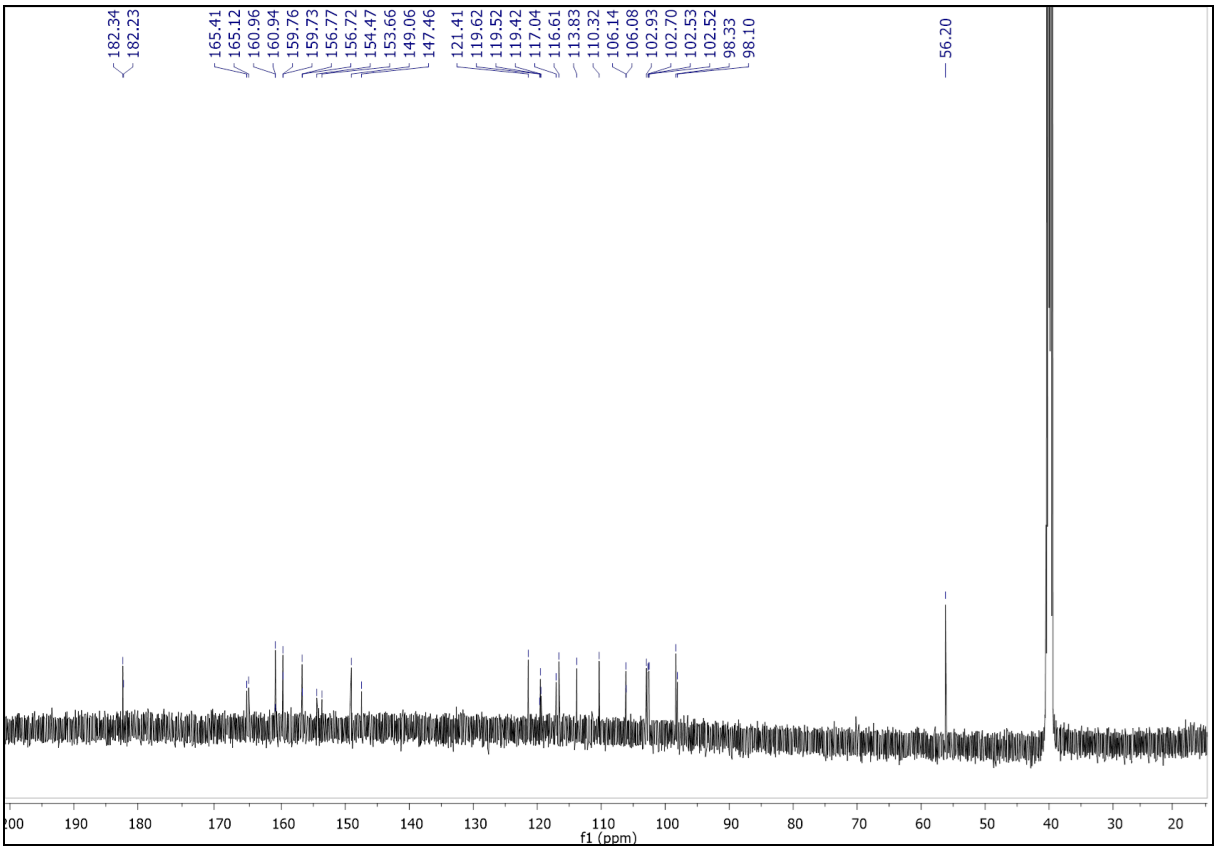

Figure S6: ^{13}C-NMR (150 MHz, DMSO-d_6) spectrum of **1** (pusillin A)

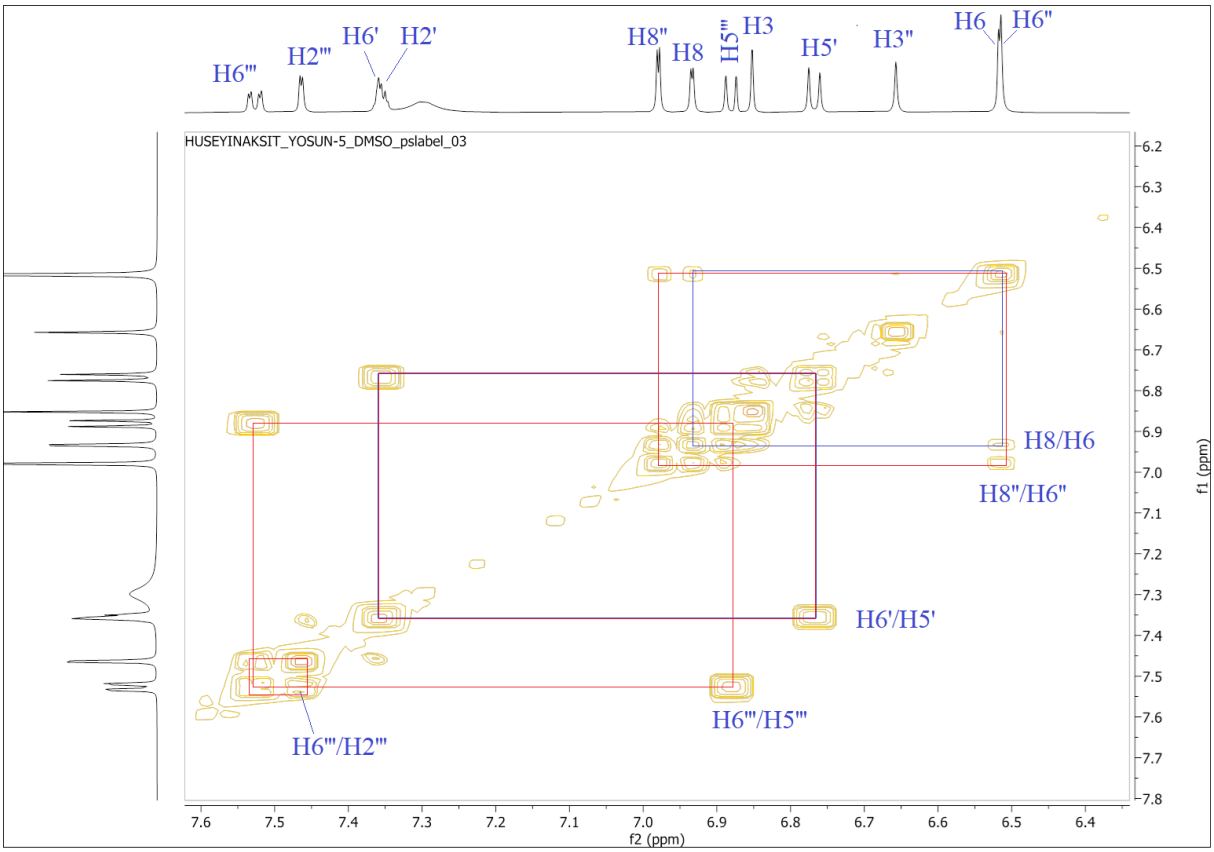

Figure S7: COSY spectrum of **1** (pusillin A)

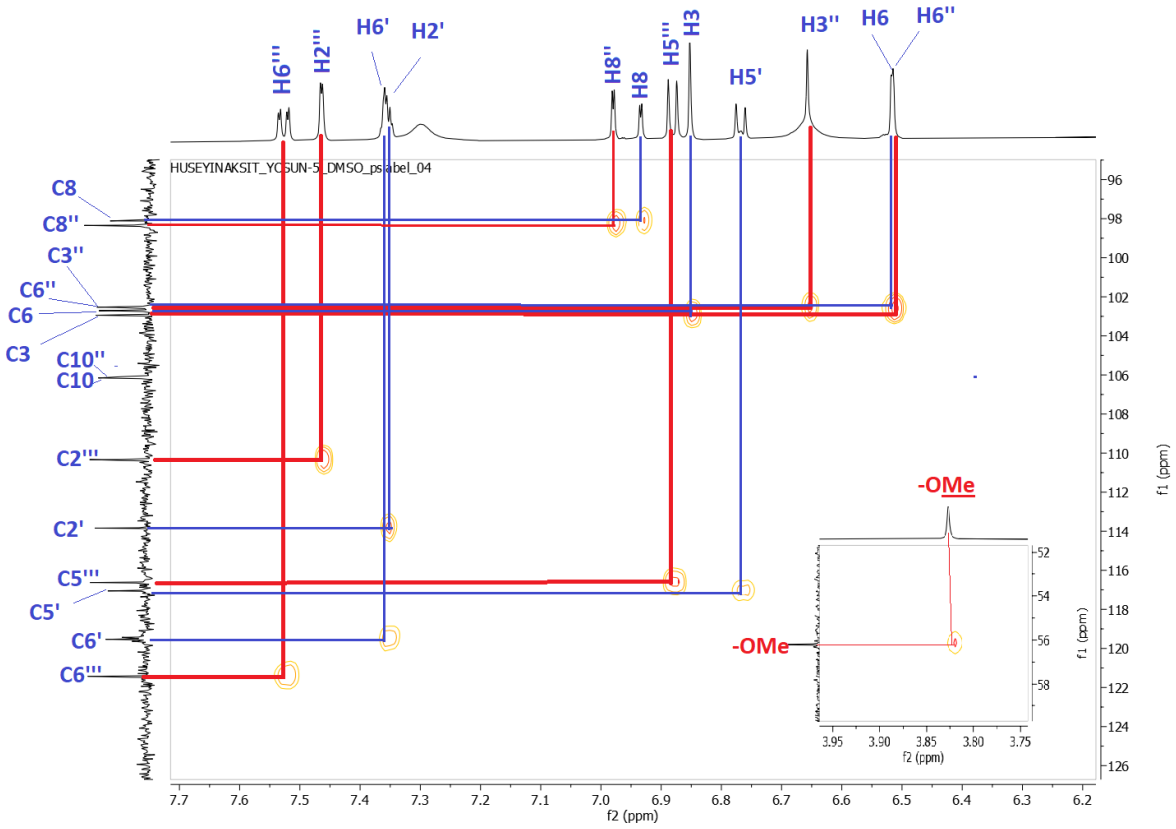

Figure S8: HSQC spectrum of **1** (pusillin A)

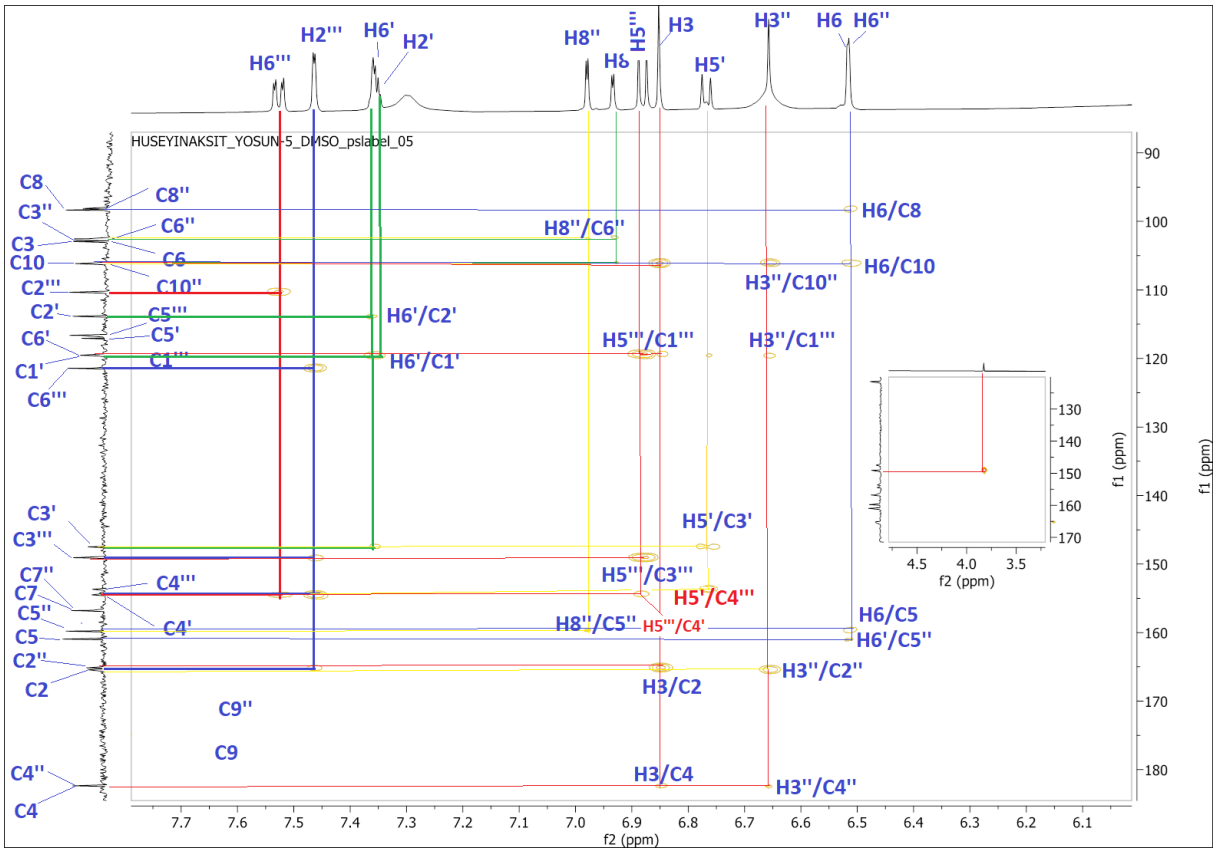

Figure S9: HMBC spectrum of **1** (pusillin A)

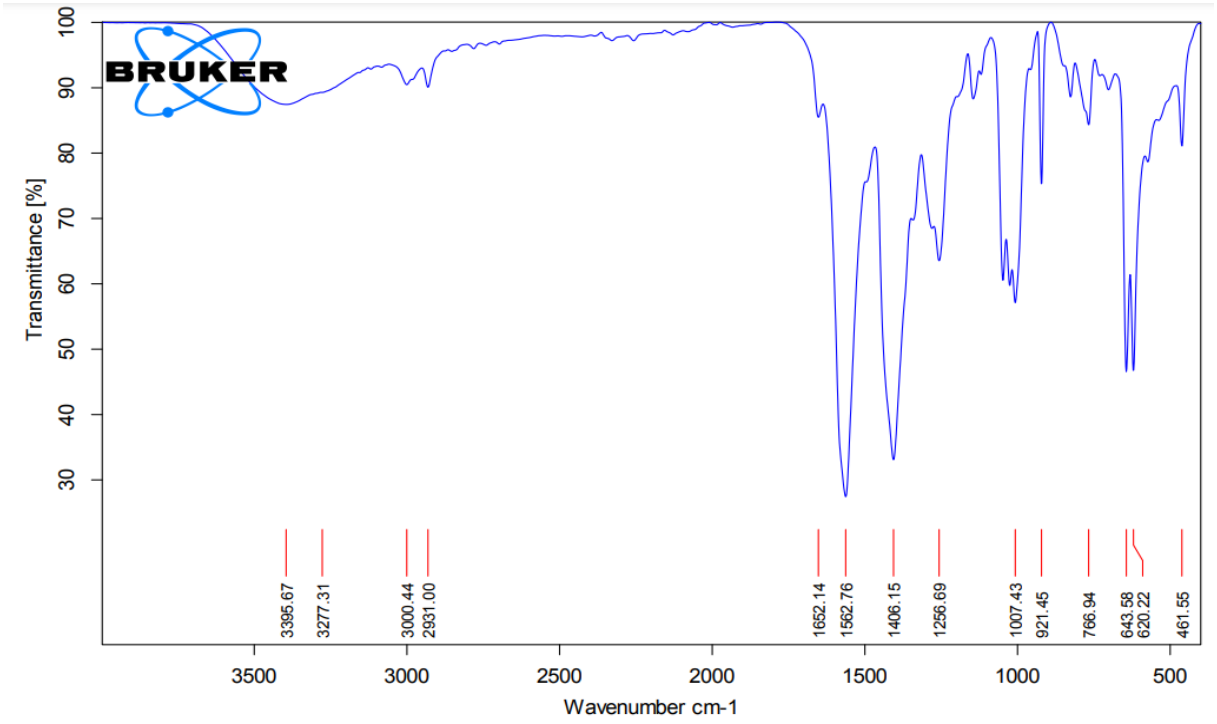

Figure S10: IR spectrum of **1** (pusillin A)

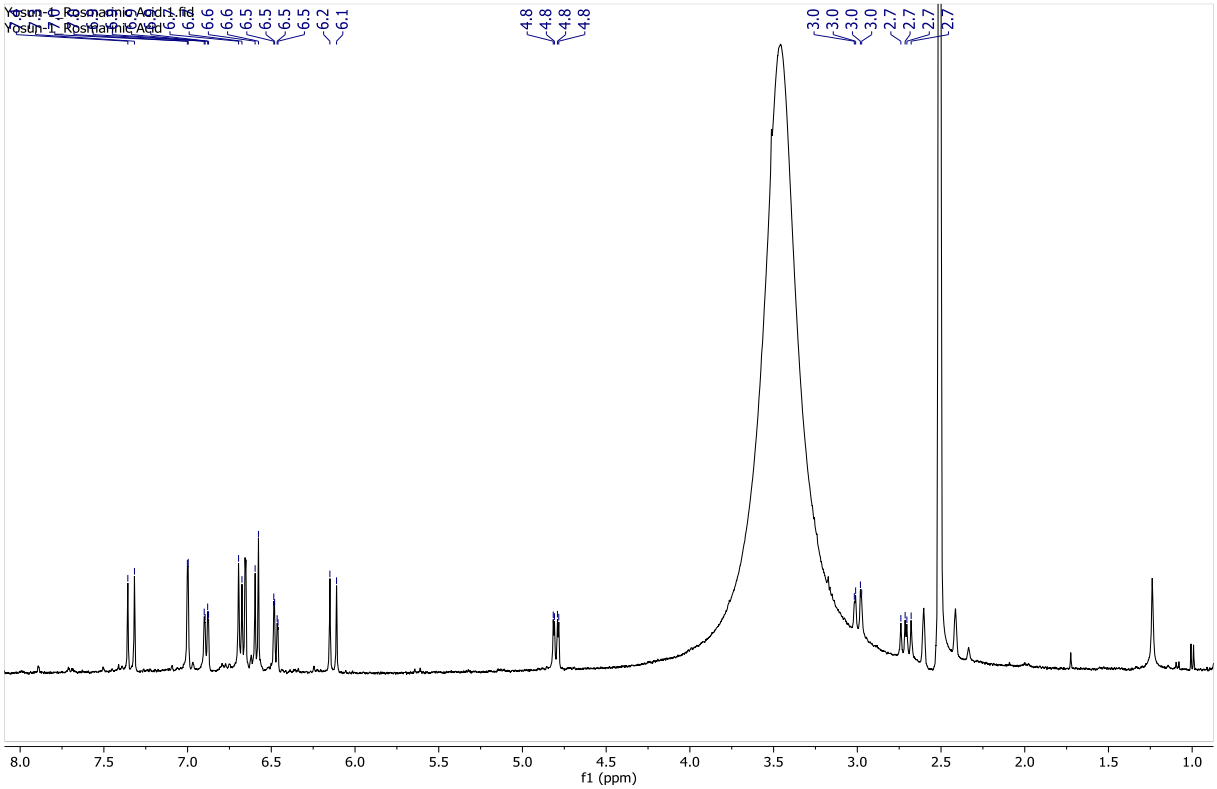

Figure S11: [1]H-NMR spectra of rosmarinic acid (**2**) (400 MHz, DMSO-d6)

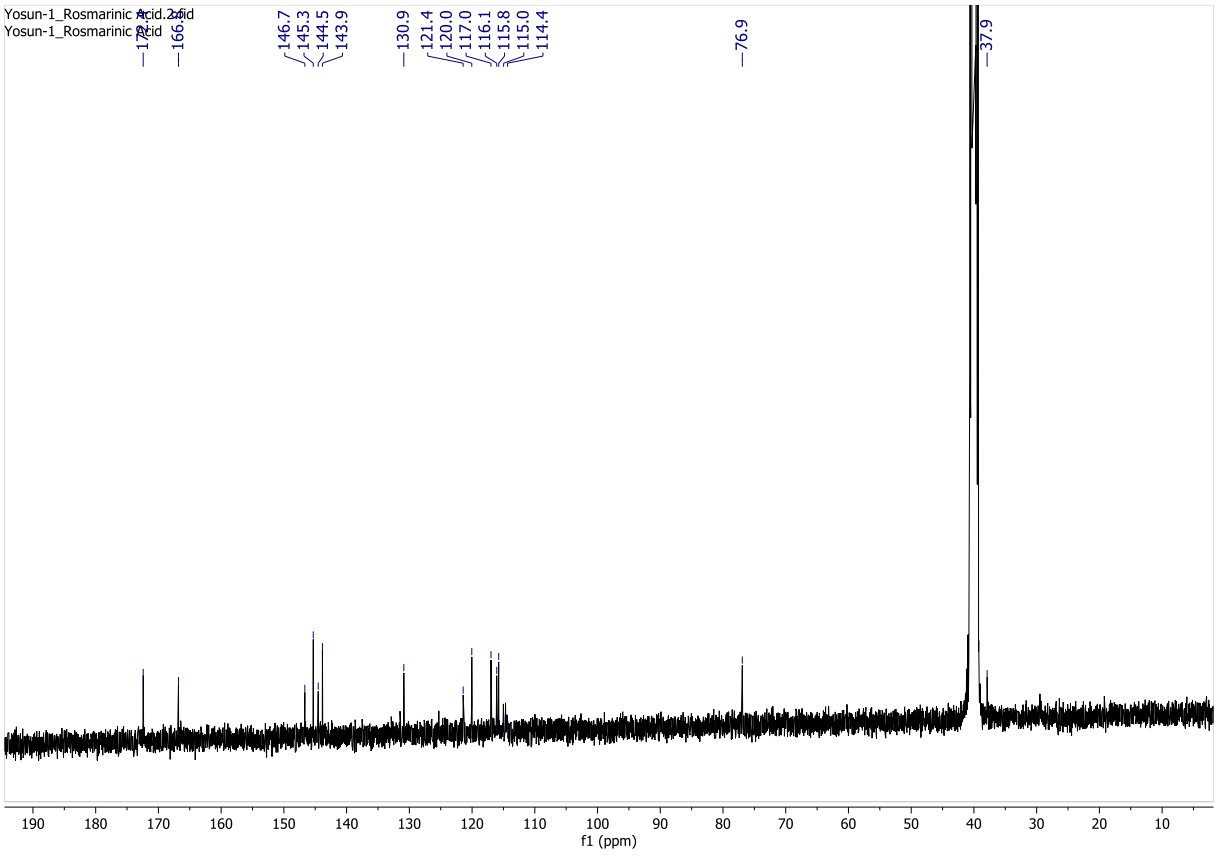

Figure S12: [13]C-NMR spectra of rosmarinic acid (**2**) (100 MHz, DMSO-d6)

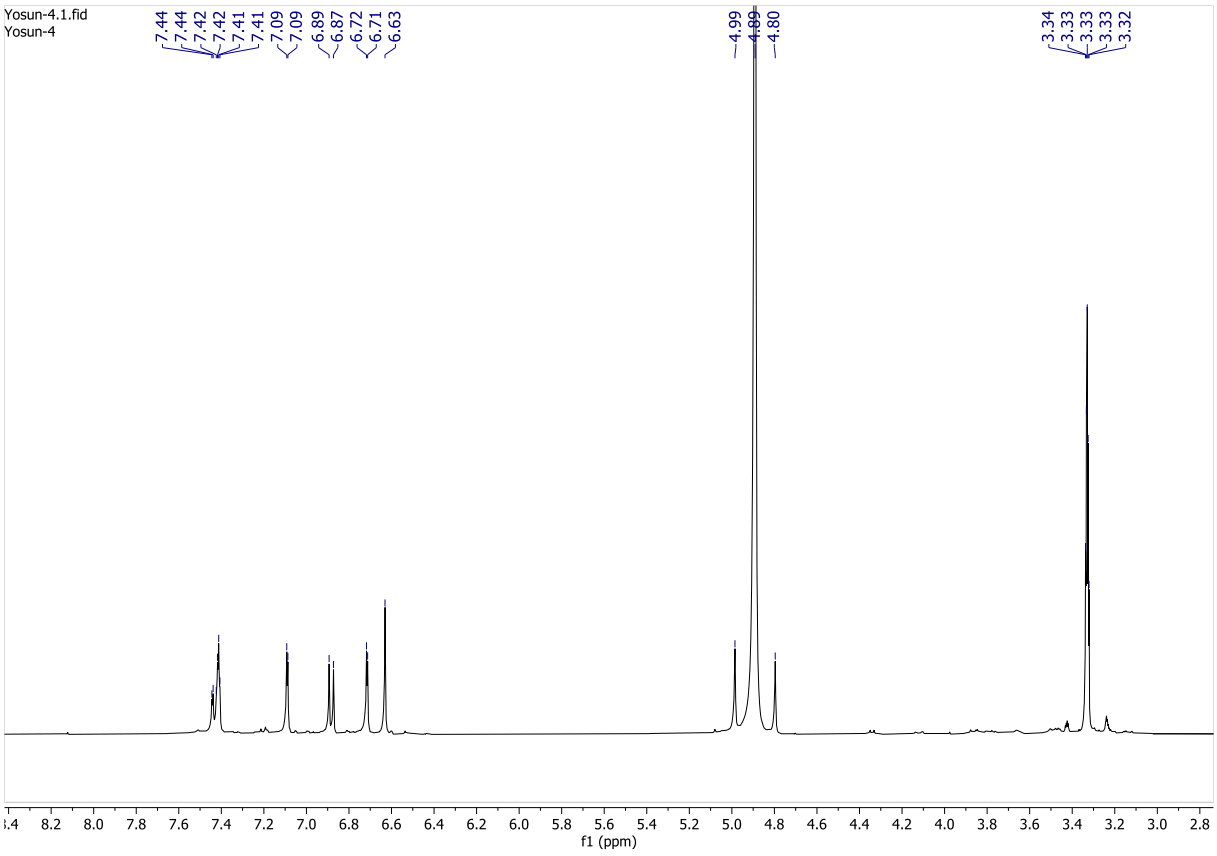

Figure S13: ^{1}H-NMR spectra of luteolin-7-sulfate (**3**) (400 MHz, in MeOD)

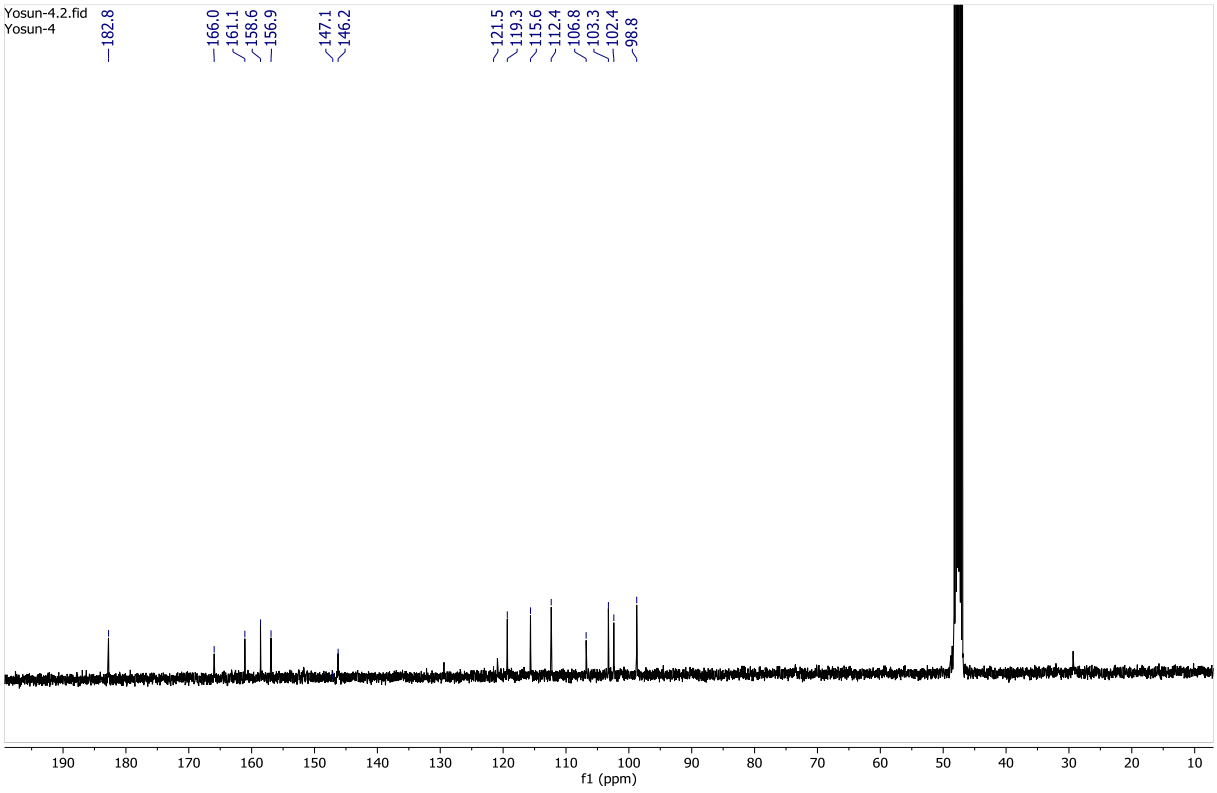

Figure S14: ^{13}C-NMR spectra of luteolin-7-sulfate (**3**) (100 MHz, in MeOD)

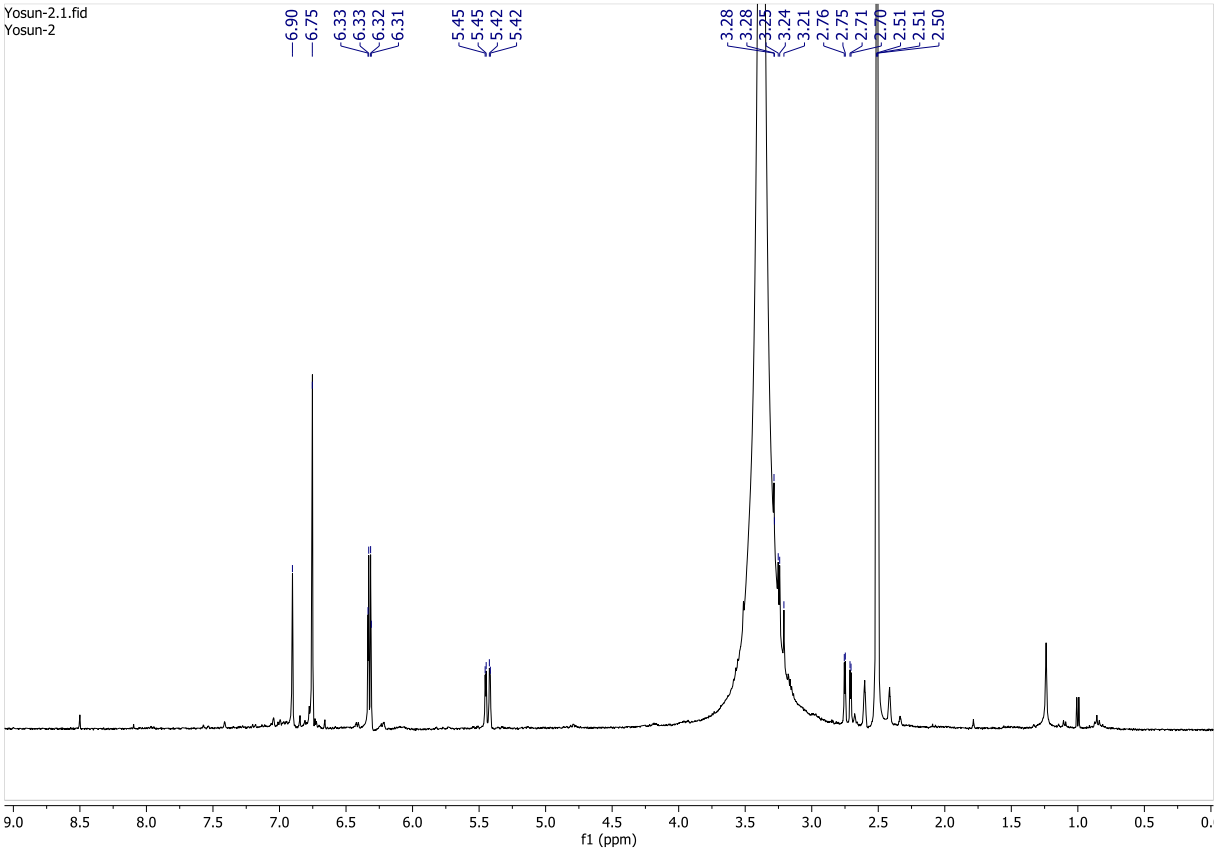

Figure S15: [1]H-NMR spectra of eriodictyol-7-sulfate (**4**) (400 MHz, in DMSO-d6)

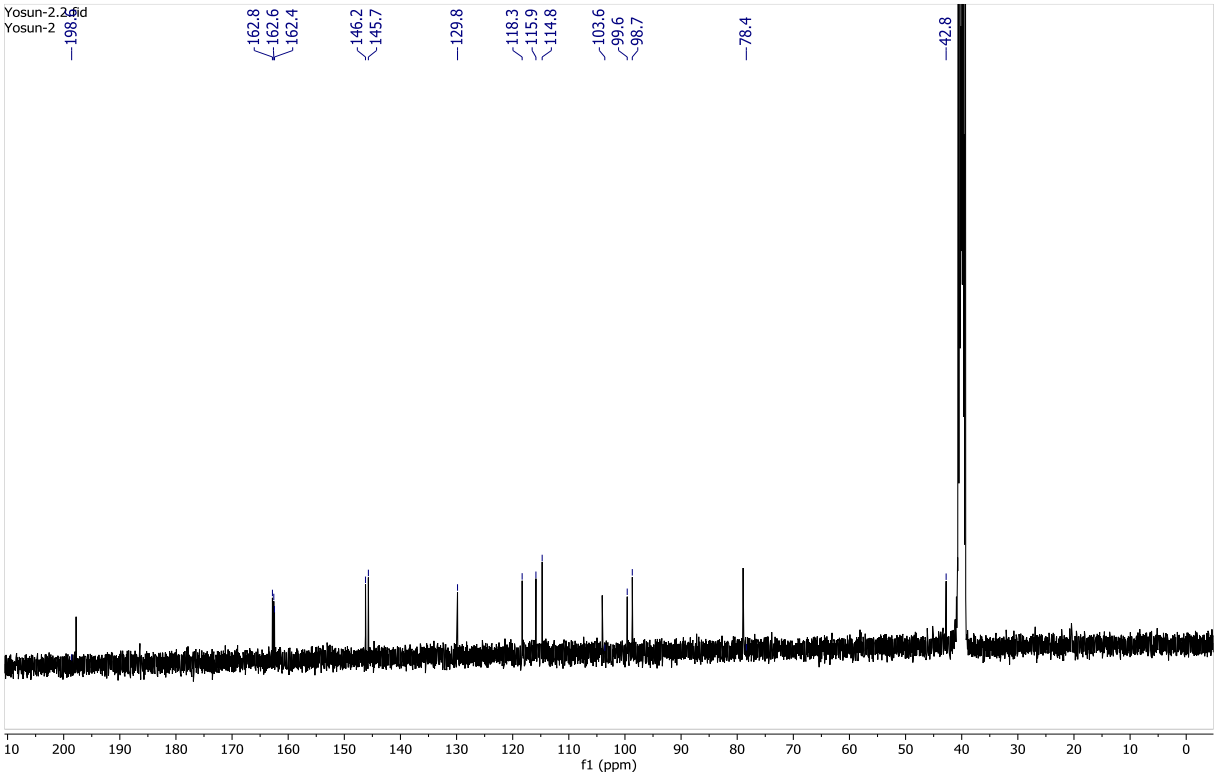

Figure S16: [13]C-NMR spectra of eriodictyol-7-sulfate (**4**) (100 MHz, in DMSO-d6)

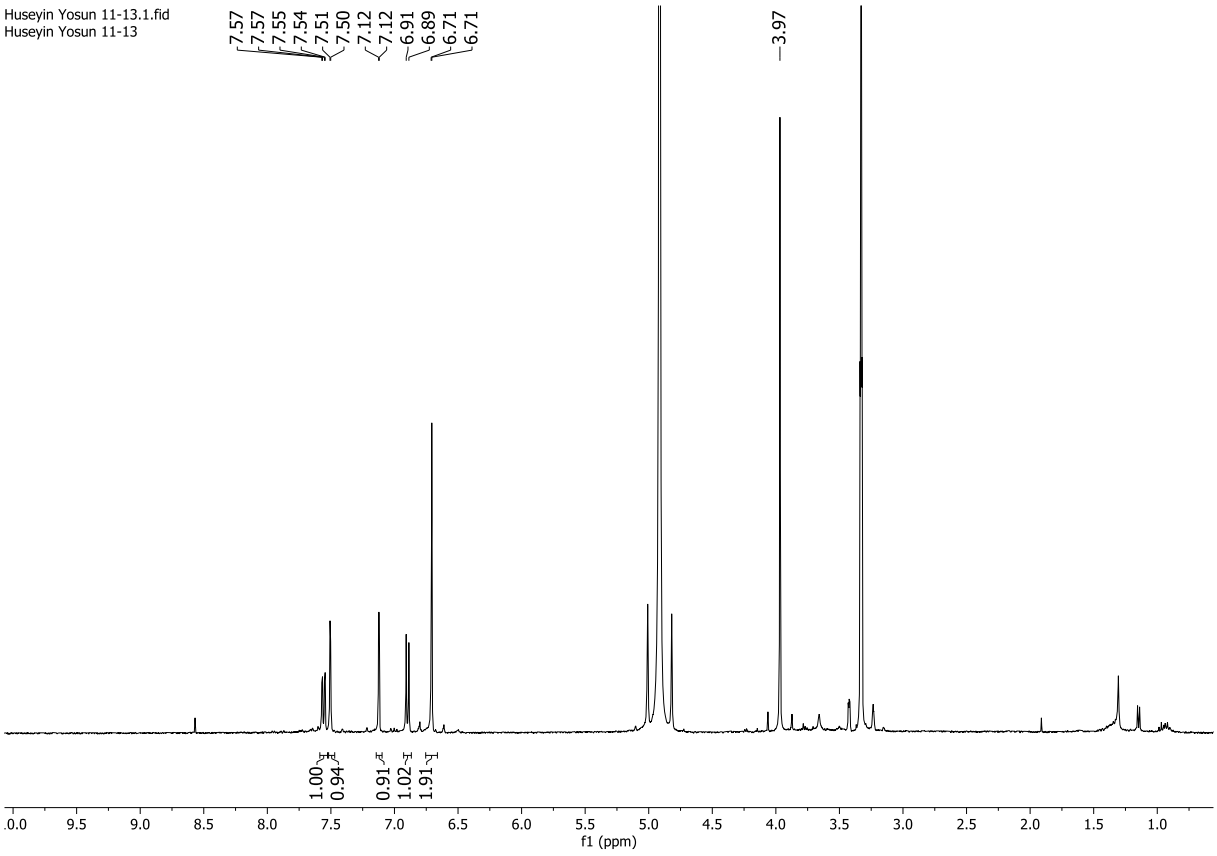

Figure S17: [1]H-NMR spectra of chrysoeriol-7-sulfate (**5**) (400 MHz, MeOD)

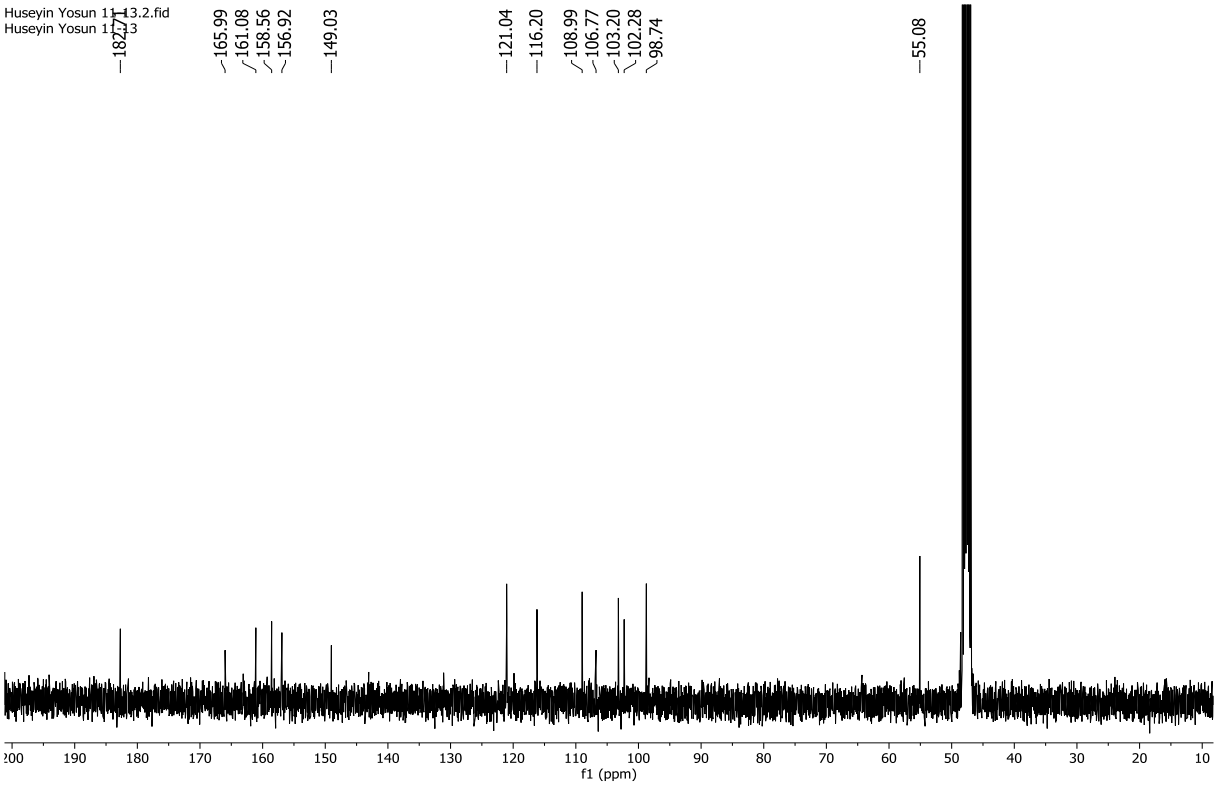

Figure S18: [13]C-NMR spectra of chrysoeriol-7-sulfate (**5**) (100 MHz, MeOD)

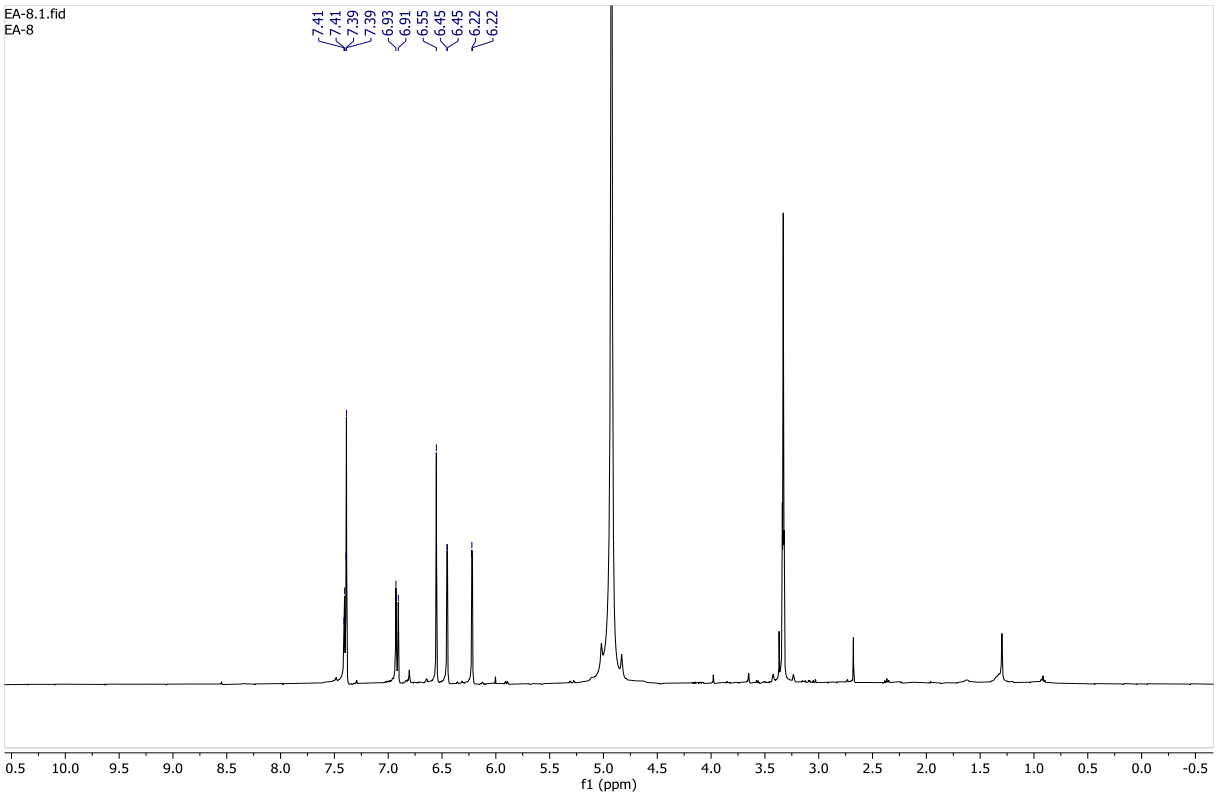

Figure S19: ^{1}H-NMR spectra of luteolin (**6**) (400 MHz, in MeOD)

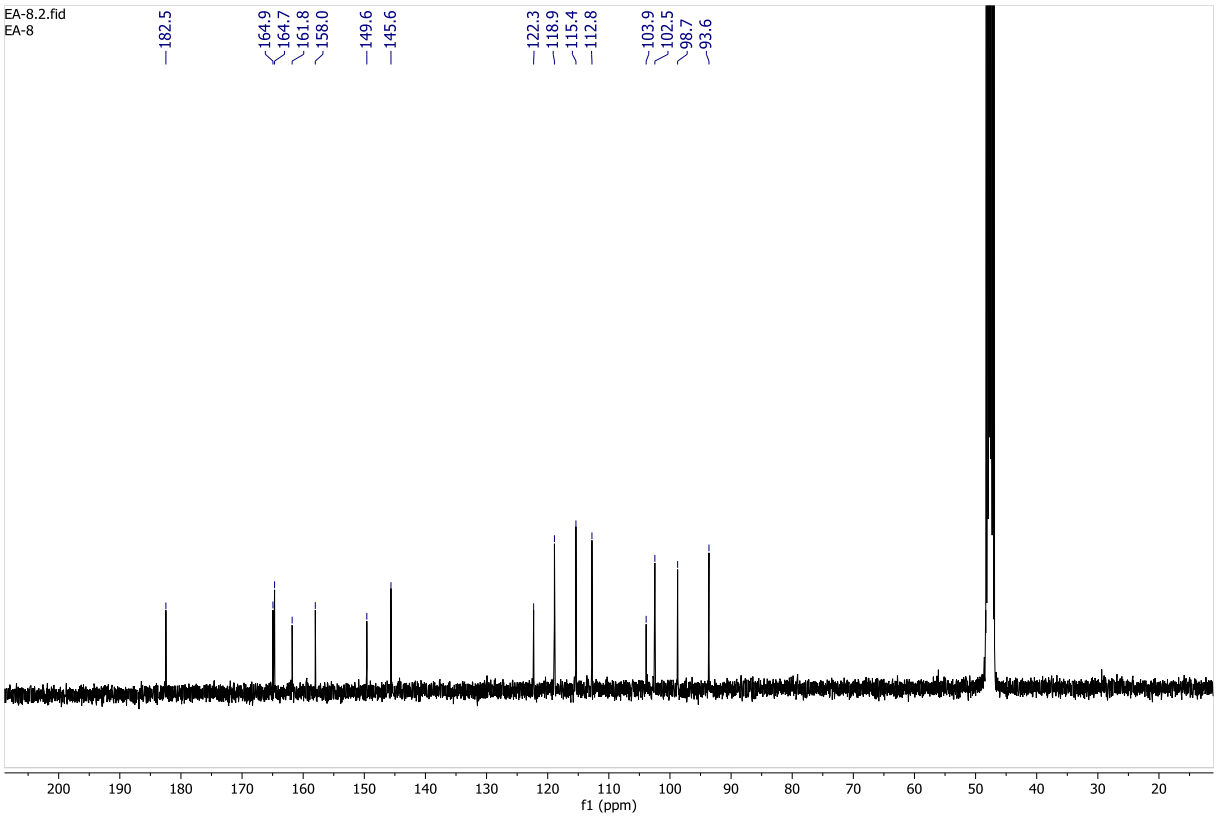

Figure S20: ^{13}C-NMR spectra of luteolin (**6**) (100 MHz, in MeOD)

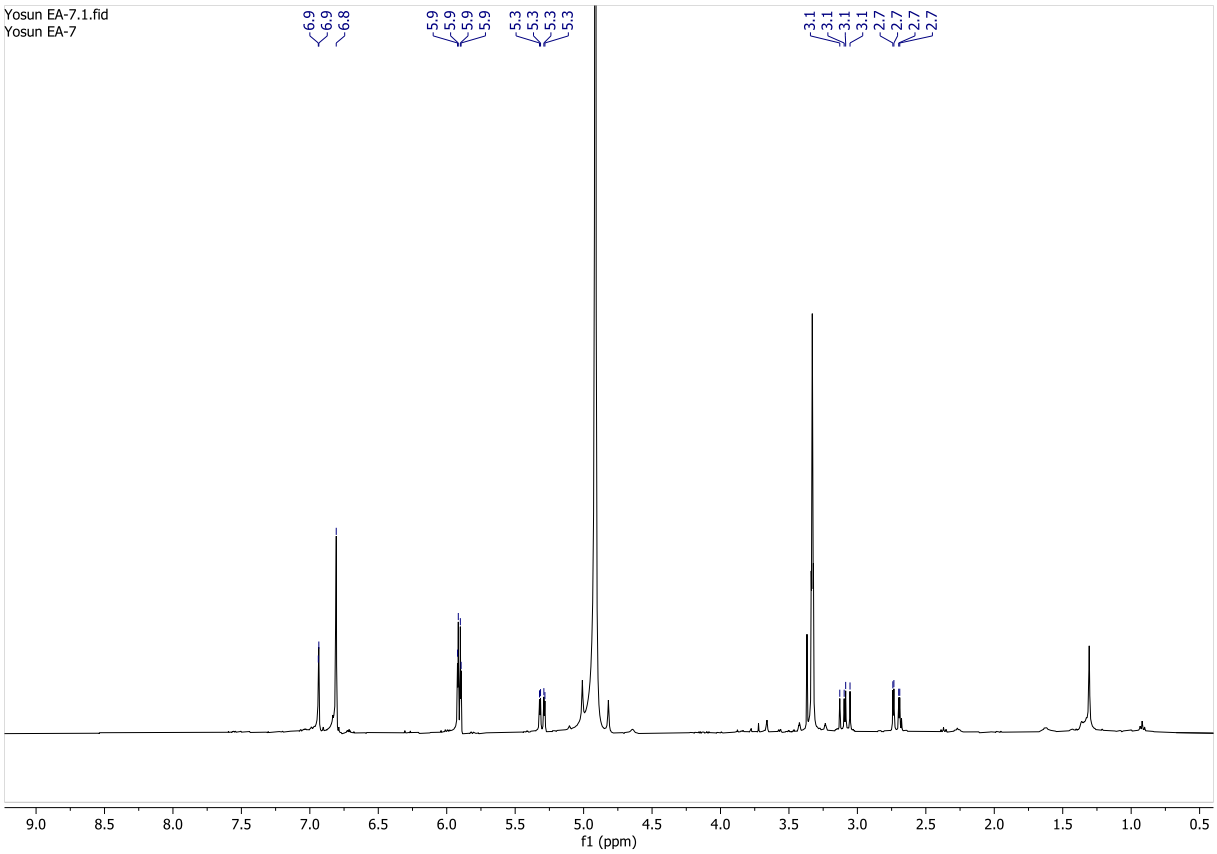

Figure S21: ^{1}H-NMR spectra of eriodictyol (**7**) (400 MHz, in MeOD)

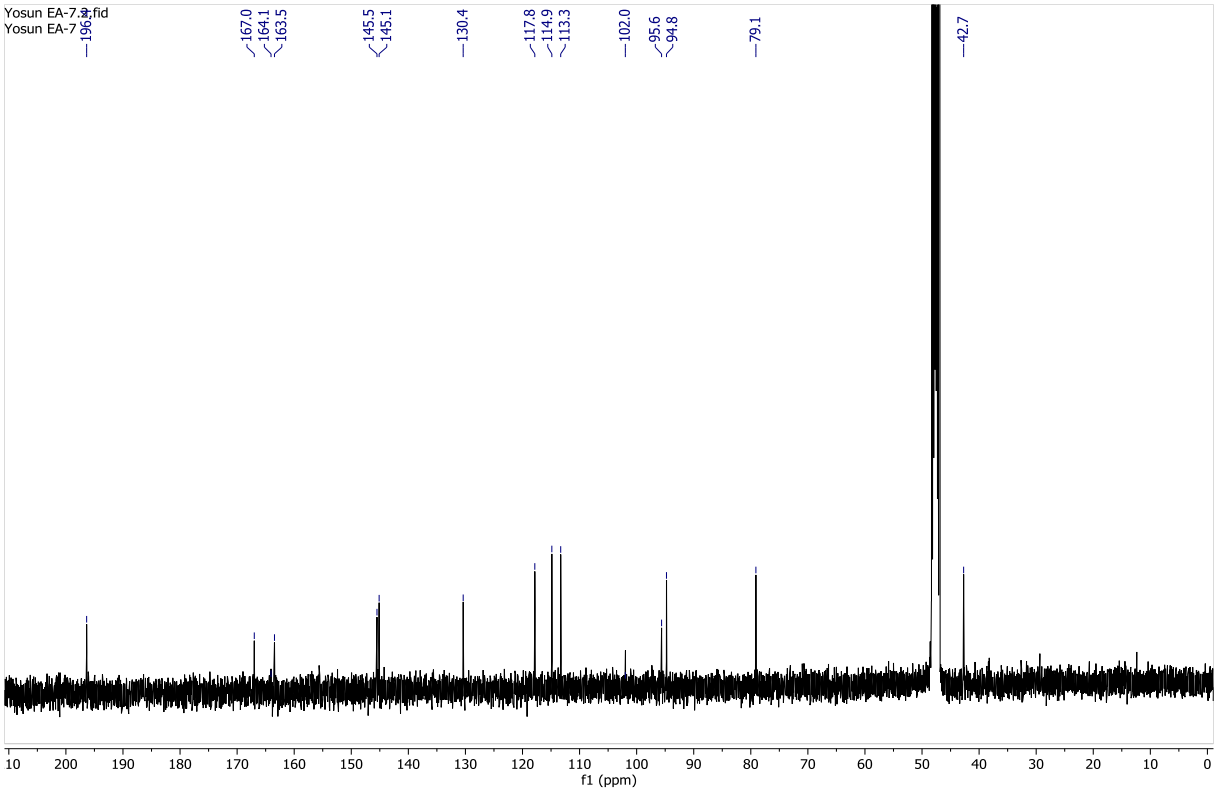

Figure S22: ^{13}C-NMR spectra of eriodictyol (**7**) (100 MHz, in MeOD)

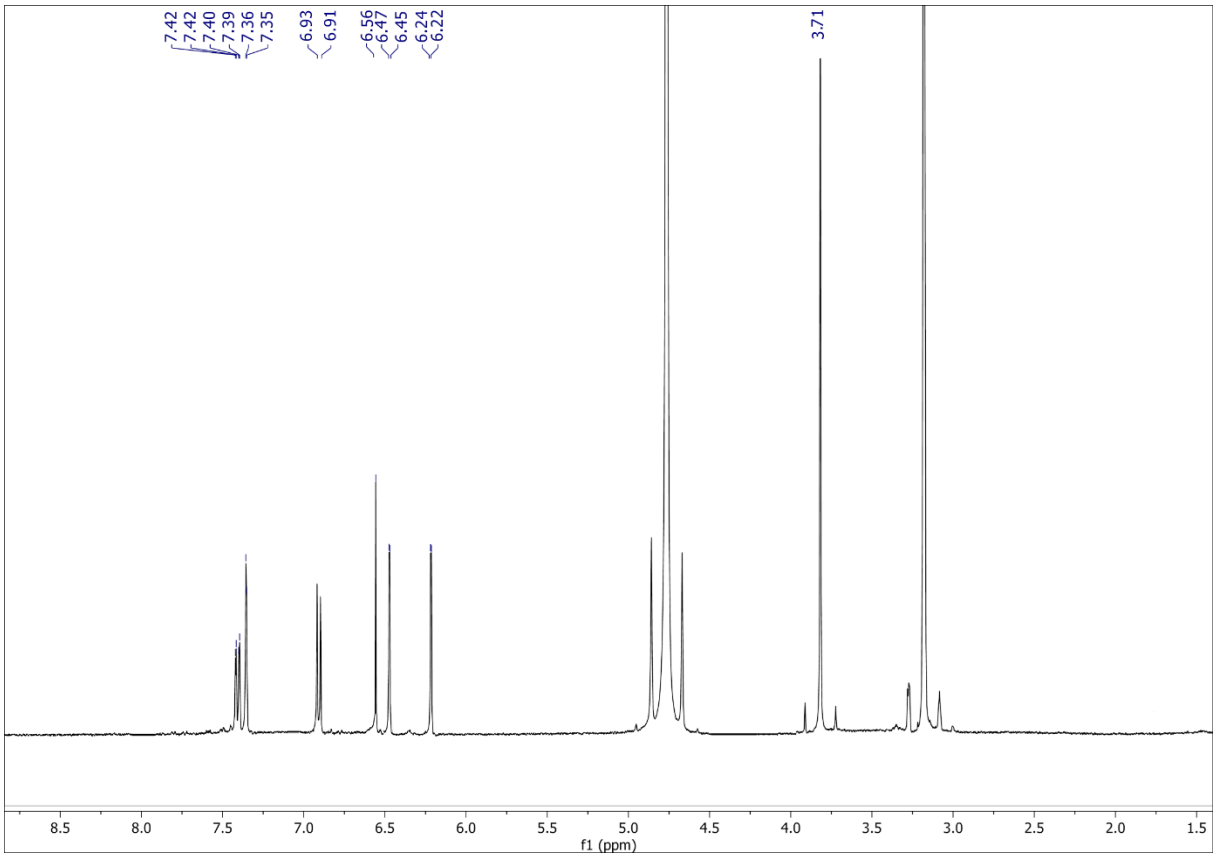

Figure S23: [1]H-NMR spectra of chrysoeriol (**8**) (400 MHz, MeOD)

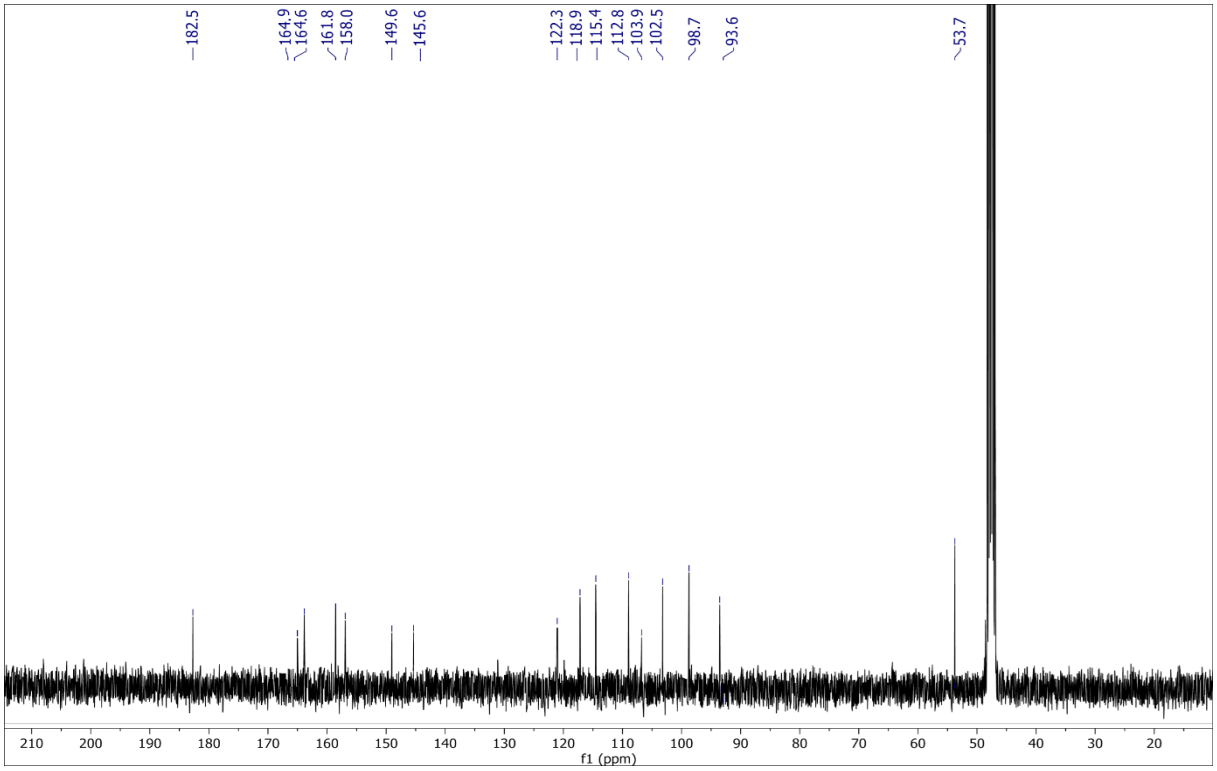

Figure S24: [13]C-NMR spectra of chrysoeriol (**8**)(100 MHz, MeOD)

Rosmarinic acid ***(2)*** *:* ^{1}H NMR (400 MHz, DMSO-d_6) δ 7.34 (d, *J* = 15.9 Hz, 1H), 7.00 (d, *J* = 2.1 Hz, 1H), 6.89 (dd, *J* = 8.2, 2.1 Hz, 1H), 6.69 (d, *J* = 8.1 Hz, 1H), 6.59 (d, *J* = 8.0 Hz, 1H), 6.47 (dd, *J* = 8.1, 2.0 Hz, 1H), 6.13 (d, *J* = 15.9 Hz, 1H), 4.80 (dd, *J* = 10.2, 3.0 Hz, 1H), 3.00 (dd, *J* = 14.5, 3.0 Hz, 1H), 2.71 (dd, *J* = 14.4, 10.2 Hz, 1H). ^{13}C NMR (100 MHz, DMSO) δ 172.4, 166.8, 146.7, 145.3, 144.5, 143.9, 130.9, 121.4, 120.1, 116.9, 116.1, 115.8, 76.9, 37.9.

Luteolin-7-sulphate ***(3)****:* ^{1}H NMR (400 MHz, MeOD-d_4) δ 7.44 (d, *J* = 2.3 Hz, 1H), 7.42 (d, *J* = 2.3 Hz, 1H), 7.41 (d, *J* = 2.3 Hz, 1H), 7.09 (d, *J* = 2.1 Hz, 1H), 6.88 (d, *J* = 8.2 Hz, 1H), 6.71 (d, *J* = 2.1 Hz, 1H), 6.63 (s, 1H). ^{13}C NMR (100 MHz, MeOD-d_4) δ 182.8 (C4), 165.96 (C2), 161.1 (C5), 158.6 (C7), 156.9 (C9), 148.0 (C4ˈ), 146.3 (C5ˈ), 121.5 (C2ˈ), 119.3 (C1ˈ), 115.6 (C3ˈ), 112.4 (C6ˈ), 106.8 (C10), 103.3 (C3), 102.4 (C6), 98.7 (C8).

Eriodictyol-7-sulphate ***(4)****:* ^{1}H NMR (400 MHz, DMSO-d_6) δ 6.90 (s, 1H), 6.75 (s, 1H), 6.33 (d, *J* = 2.2 Hz, 2H), 6.31 (d, *J* = 2.1 Hz, 1H), 5.43 (dd, *J* = 12.7, 3.0 Hz, 1H), 3.29 – 3.15 (m, 1H), 2.73 (dd, *J* = 17.1, 3.1 Hz, 1H). ^{13}C NMR (100 MHz, DMSO) δ 198.6 (C4), 162.8 (C5), 162.3 (C7), 162.4 (C9), 146.2 (C4ˈ), 145.7 (C5ˈ), 129.8 (C1ˈ), 118.3 (C2ˈ), 115.9 (C3ˈ), 114.8 (C6ˈ), 103.6 (C10), 99.6 (C6), 98.7 (C8), 78.4 (C2), 42.8 (C3).

Chrysoeriol-7-sulphate ***(5)****:* ^{1}H NMR (400 MHz, MeOD-d_4) δ 7.56 (dd, *J* = 8.4, 2.2 Hz, 1H), 7.50 (d, *J* = 2.2 Hz, 1H), 7.12 (d, *J* = 2.2 Hz, 1H), 6.90 (d, *J* = 8.4 Hz, 1H), 6.71 (d, *J* = 2.1 Hz, 2H), 3.97 (s, 3H). ^{13}C NMR (100 MHz, MeOD-d_4) δ 182.7 (C4), 166.0 (C2), 161.1 (C5), 158.7 (C7), 156.9 (C9), 149.4 (C4ˈ), 149.0 (C5ˈ), 121.0 (C3ˈ), 119.9 (C6ˈ) 116.2 (C6ˈ), 109.0 (C2ˈ), 106.8 (C10), 103.2 (C3), 102.3 (C6), 98.7 (C8), 55.0 (-OCH_3).

Luteolin ***(6):*** ^{1}H NMR (400 MHz, MeOD-d_4) δ 7.44 (dd, *J* = 2.3, 9.0 Hz, H6′), 6.92 (d, *J* = 9.0 Hz, 1H, H5′), 6.55 (s, 1H, H3), 6.45 (d, *J* = 2.1 Hz, 1H, H8), 6.22 (d, *J* = 2.2 Hz, 1H, H6). ^{13}C NMR (100 MHz, MeOD-d_4) δ 182.5 (C3), 164.9 (C7), 164.7 (C2), 161.8 (C5), 158.0 (C9), 149.6 (C3′), 145.6 (C4′), 122.3 (C1′), 118.9 (C6′), 115.4 (C5′), 112.8 (C2′), 103.9 (C10), 102.5 (C3), 98.7 (C6), 93.6 (C8).

Eriodictyol ***(7)****:* ^{1}H NMR (400 MHz, MeOD-d_4) δ 6.94 (brs, 1H, H6′), 6.81 (brs, 2H, H2′/H5′), 5.92 (d, *J* = 2.2 Hz, 1H, H8), 5.90 (d, *J* = 2.2 Hz, 1H, H6), 5.30 (dd, *J* = 12.7, 3.0 Hz, 1H, H2), 3.09 (dd, *J* = 17.2, 12.8 Hz, 1H, H3a), 2.72 (dd, *J* = 17.2, 3.1 Hz, 1H, H3b). ^{13}C NMR (100 MHz, MeOD-d_4) δ 196.4 (C3), 167.0 (C7), 164.1 (C9), 163.5 (C7), 145.5 (C3′), 145.1 (C4′), 130.4 (C1′), 117.8 (C6′), 114.9 (C5′), 113.3 (C2′), 102.0 (C10), 95.6 (C6), 94.8 (C8), 79.1 (C2), 42.7 (C3).

Chrysoeriol ***(8)****:* ^{1}H NMR (400 MHz, Methanol-d_4) δ 7.41 (dd, *J* = 9.0/2.3 Hz, 1H), 7.40 (d, *J* = 2.3 Hz, 1H), 6.92 (d, *J* = 9.0 Hz, 1H), 6.56 (s, 1H), 6.46 (d, *J* = 2.1 Hz, 1H), 6.23 (d, *J* = 2.1 Hz, 1H), 3.71 (s, 3H). ^{13}C NMR (100 MHz, MeOD) δ 182.5 (C4), 164.9 (C2), 164.6 (C5), 161.8 (C7), 158.0 (C9), 149.6 (C4ˈ), 145.6 (C5ˈ), 122.3 (C1ˈ), 118.9 (C2ˈ), 115.4 (C3ˈ), 112.8 (C6ˈ), 103.9 (C10), 102.5 (C3), 98.7 (C6), 93.6 (C8), 53.7 (-O$\underline{CH_3}$).