

Supplementary materials

New glycosylated dihydrochalcones obtained by biotransformation of 2'-hydroxy-2-methylchalcone in cultures of entomopathogenic filamentous fungi

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Figure S104. HSQC contour map – $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

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Figure S109. HMBC contour map – $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

Molecular formula: C₁₆H₁₄O₂

Formula weight: 238.10

Ionization mode: positive

Precursor: [M + H]⁺ 239.00

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239.0000>224.1000 CE: -17.0

239.0000>65.0500 CE: -45.0

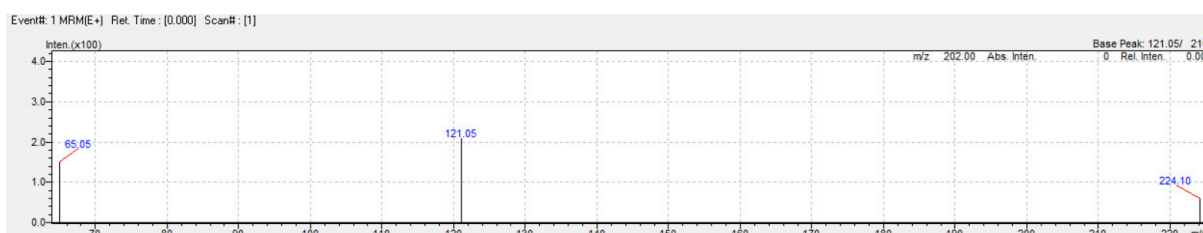
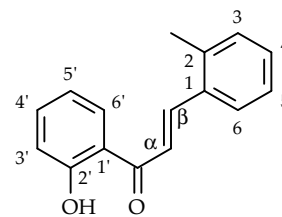


Figure S1. MS analysis of 2'-hydroxy-2-methylchalcone (3)

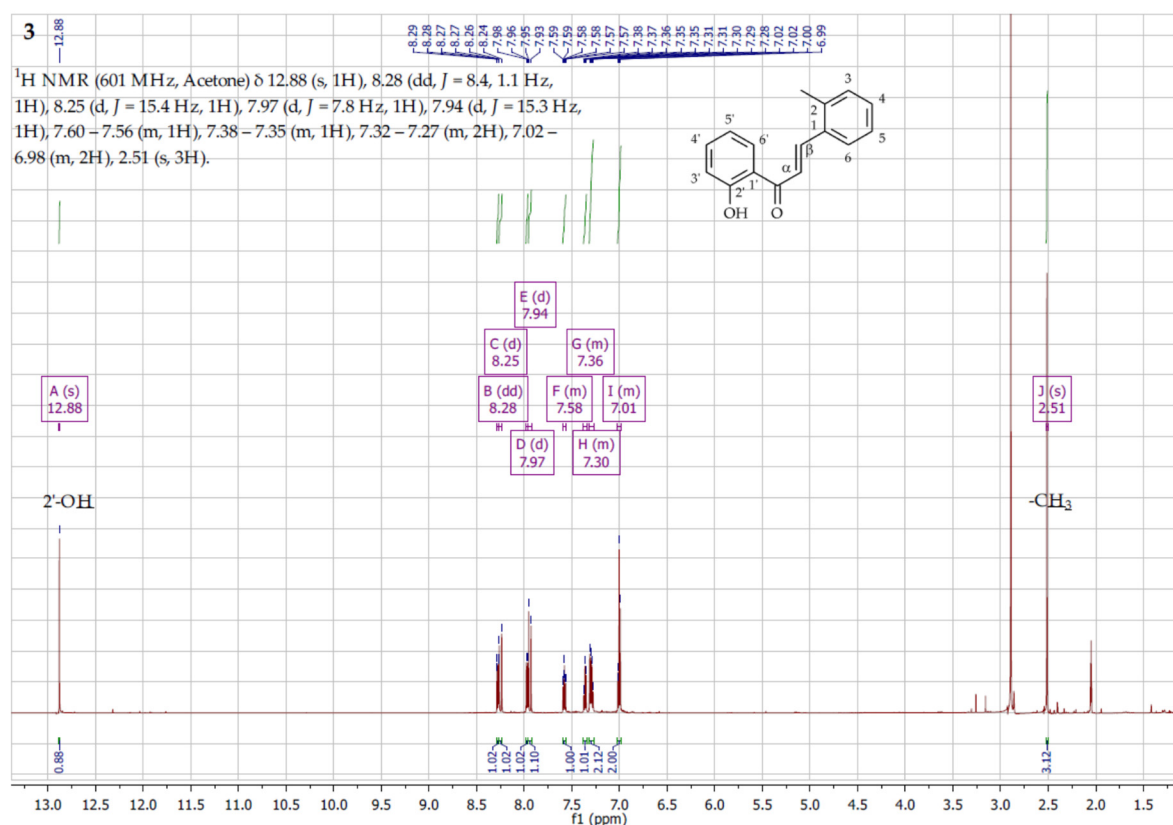


Figure S2. ¹H NMR spectrum (δ, acetone-d₆, 600 MHz) of 2'-hydroxy-2-methylchalcone (3)

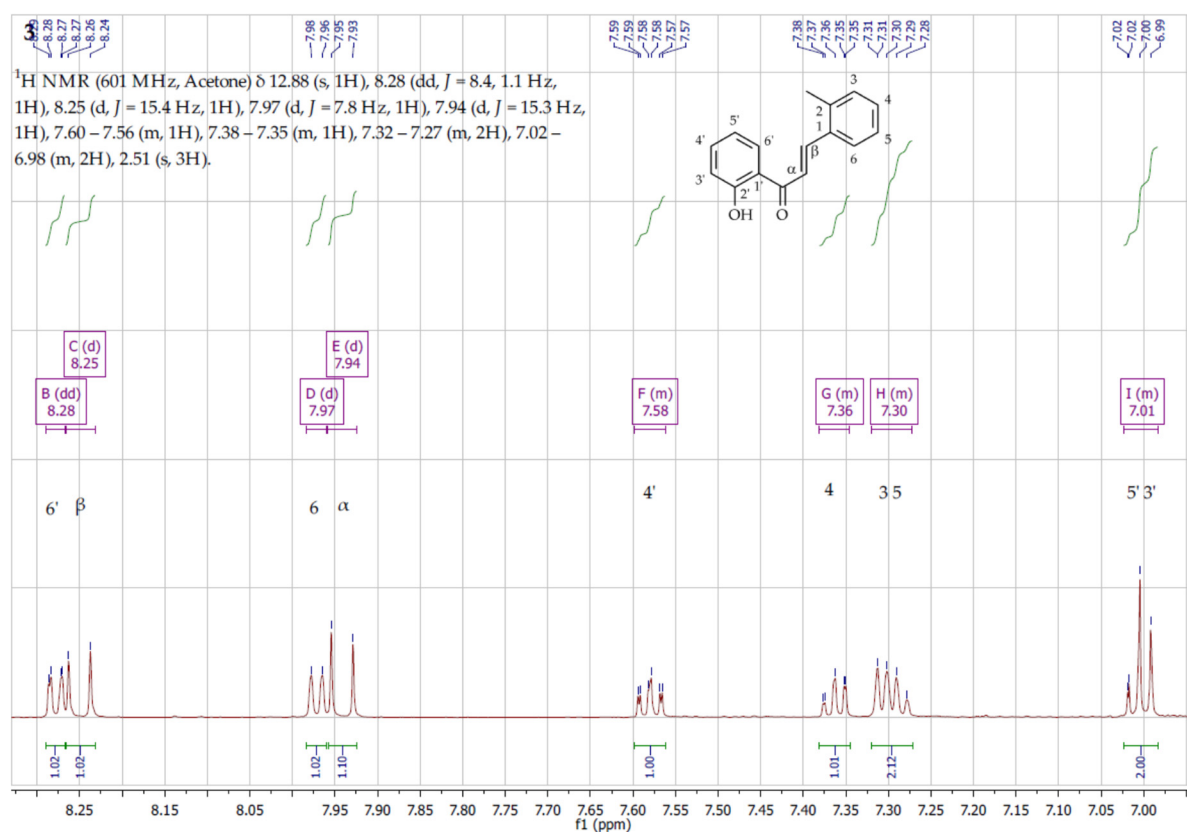


Figure S3. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 2'-hydroxy-2-methylchalcone (**3**)

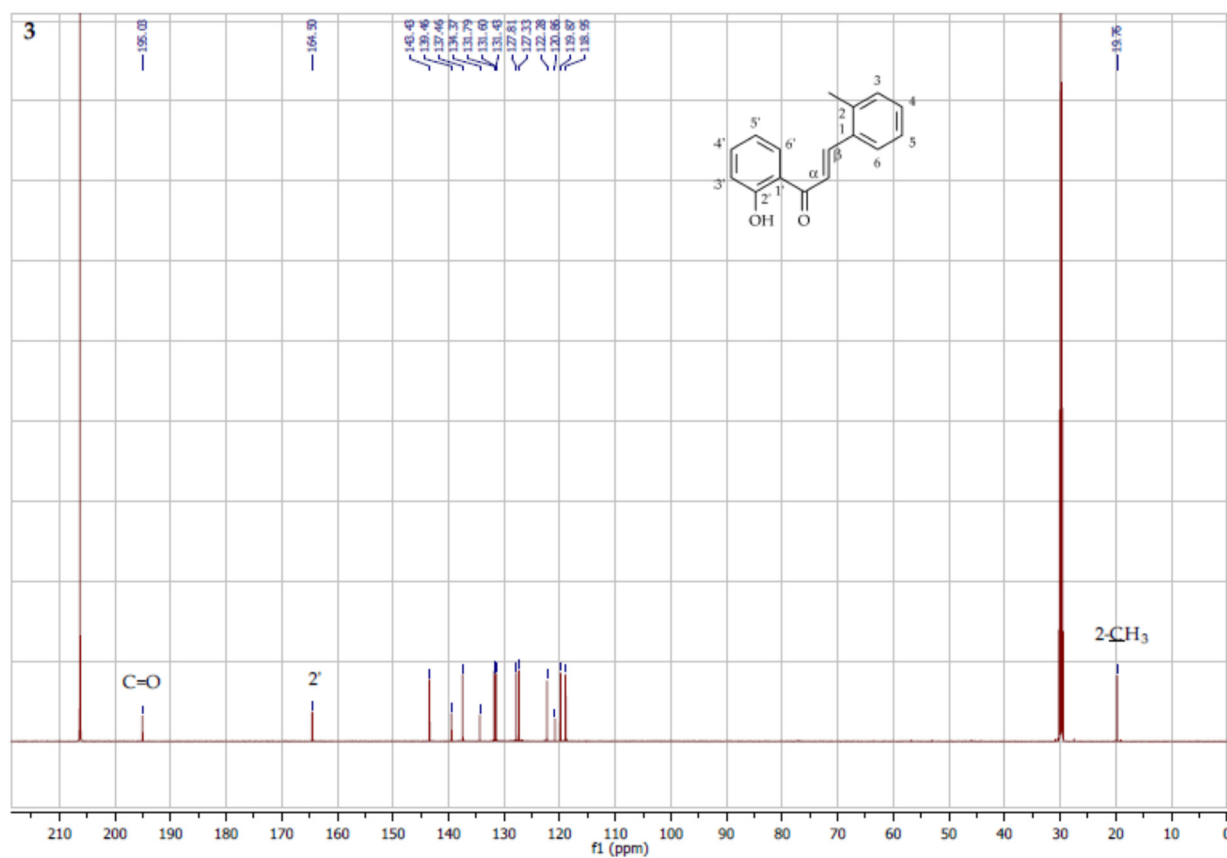


Figure S4. ¹³C NMR spectrum (δ, acetone-d₆, 151 MHz) of 2'-hydroxy-2-methylchalcone (**3**)

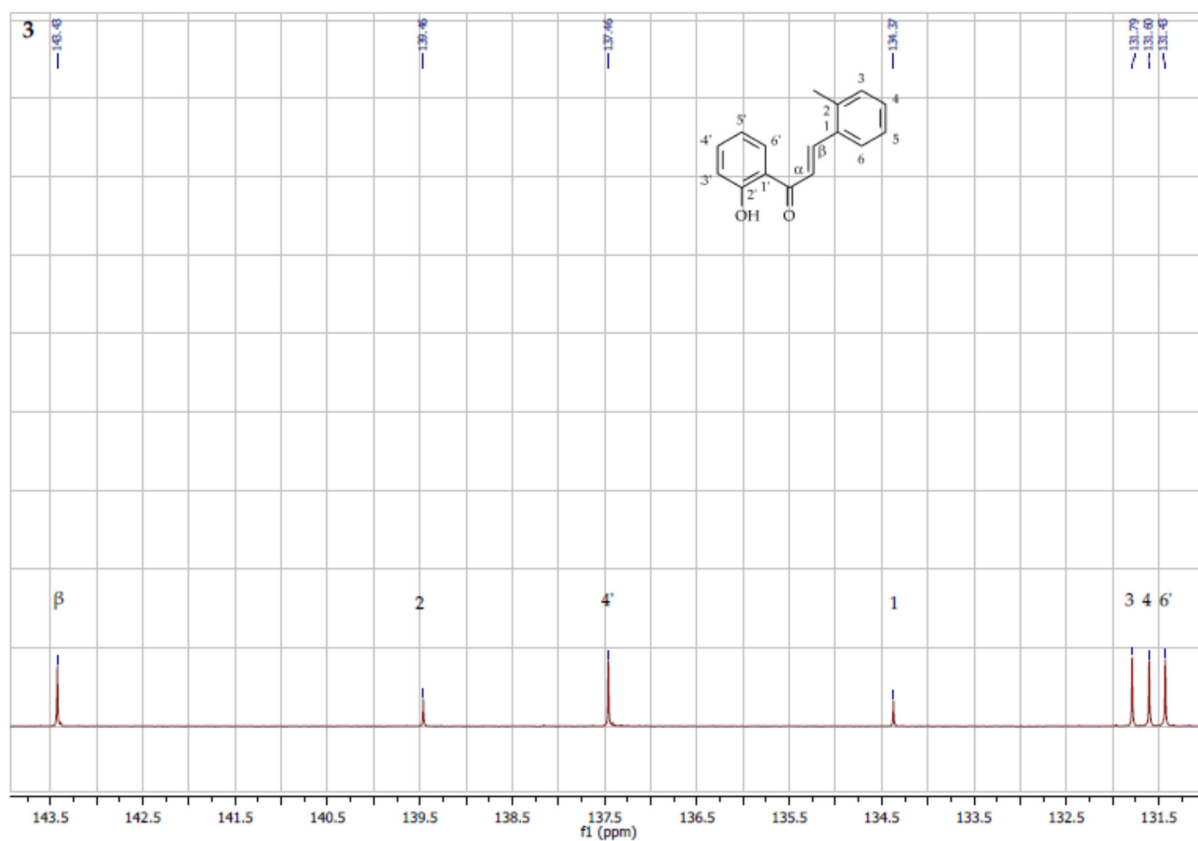


Figure S5. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-methylchalcone (3)

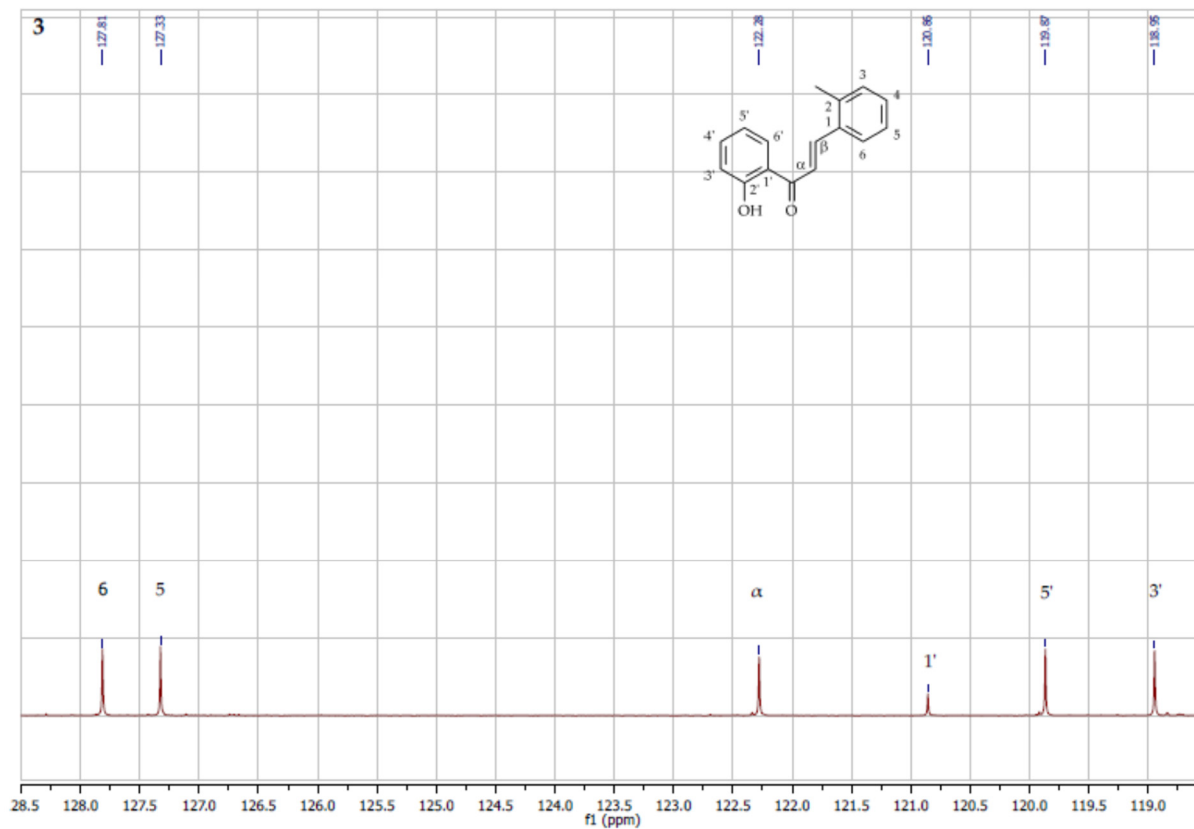


Figure S6. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-methylchalcone (3)

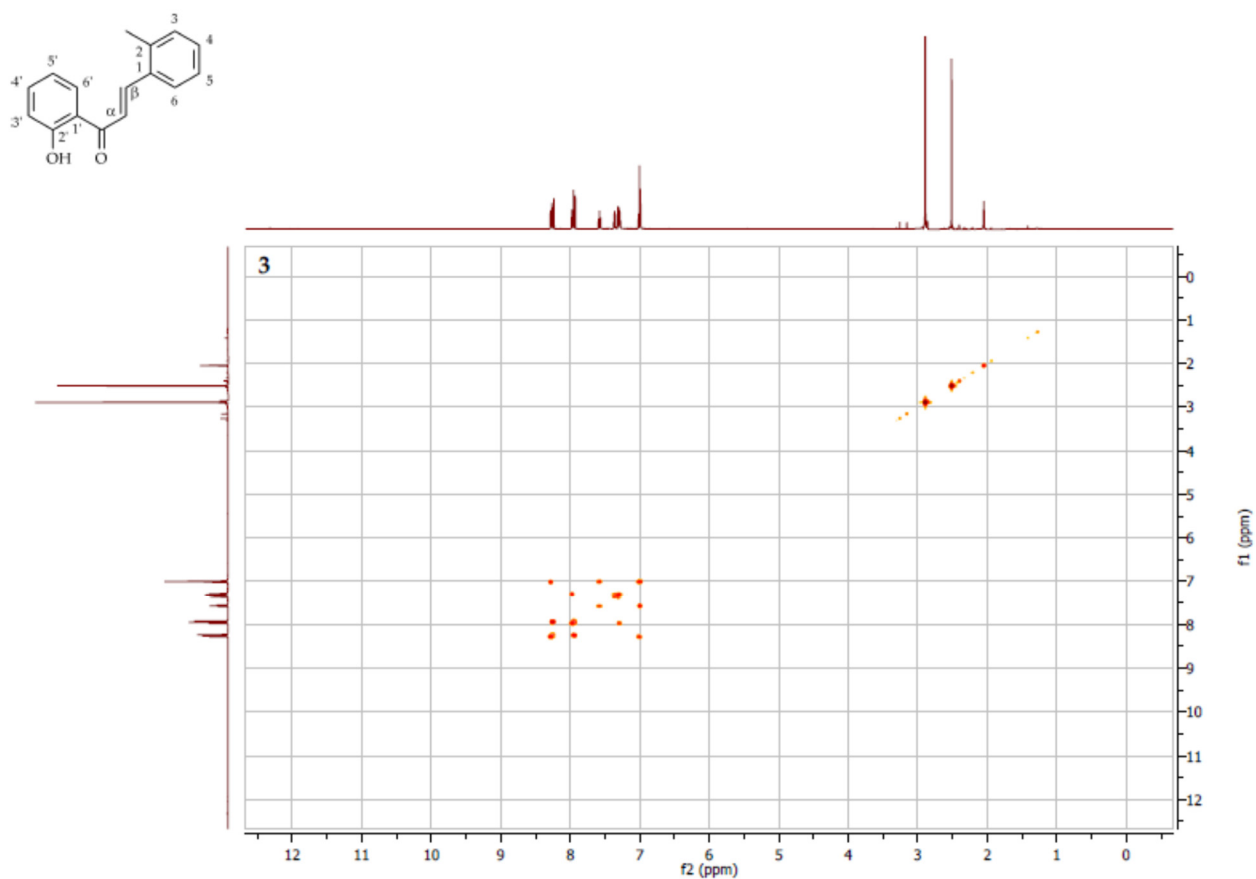


Figure S7. COSY contour map – $^1\text{H} \times ^1\text{H}$ of 2'-hydroxy-2-methylchalcone (**3**)

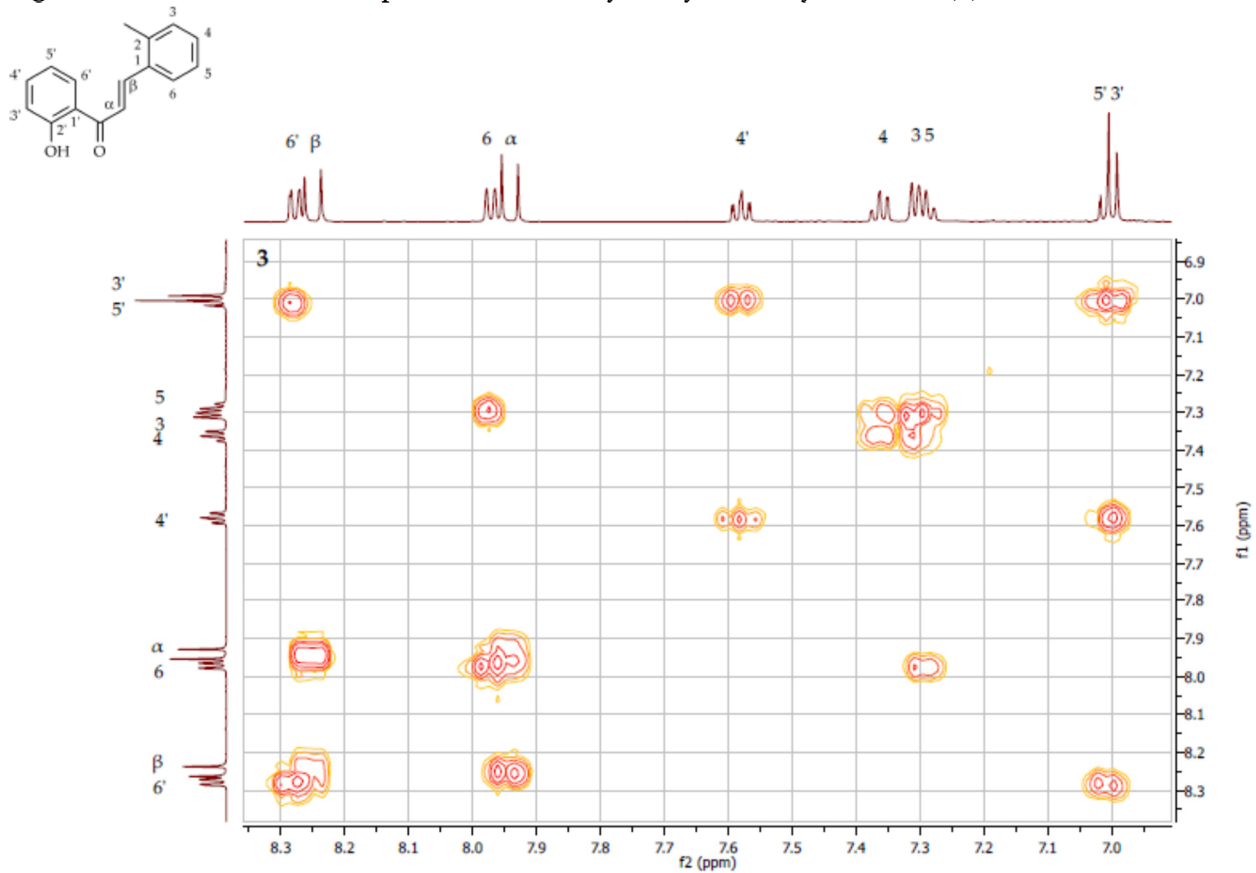


Figure S8. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2'-hydroxy-2-methylchalcone (**3**)

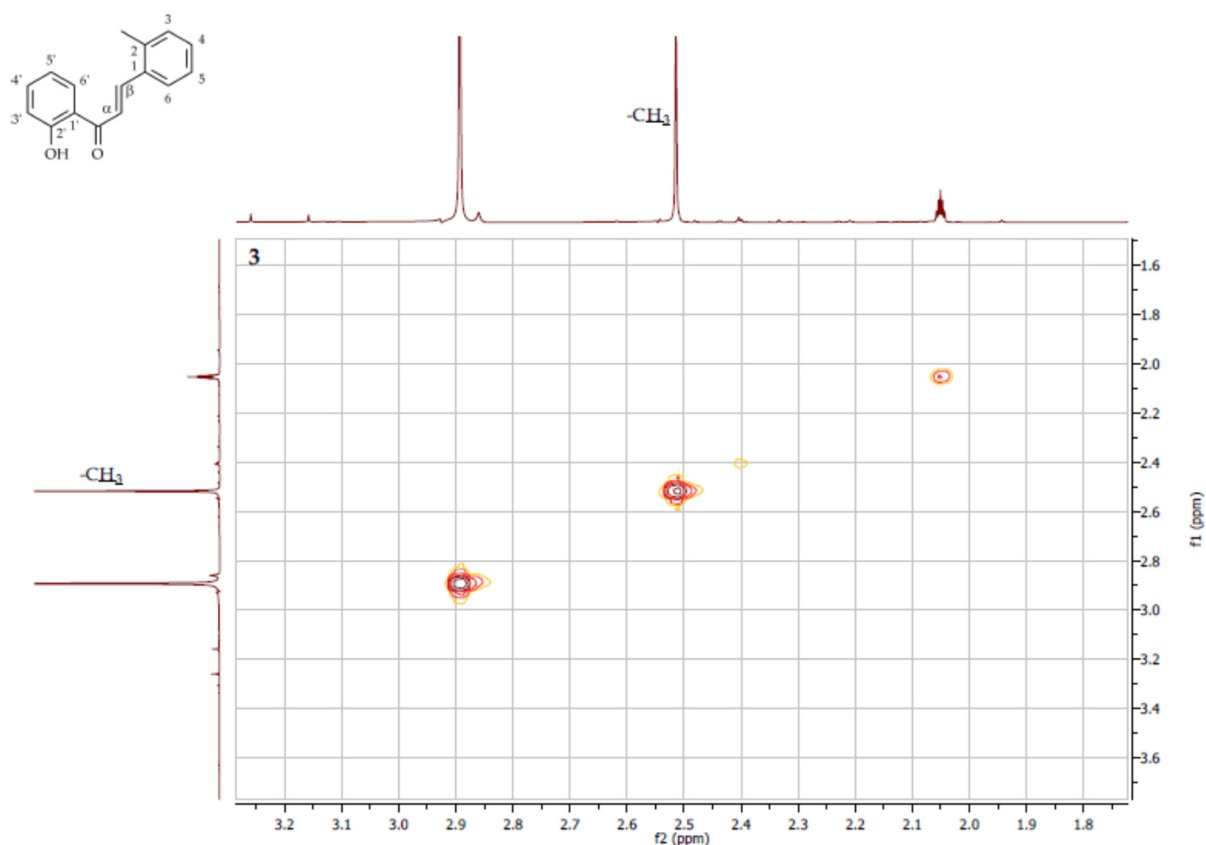


Figure S9. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2'-hydroxy-2-methylchalcone (3)

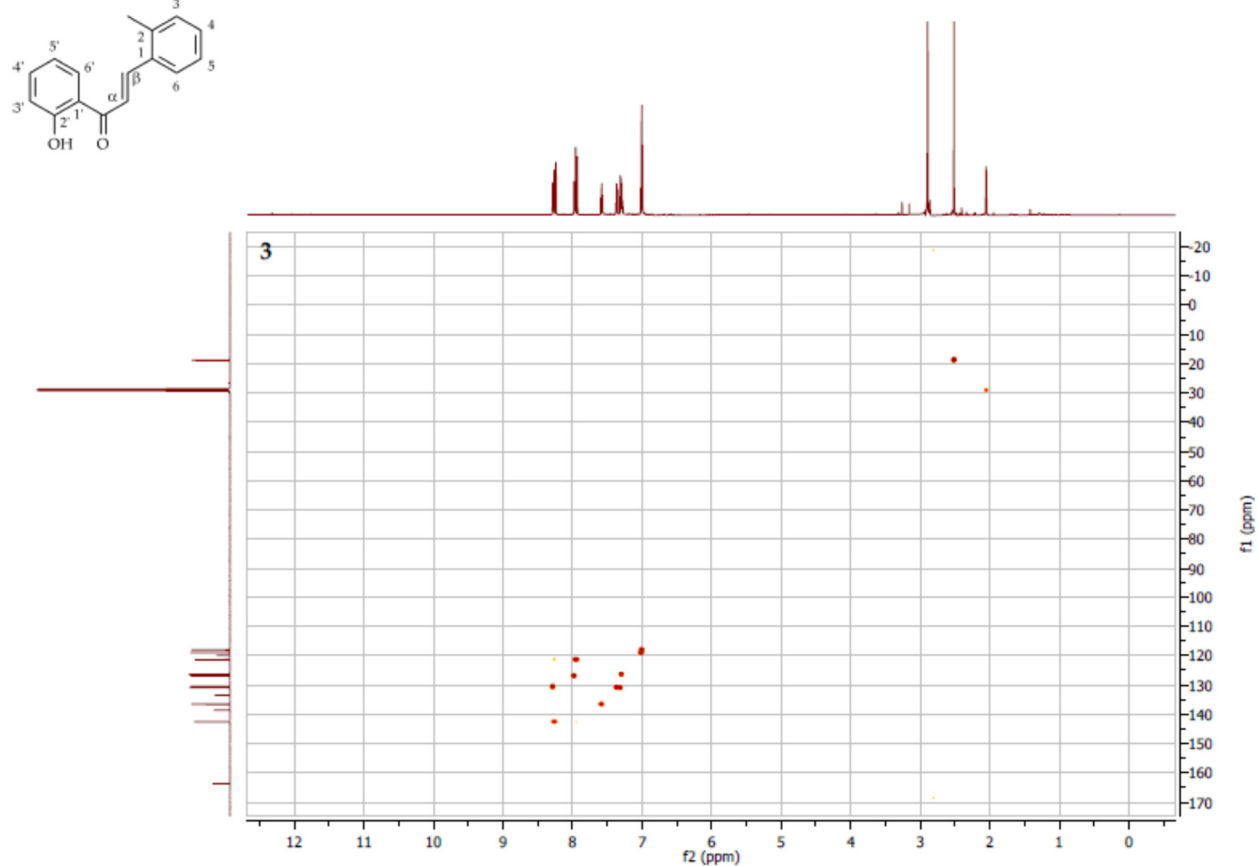


Figure S10. HSQC contour map – $^1\text{H} \times ^{13}\text{C}$ of 2'-hydroxy-2-methylchalcone (3)

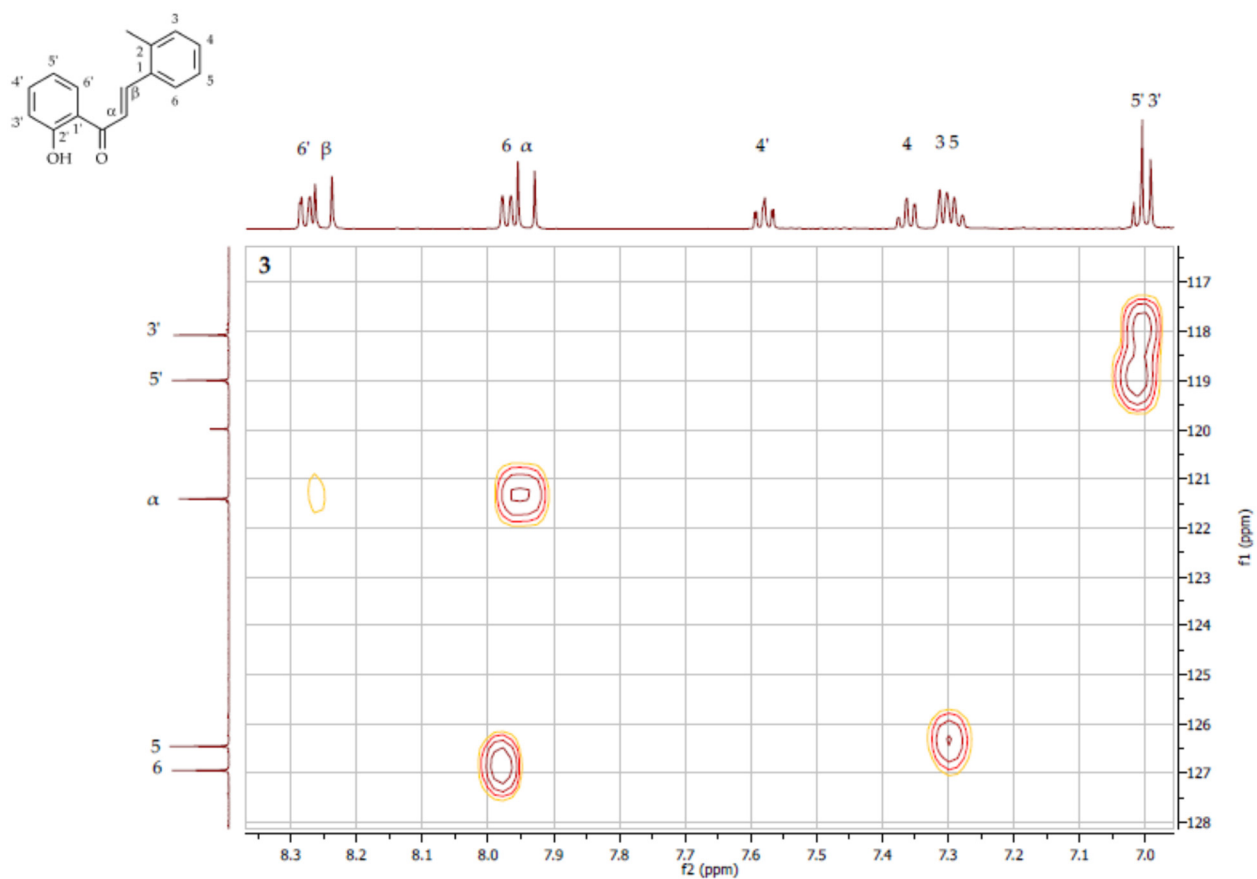


Figure S11. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (**3**)

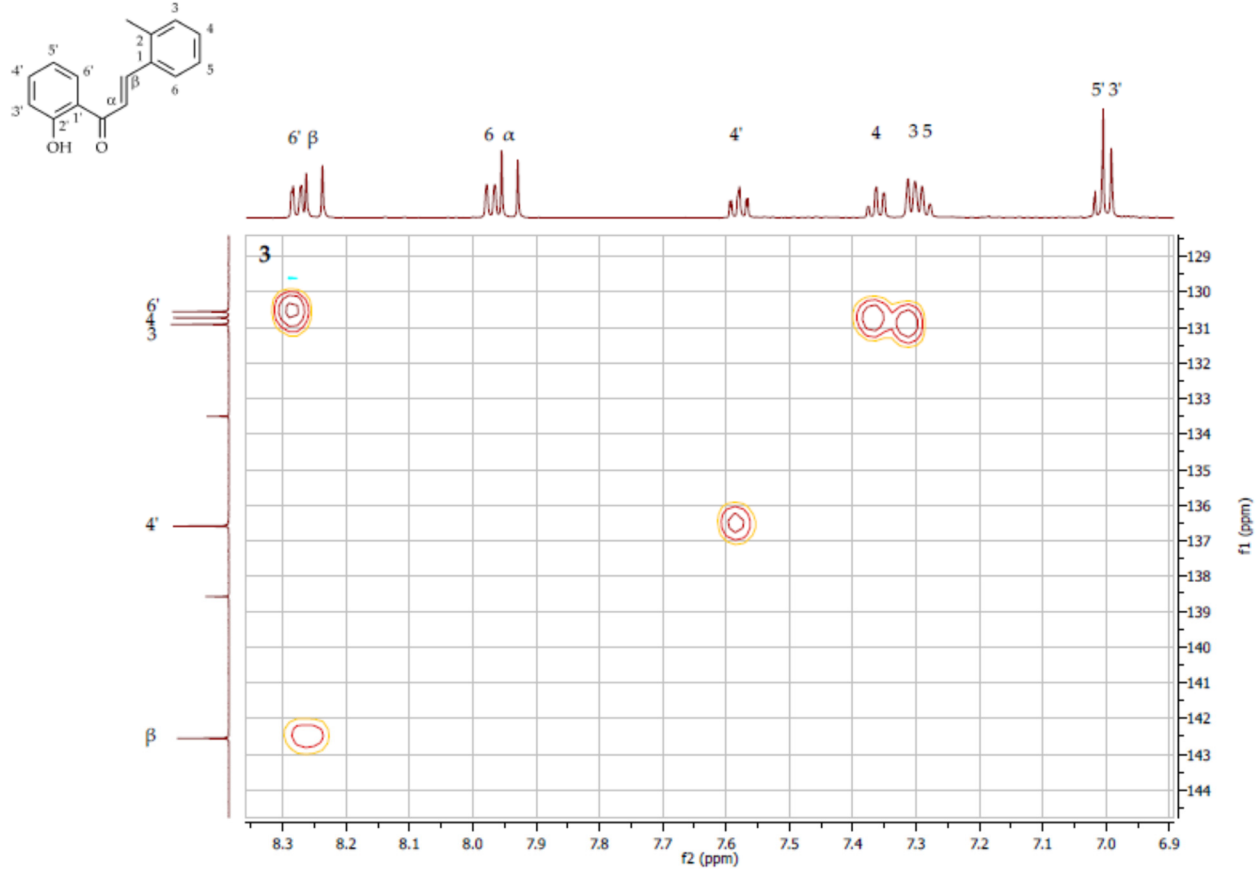


Figure S12. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (**3**)

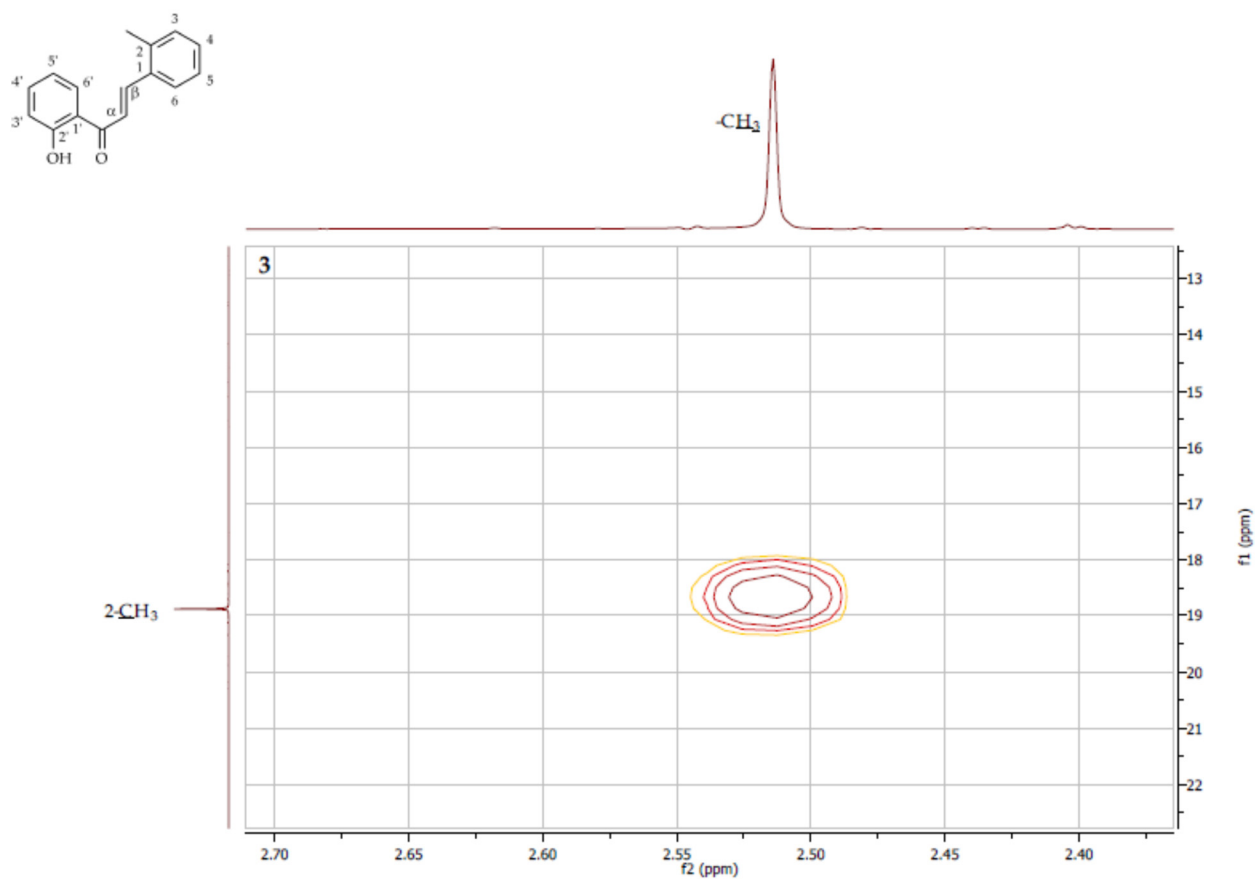


Figure S13. HSQC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (**3**)

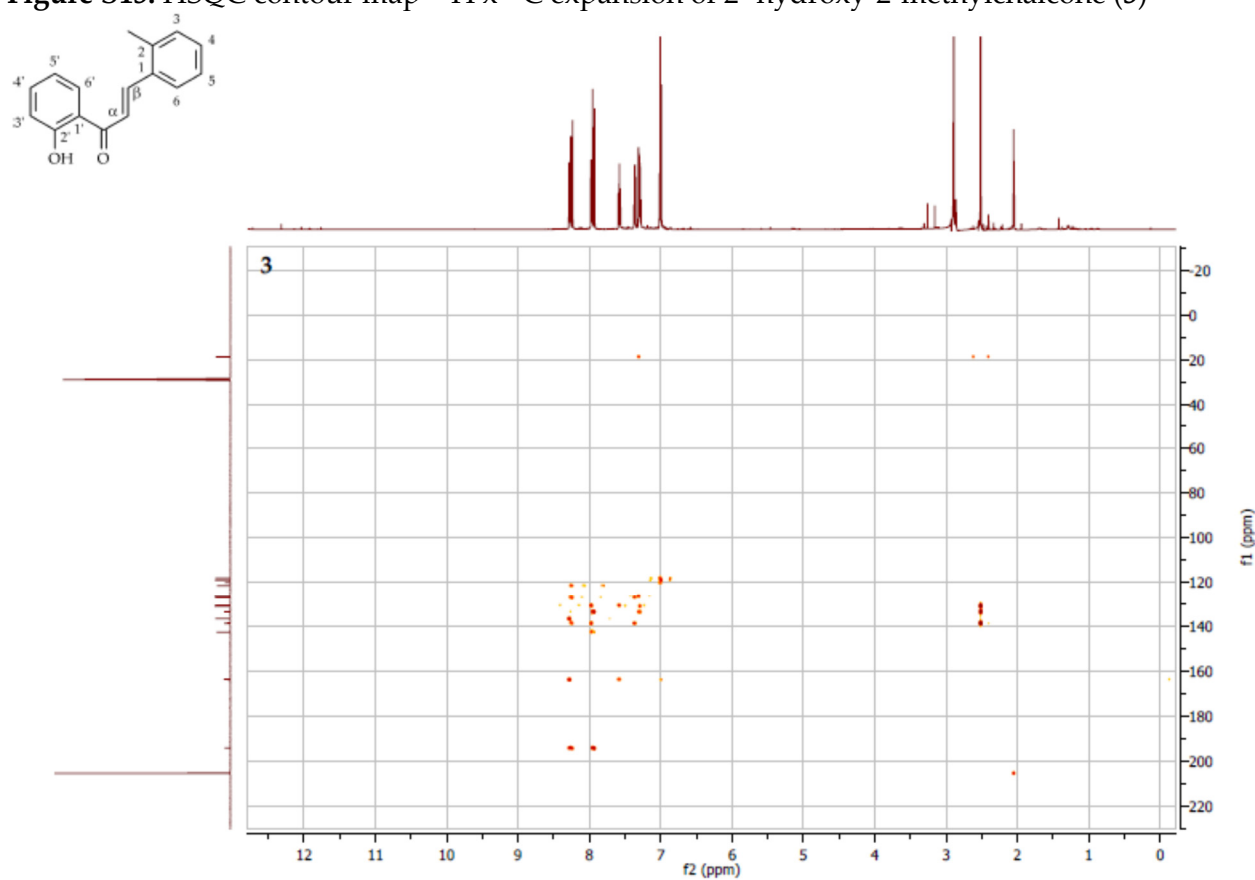


Figure S14. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ of 2'-hydroxy-2-methylchalcone (**3**)

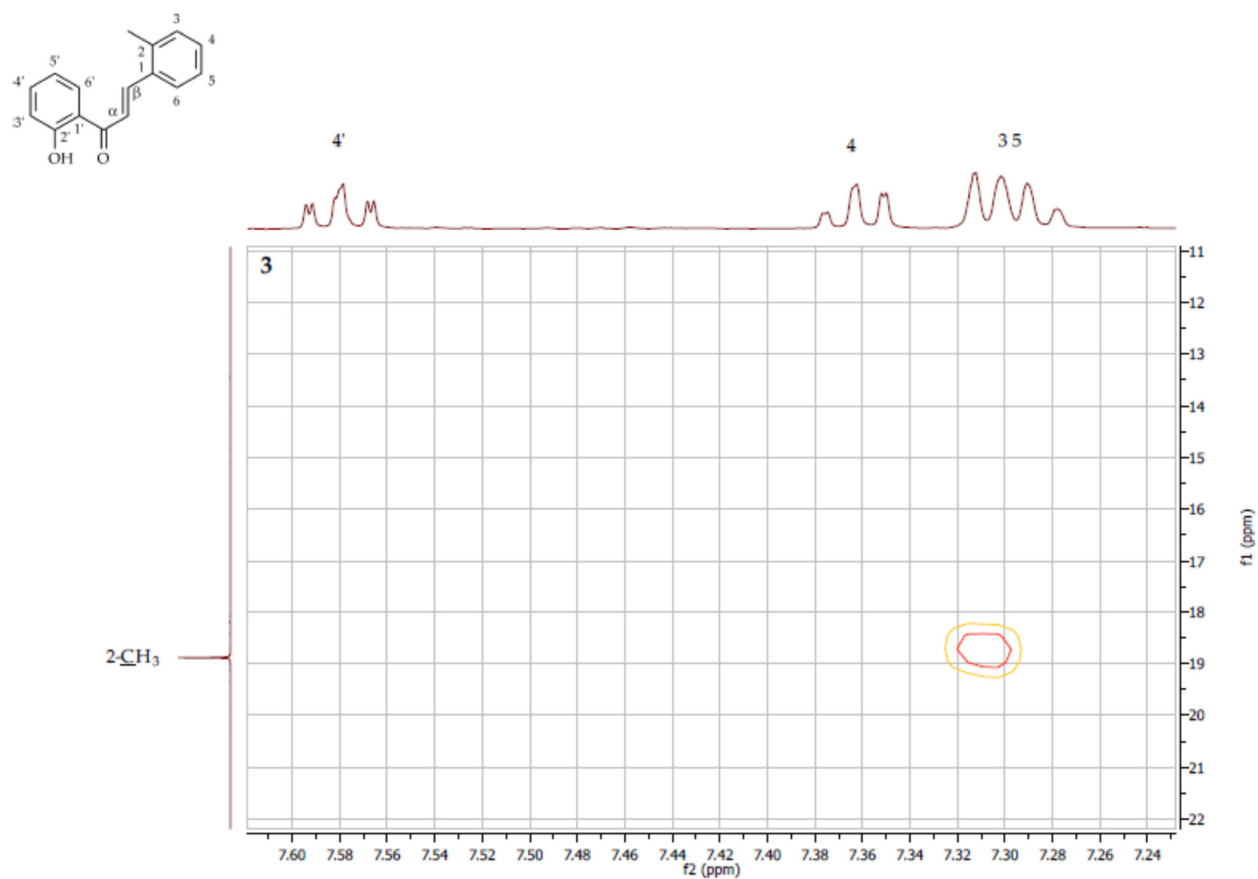


Figure S15. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (3)

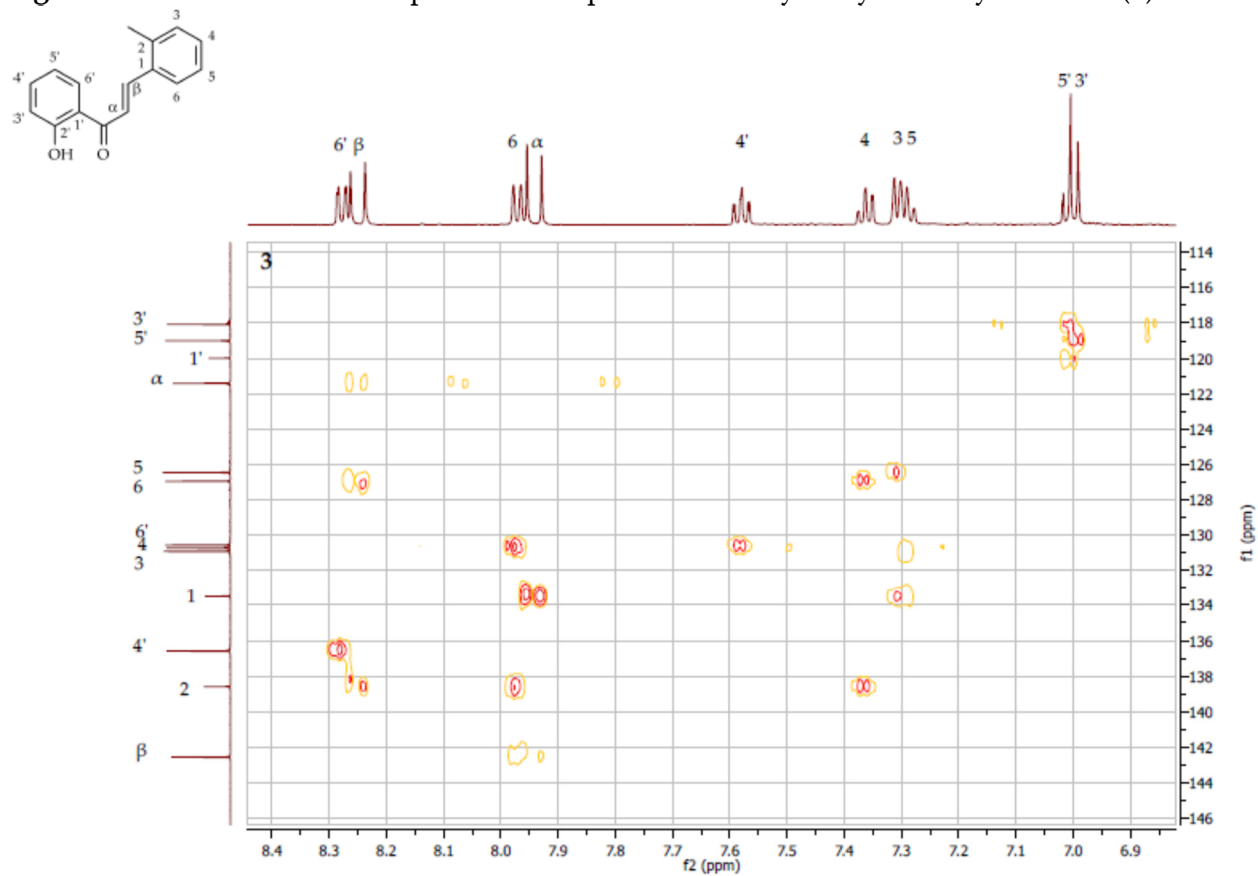


Figure S16. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (3)

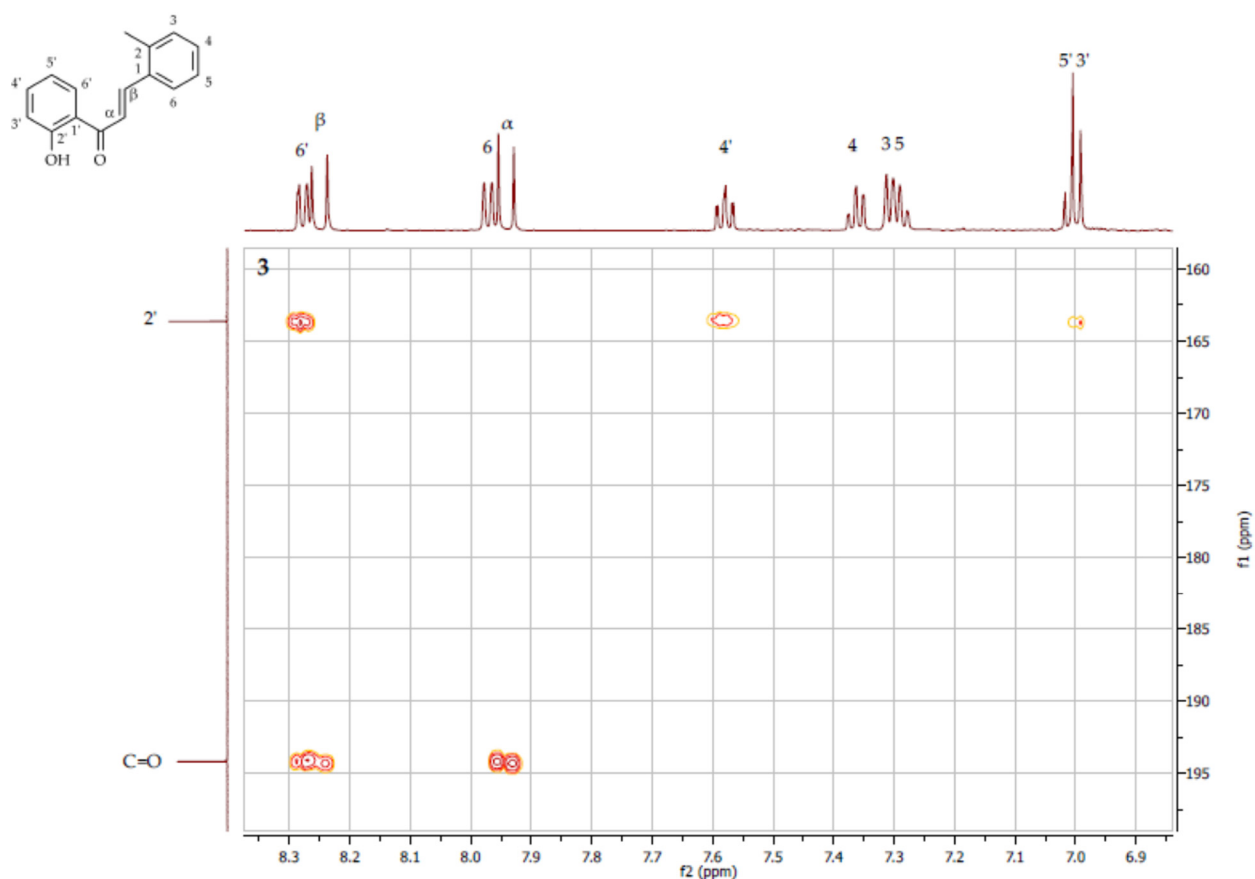


Figure S17. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (3)

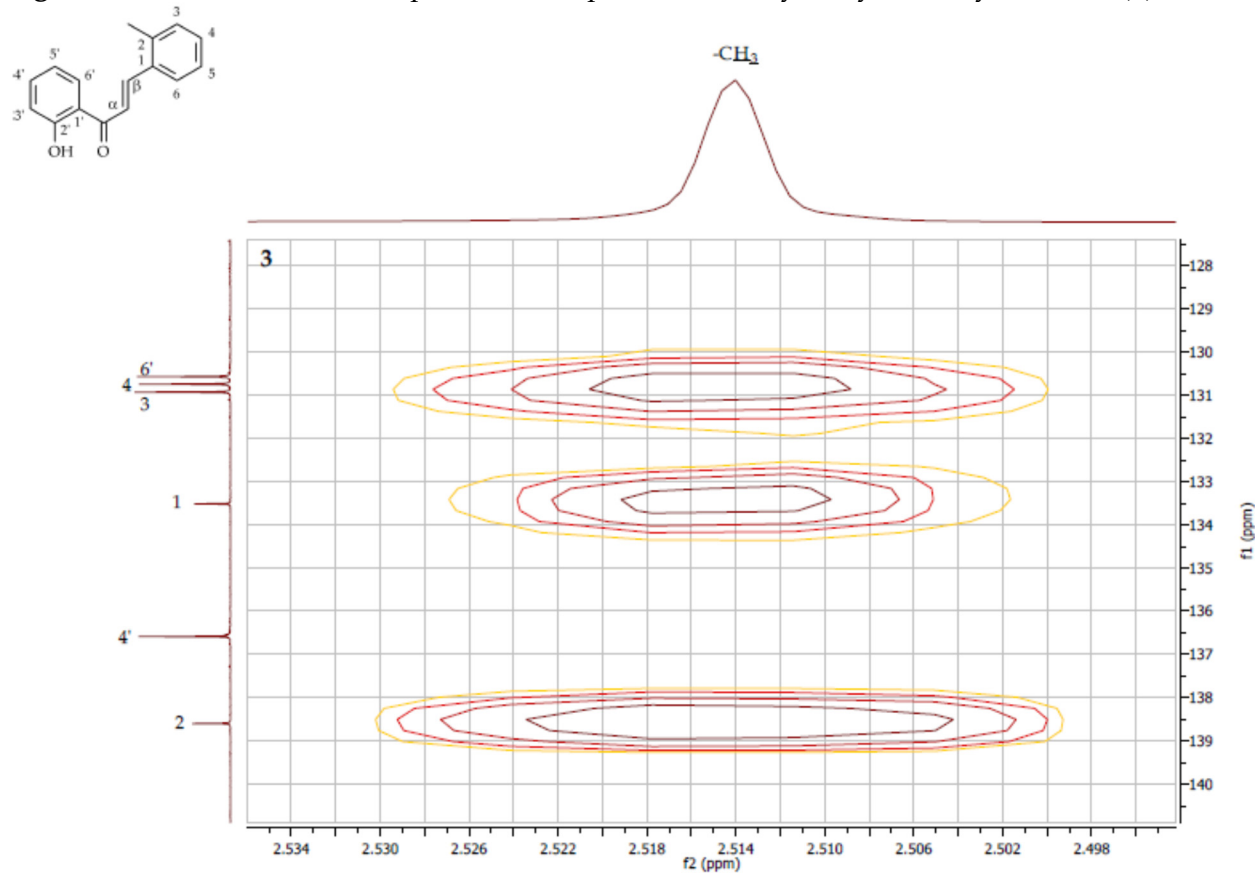


Figure S18. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methylchalcone (3)

Molecular formula: $C_{23}H_{28}O_8$

Formula weight: 432.18

Ionization mode: negative

Precursor: $[M - H]^-$ 431.30

431.3000 > 255.1000 CE: 26.0

431.3000 > 108.0000 CE: 48.0

431.3000 > 235.0500 CE: 47.0

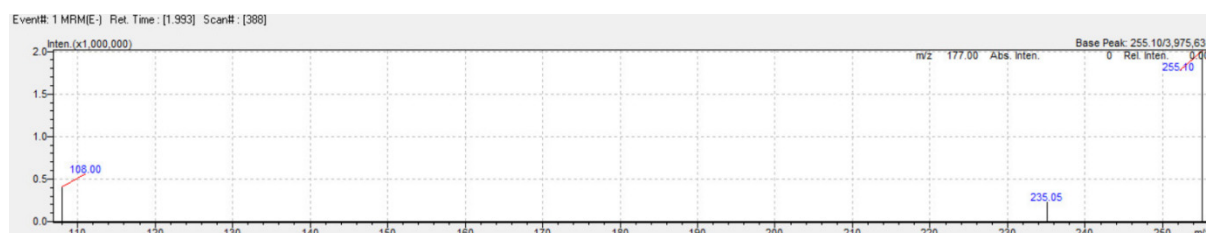
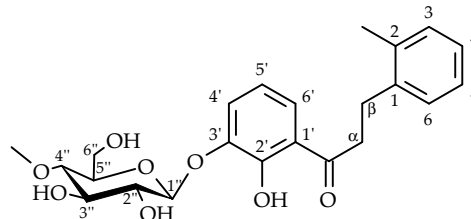


Figure S19. MS analysis of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

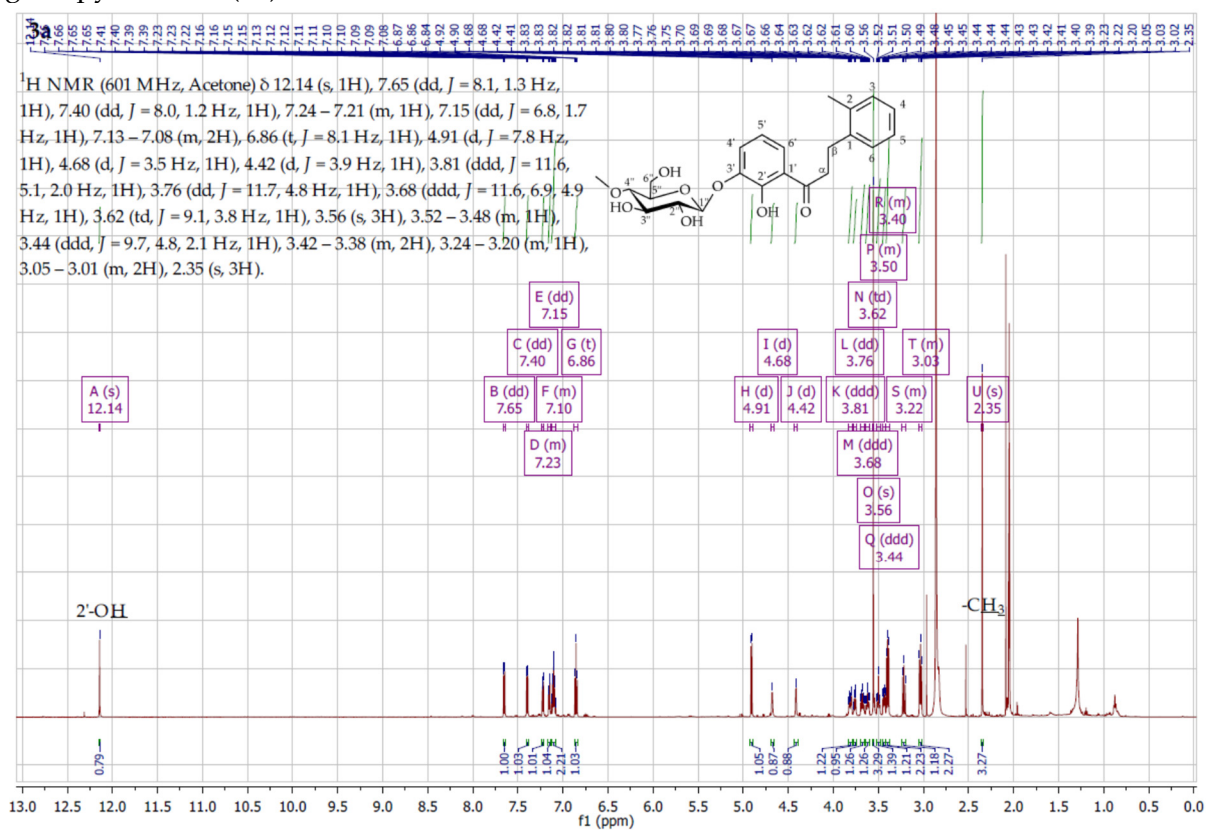


Figure S20. ^1H NMR spectrum (δ , acetone- d_6 , 600 MHz) of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

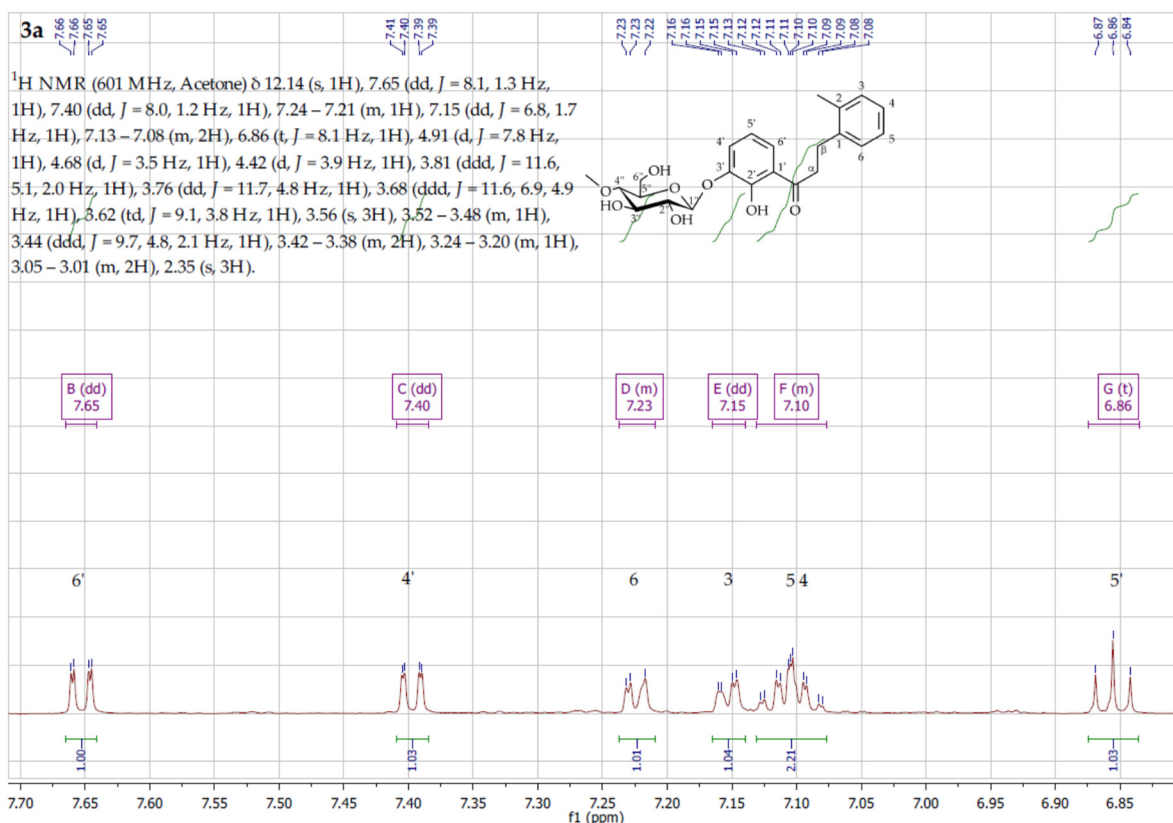


Figure S21. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 2'-hydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3a**)

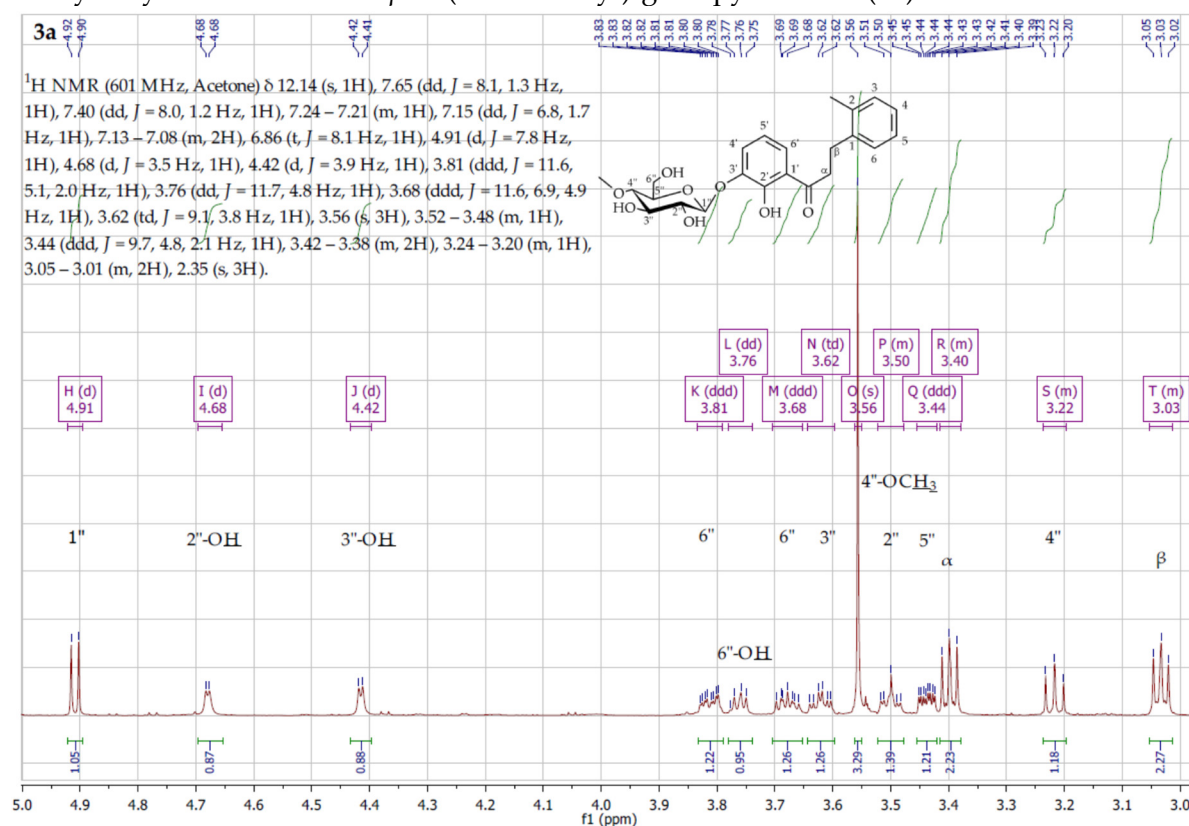


Figure S22. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 2'-hydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3a**)

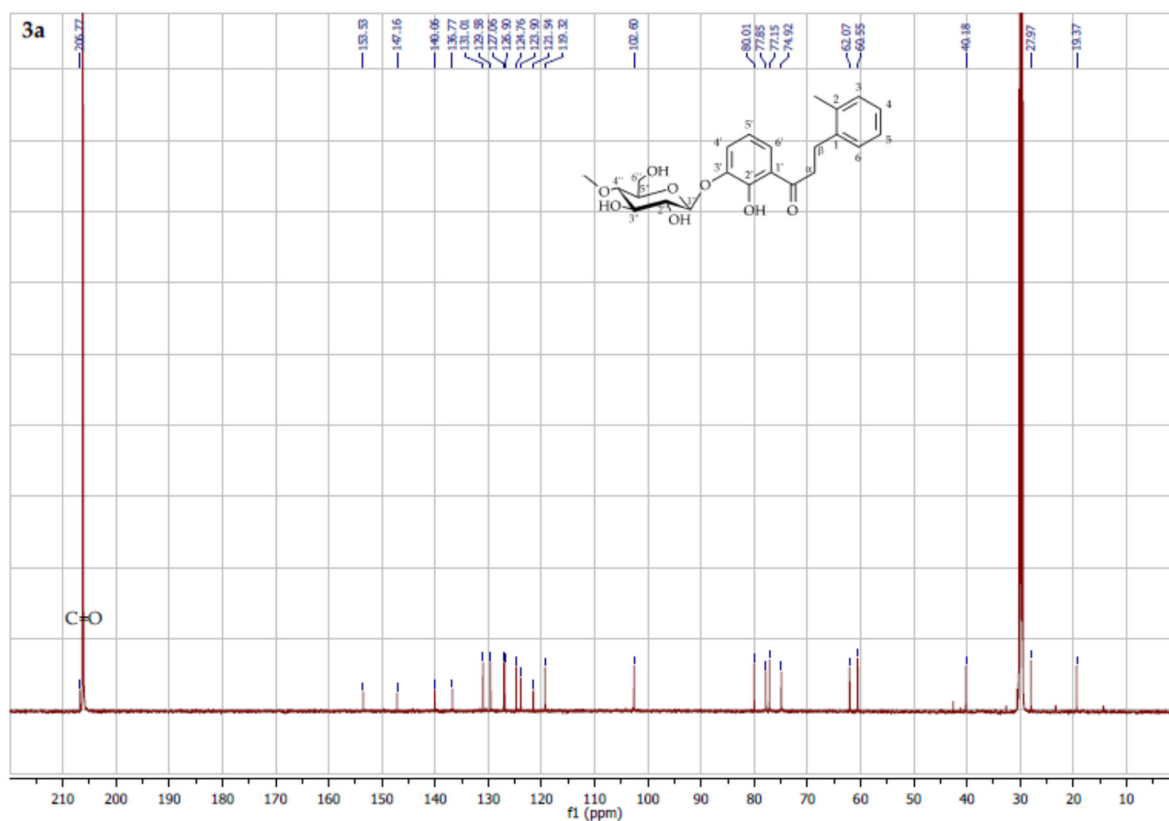


Figure S23. ^{13}C NMR spectrum (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-methyldihydrochalcone 3'- O - β -D-(4''- O -methyl)-glucopyranoside (**3a**)

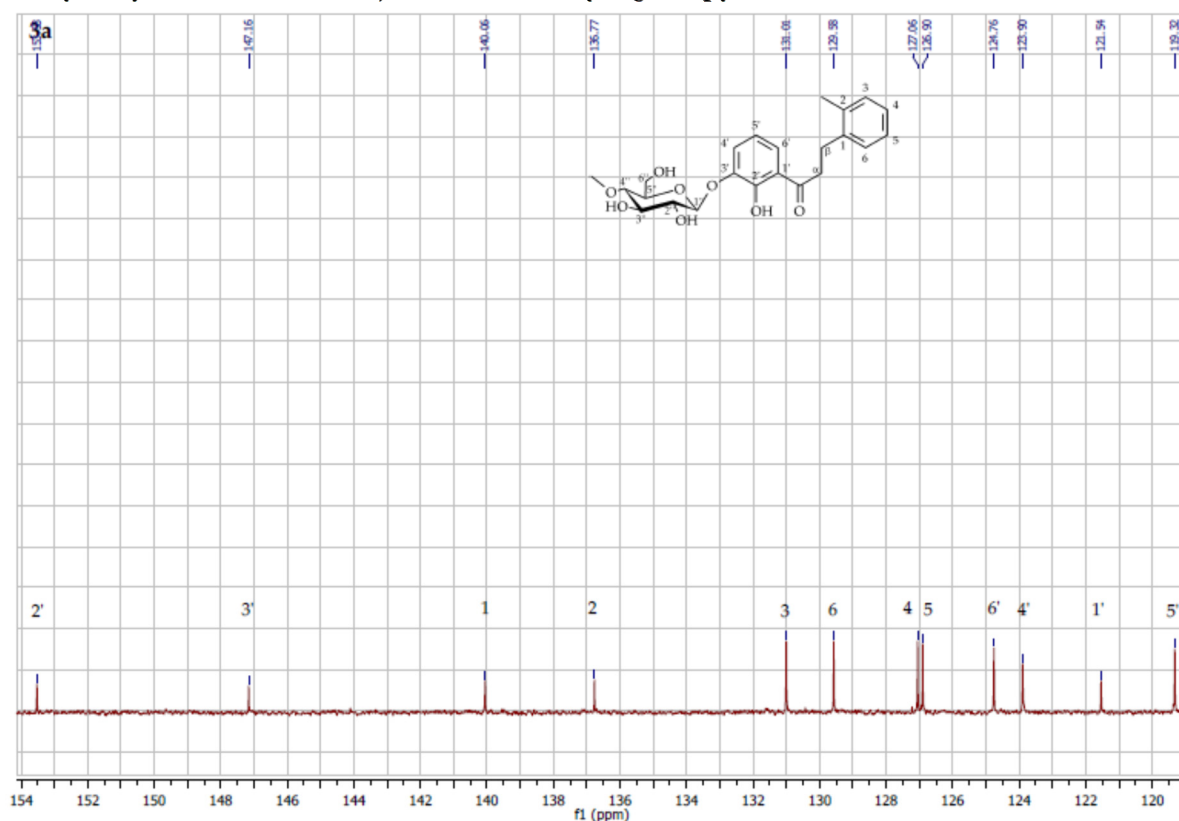


Figure S24. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-methyldihydrochalcone 3'- O - β -D-(4''- O -methyl)-glucopyranoside (**3a**)

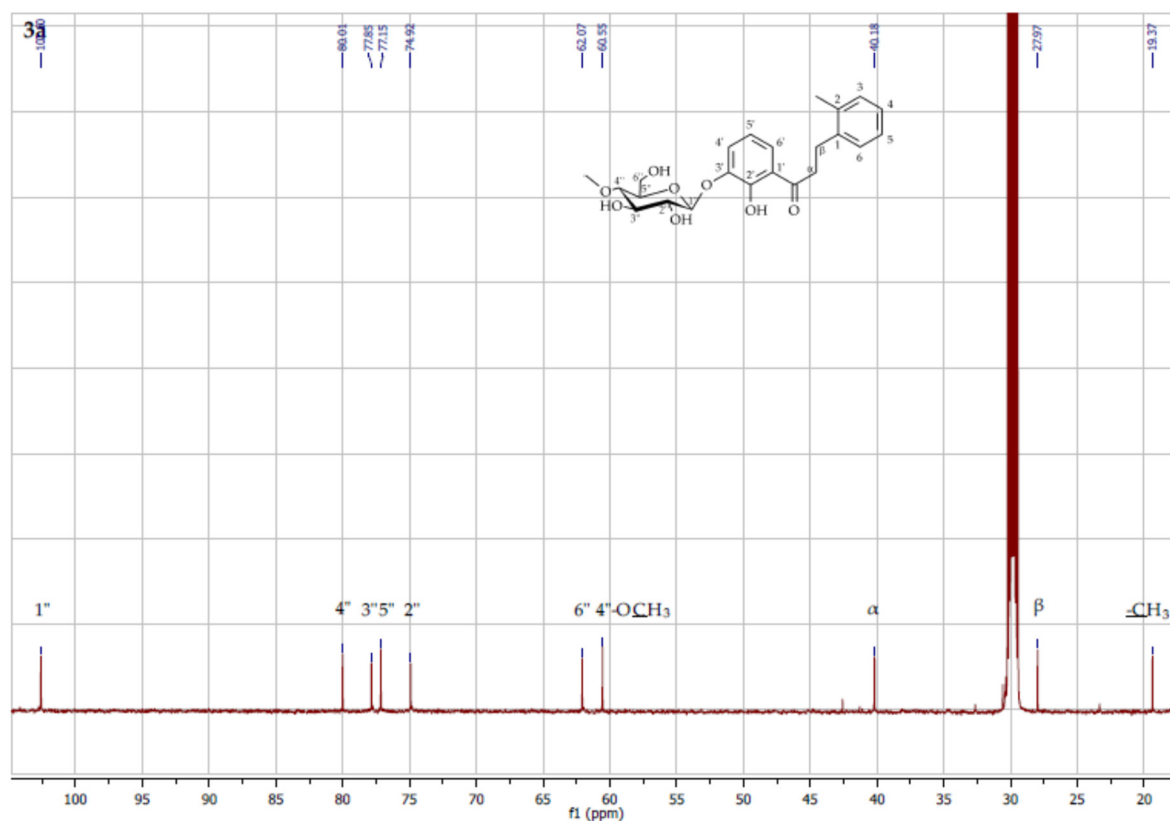


Figure S25. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 600 MHz) of 2'-hydroxy-2-methyldihydrochalcone 3'- O - β -D-(4''- O -methyl)-glucopyranoside (**3a**)

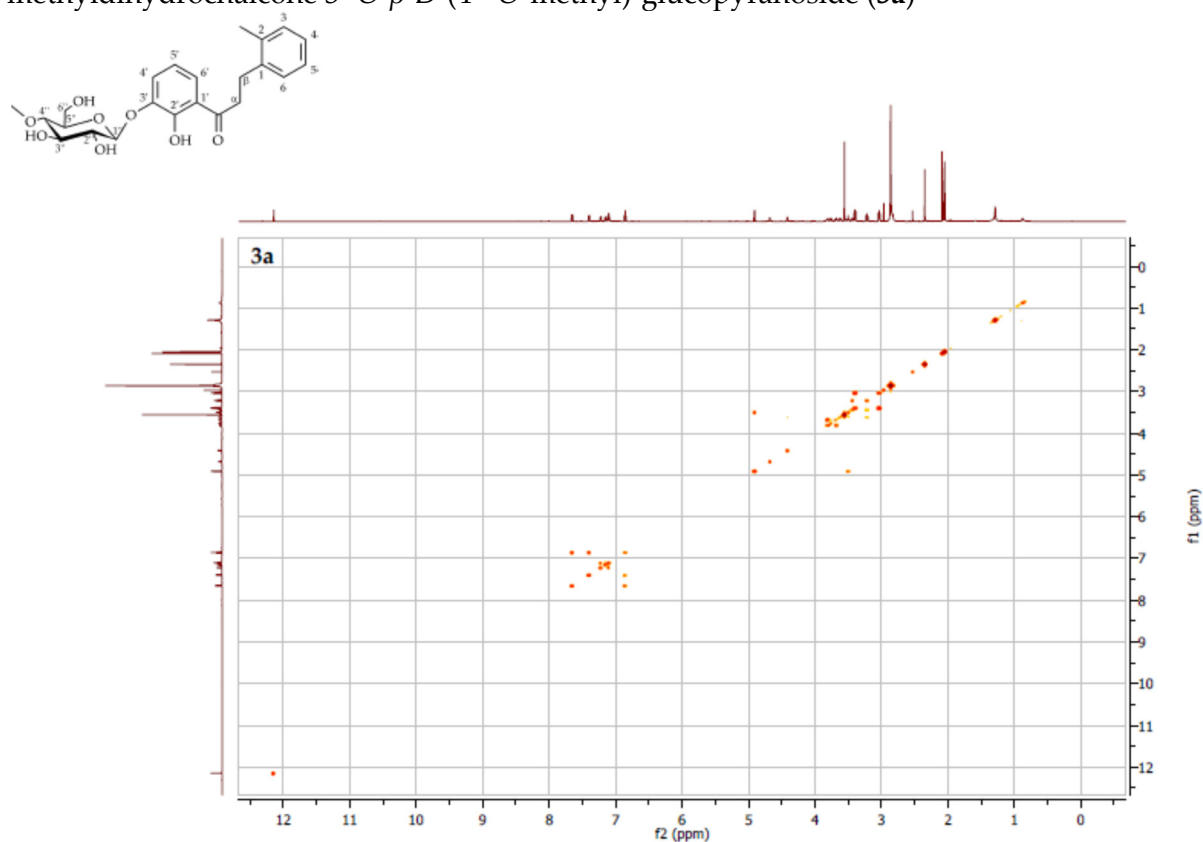


Figure S26. COSY contour map – $^1\text{H} \times ^1\text{H}$ of 2'-hydroxy-2-methyldihydrochalcone 3'- O - β -D-(4''- O -methyl)-glucopyranoside (**3a**)

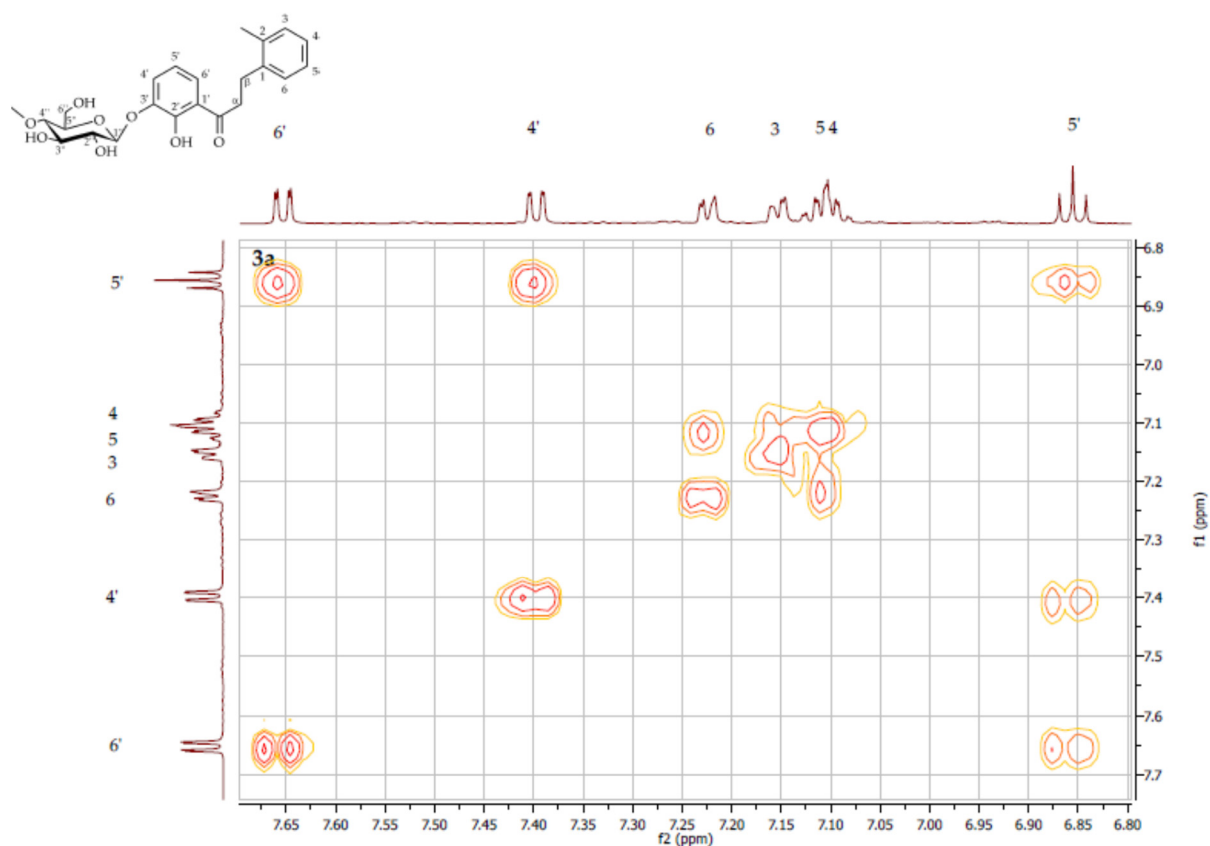


Figure S27. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

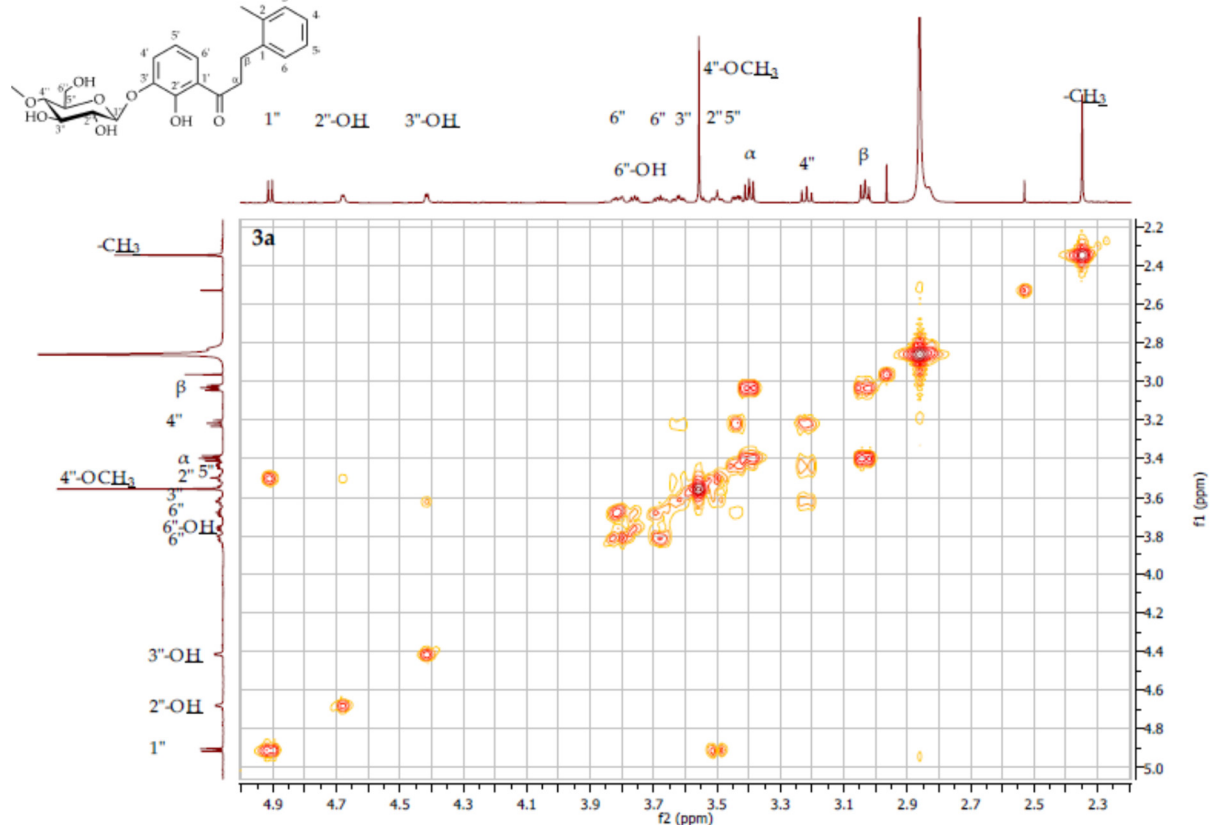


Figure S28. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

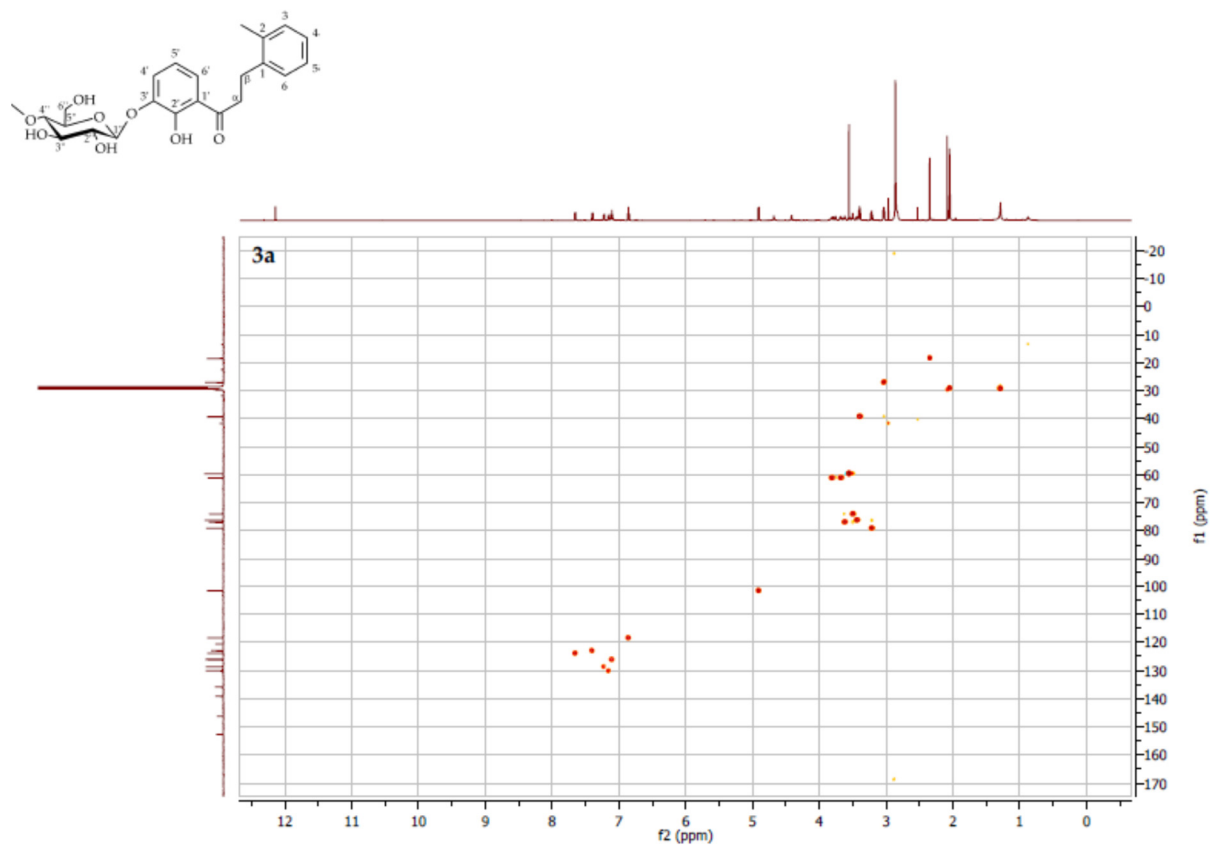


Figure S29. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

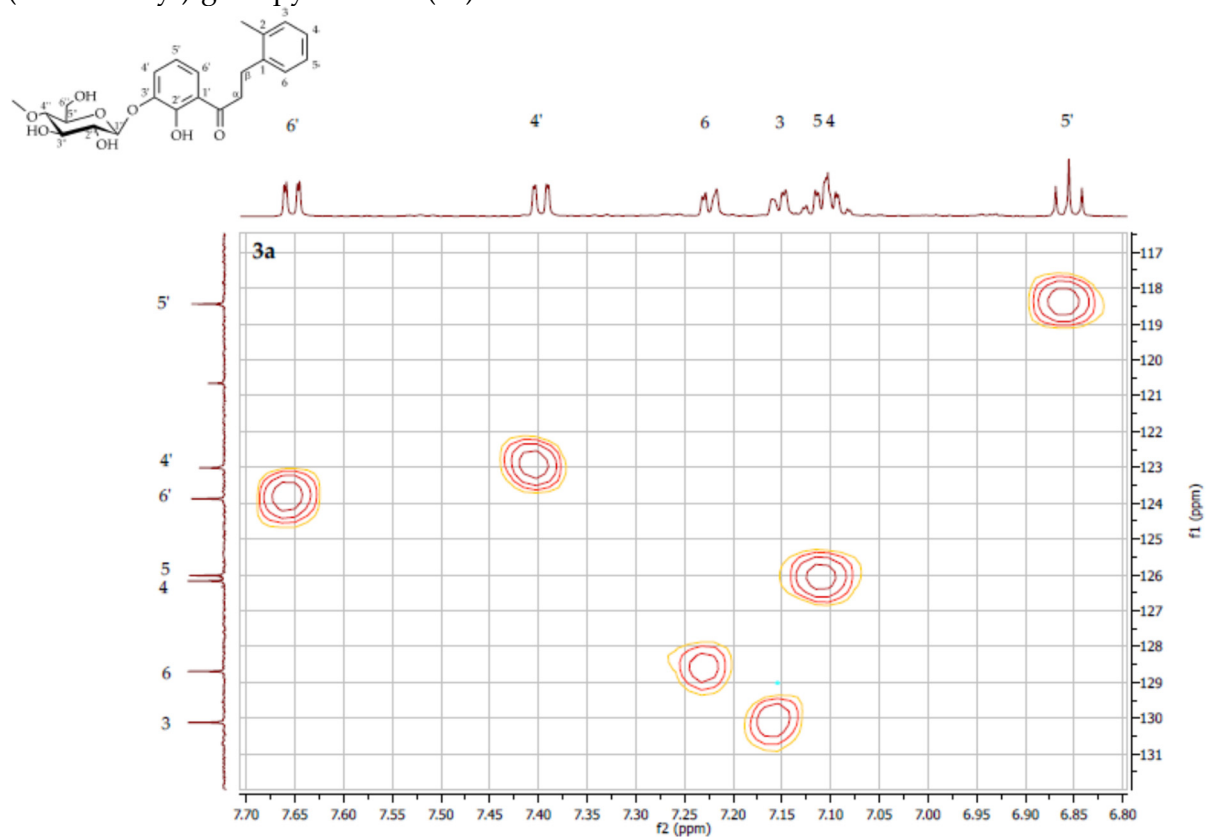


Figure S30. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

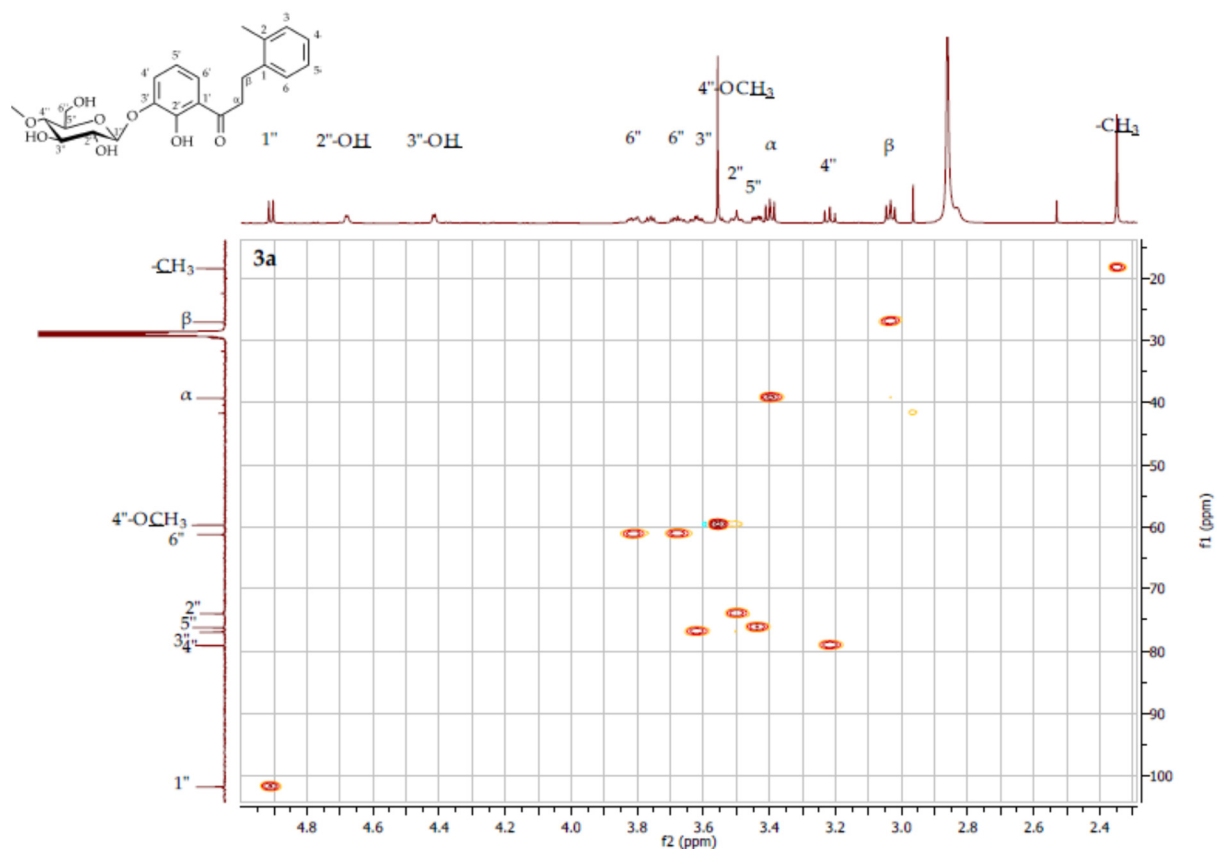


Figure S31. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

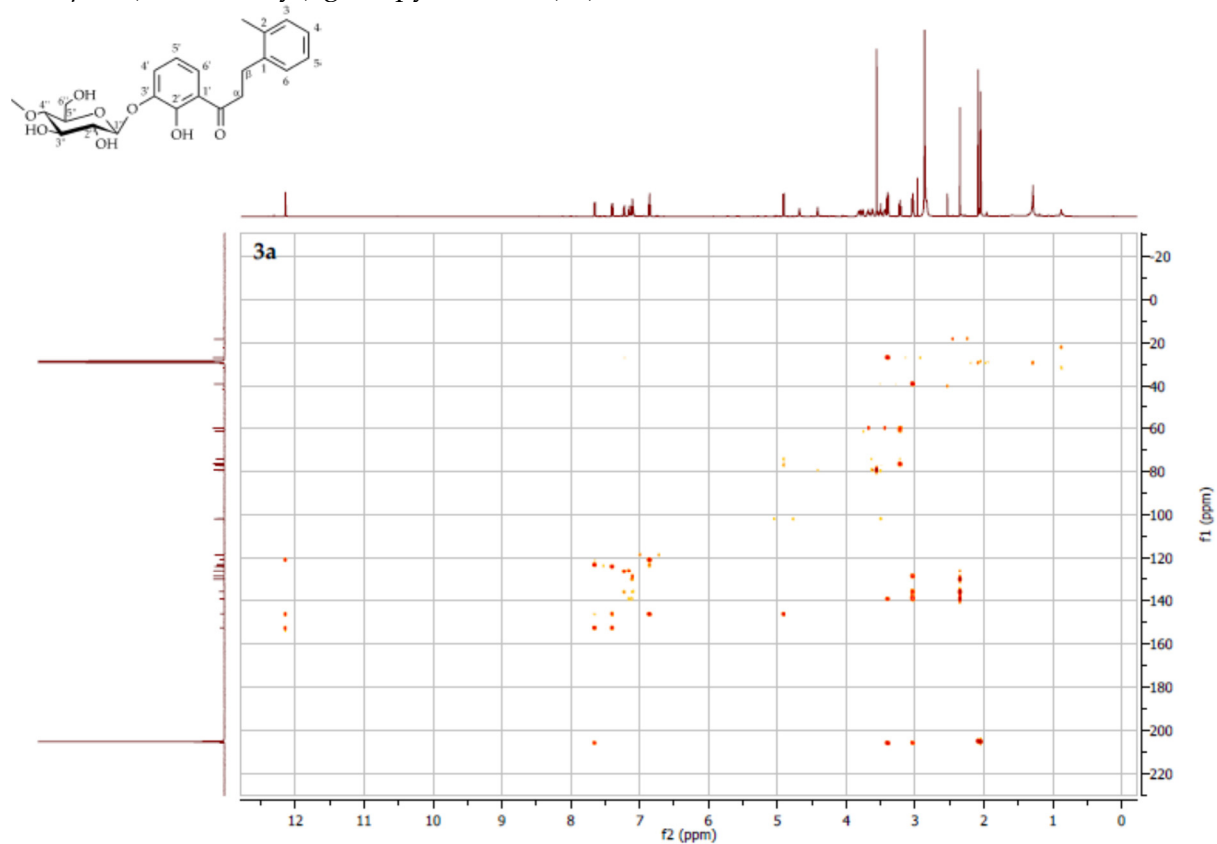


Figure S32. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

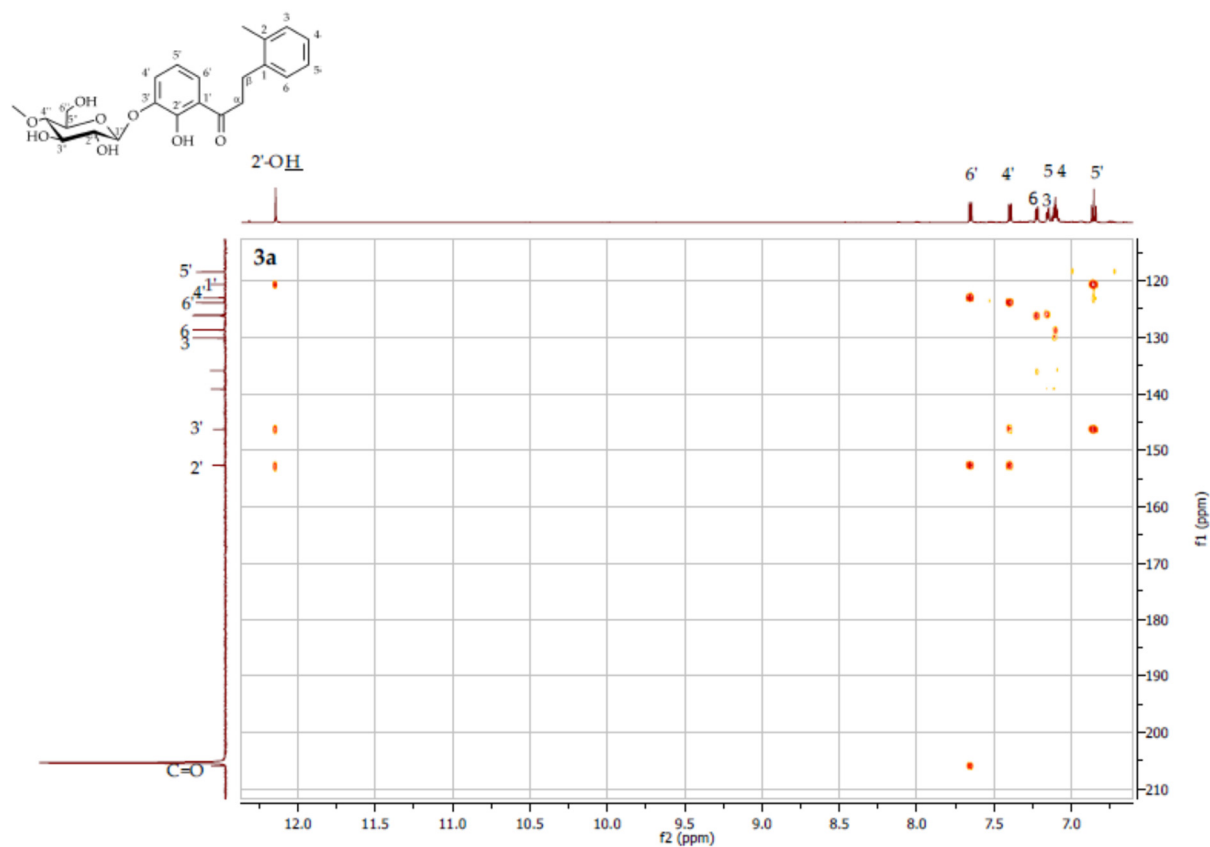


Figure S33. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

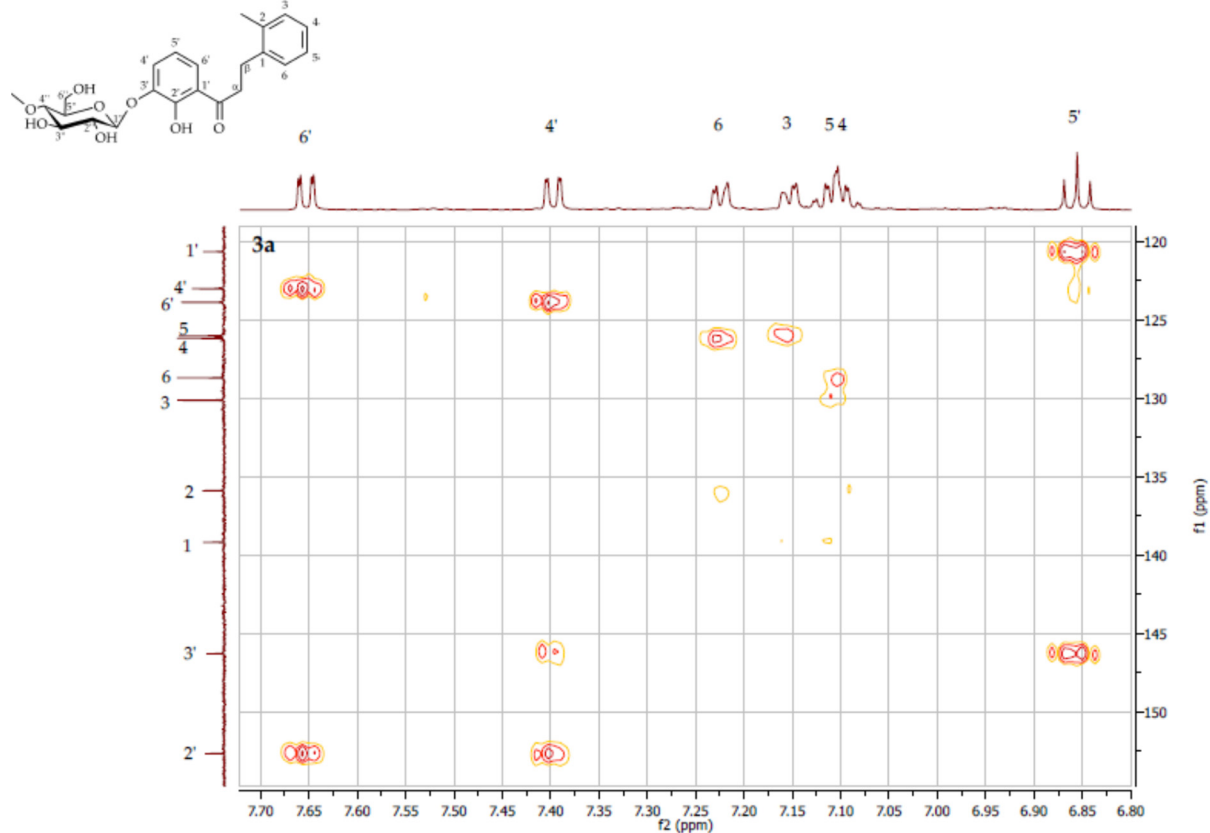


Figure S34. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

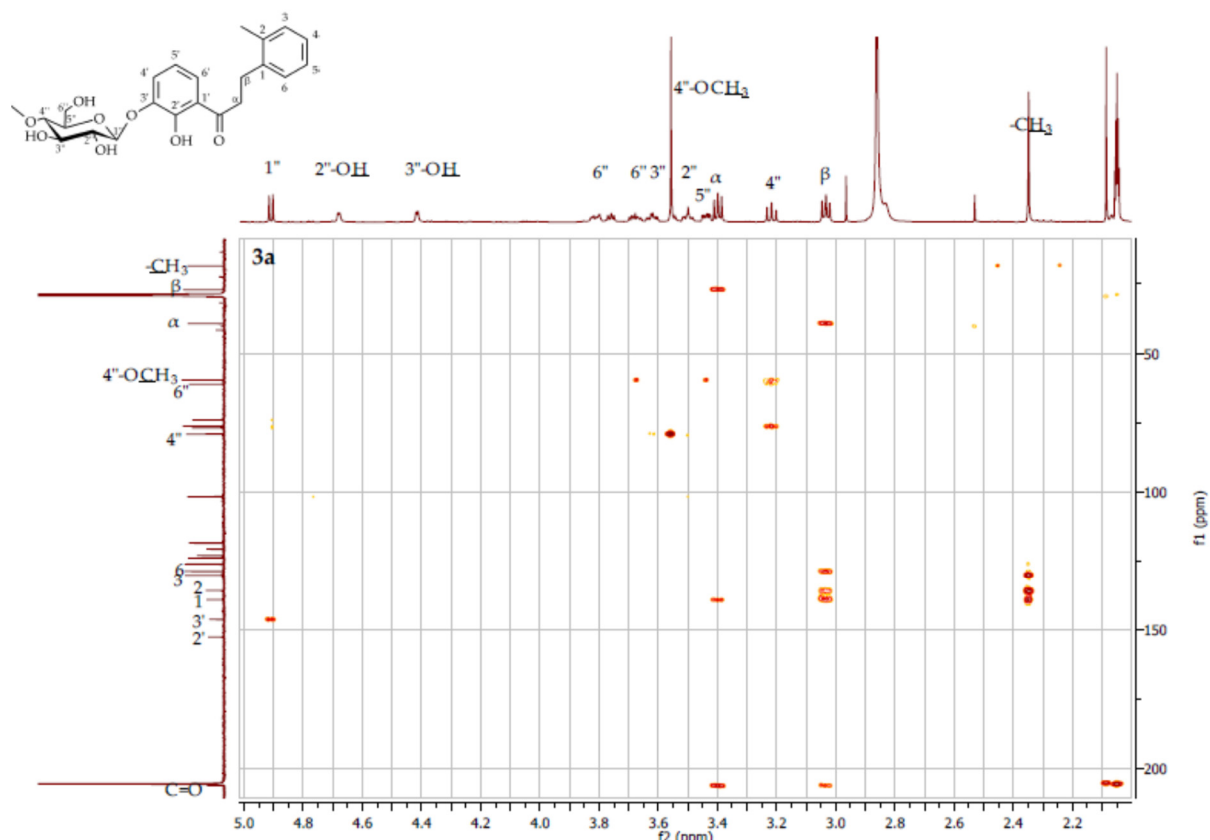


Figure S35. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

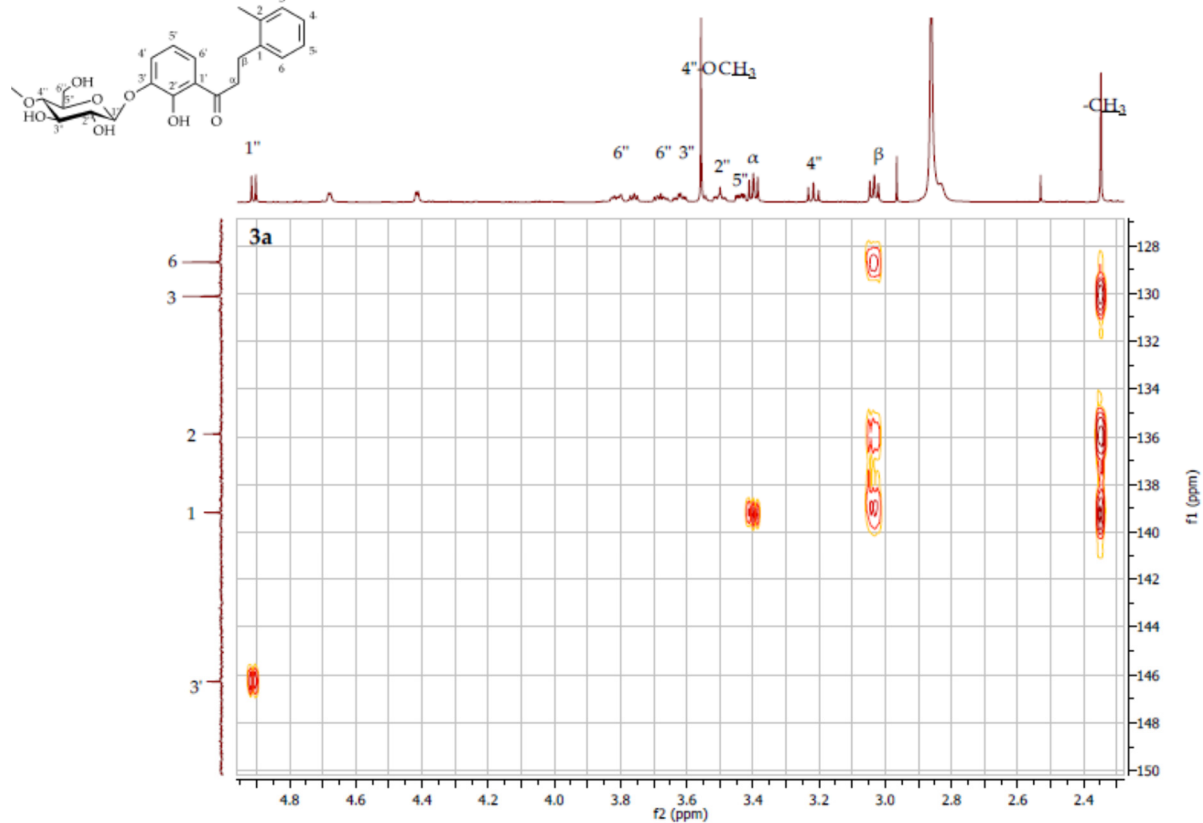


Figure S36. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3a**)

Molecular formula: $C_{23}H_{28}O_9$

Formula weight: 448.17

Ionization mode: negative

Precursor: $[M - H]^-$ 447.30

447.3000 > 253.1000 CE: 29.0

447.3000 > 238.0500 CE: 47.0

447.3000 > 271.0000 CE: 21.0

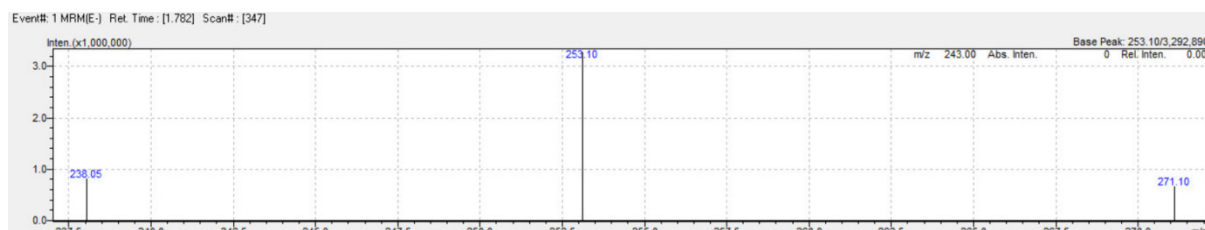
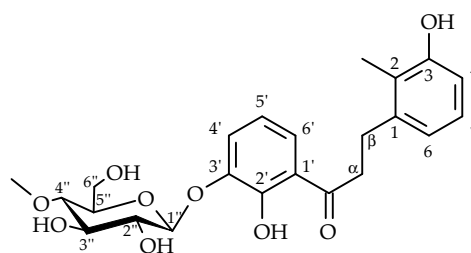


Figure S37. MS analysis of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

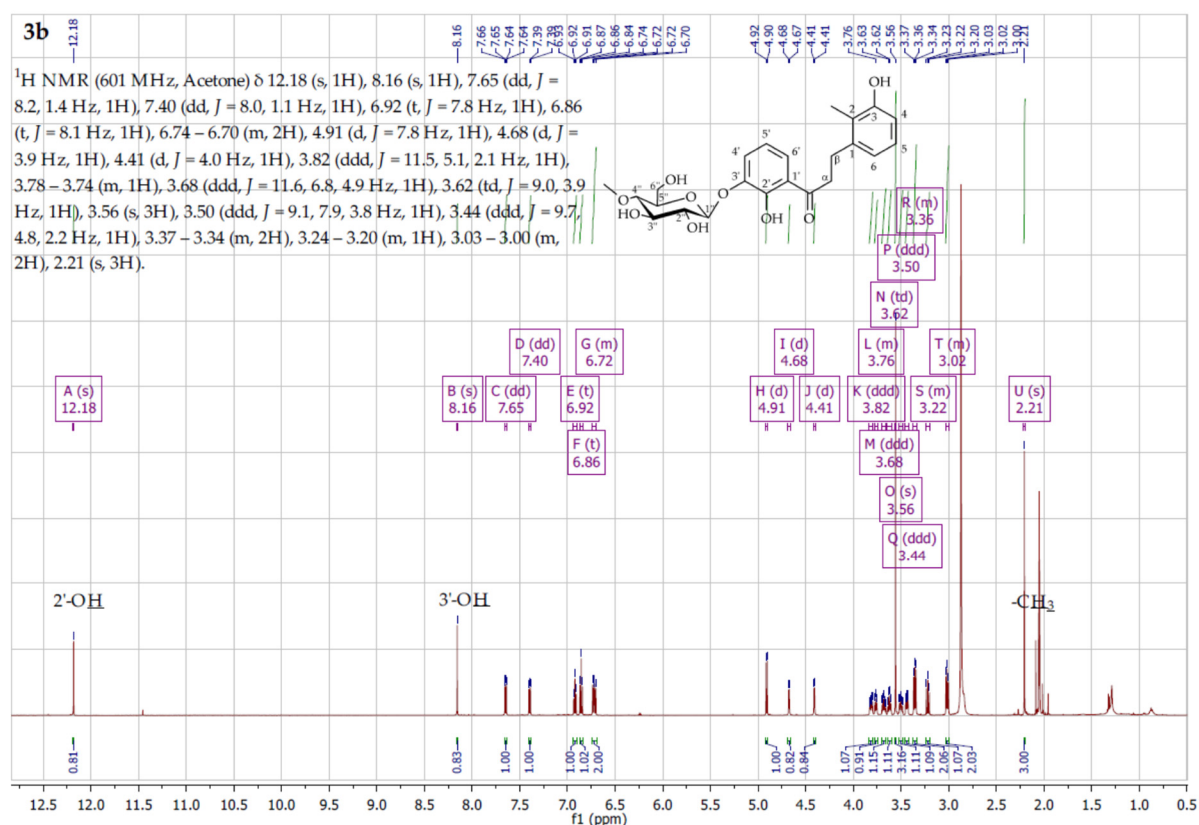


Figure S38. ^1H NMR spectrum (δ , acetone- d_6 , 600 MHz) of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

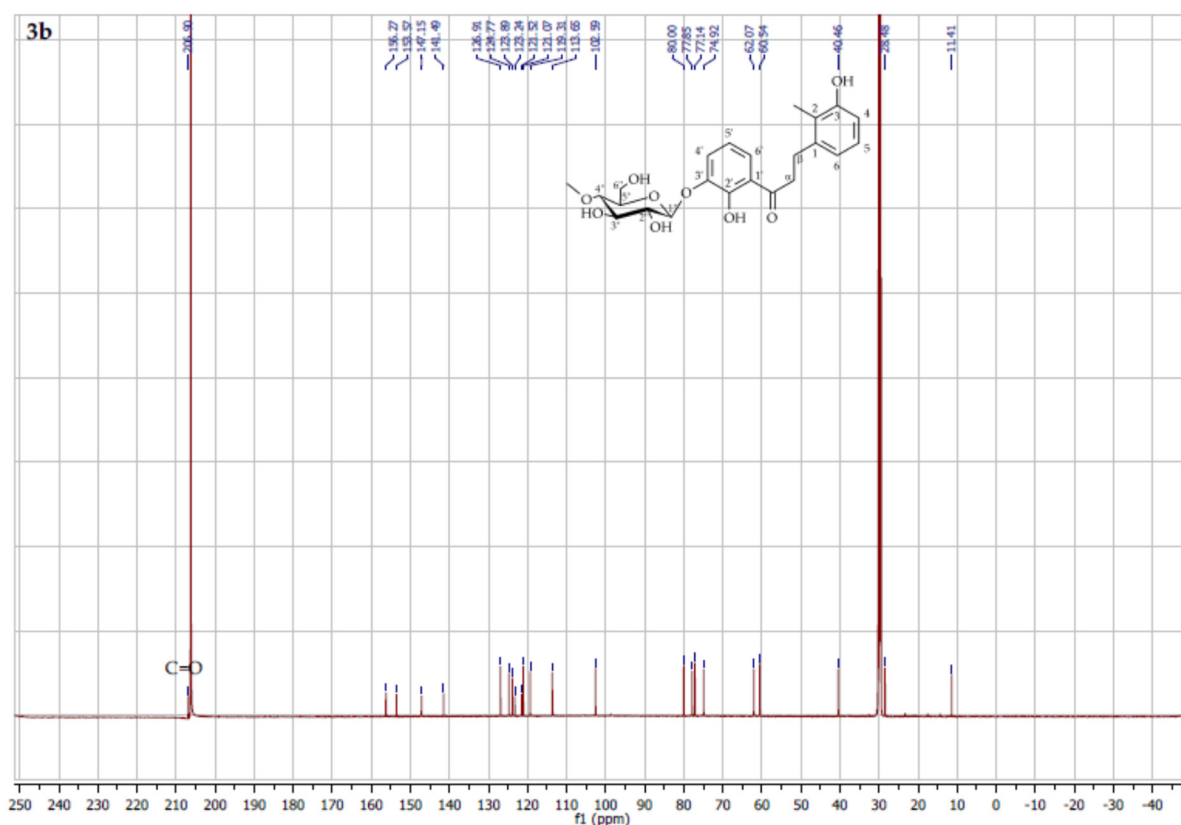


Figure S41. ^{13}C NMR spectrum (δ , acetone- d_6 , 151 MHz) of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3b**)

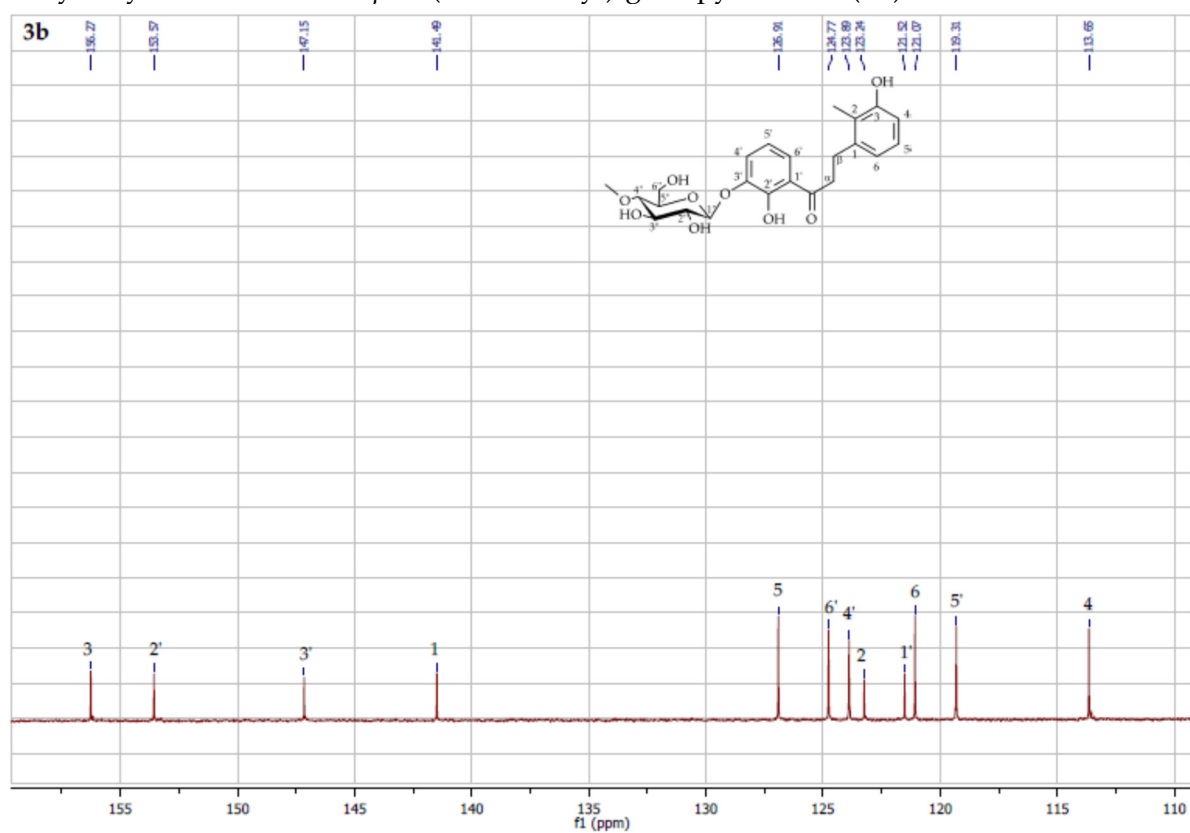


Figure S42. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3b**)

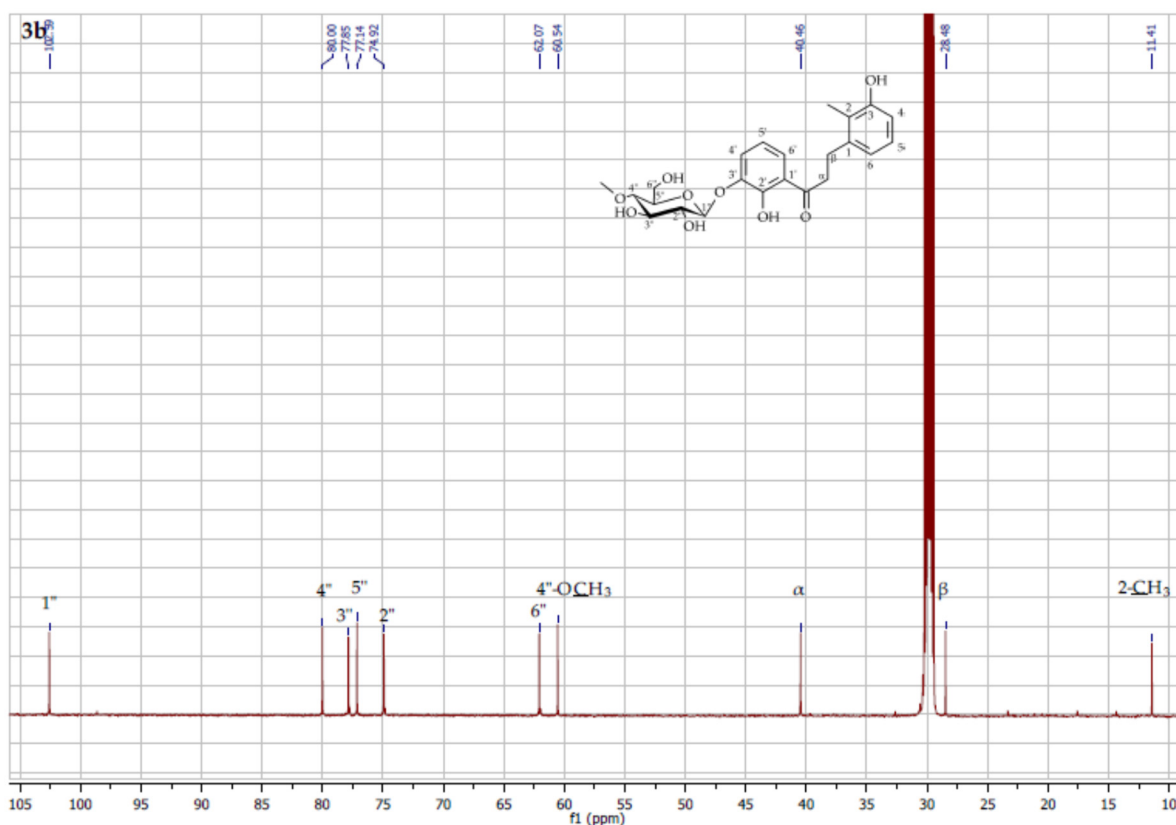


Figure S43. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2', 3-dihydroxy-2-methyldihydrochalcone 3'- O - β -D-(4''- O -methyl)-glucopyranoside (**3b**)

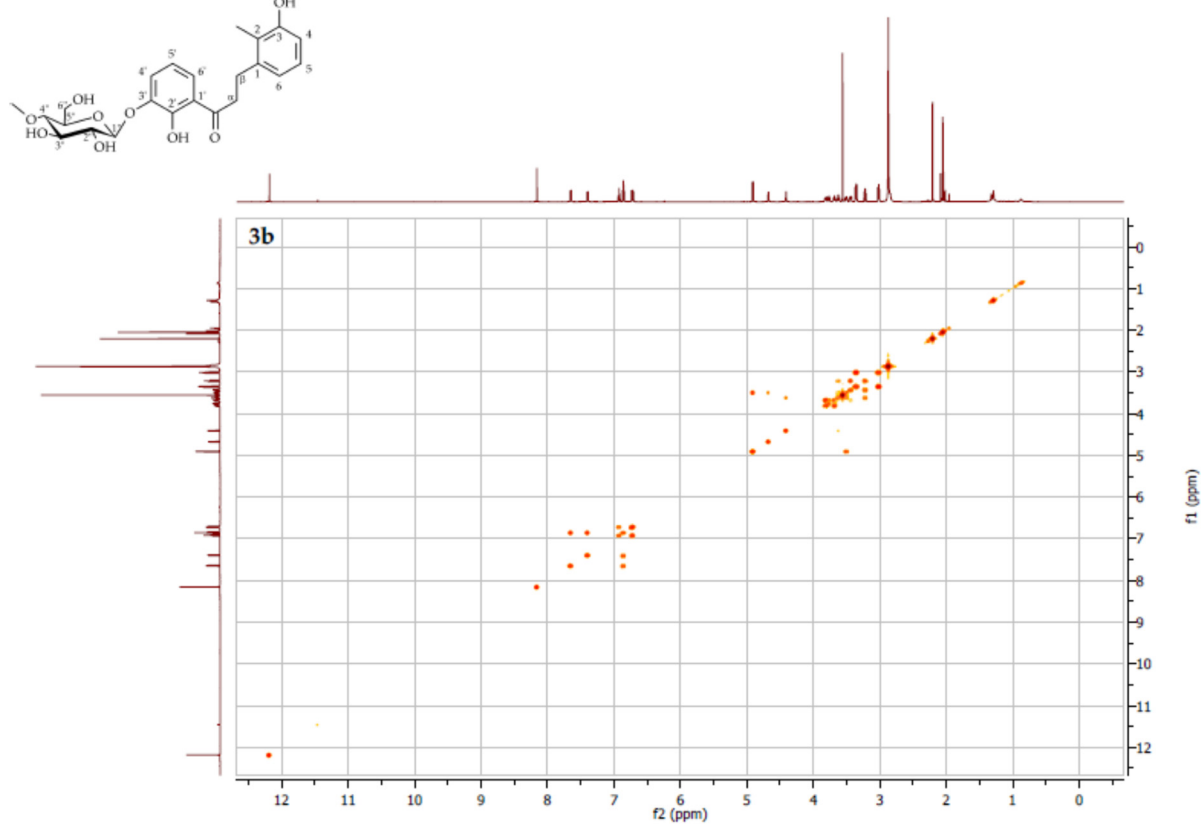


Figure S44. COSY contour map – $^1\text{H} \times ^1\text{H}$ of 2', 3-dihydroxy-2-methyldihydrochalcone 3'- O - β -D-(4''- O -methyl)-glucopyranoside (**3b**)

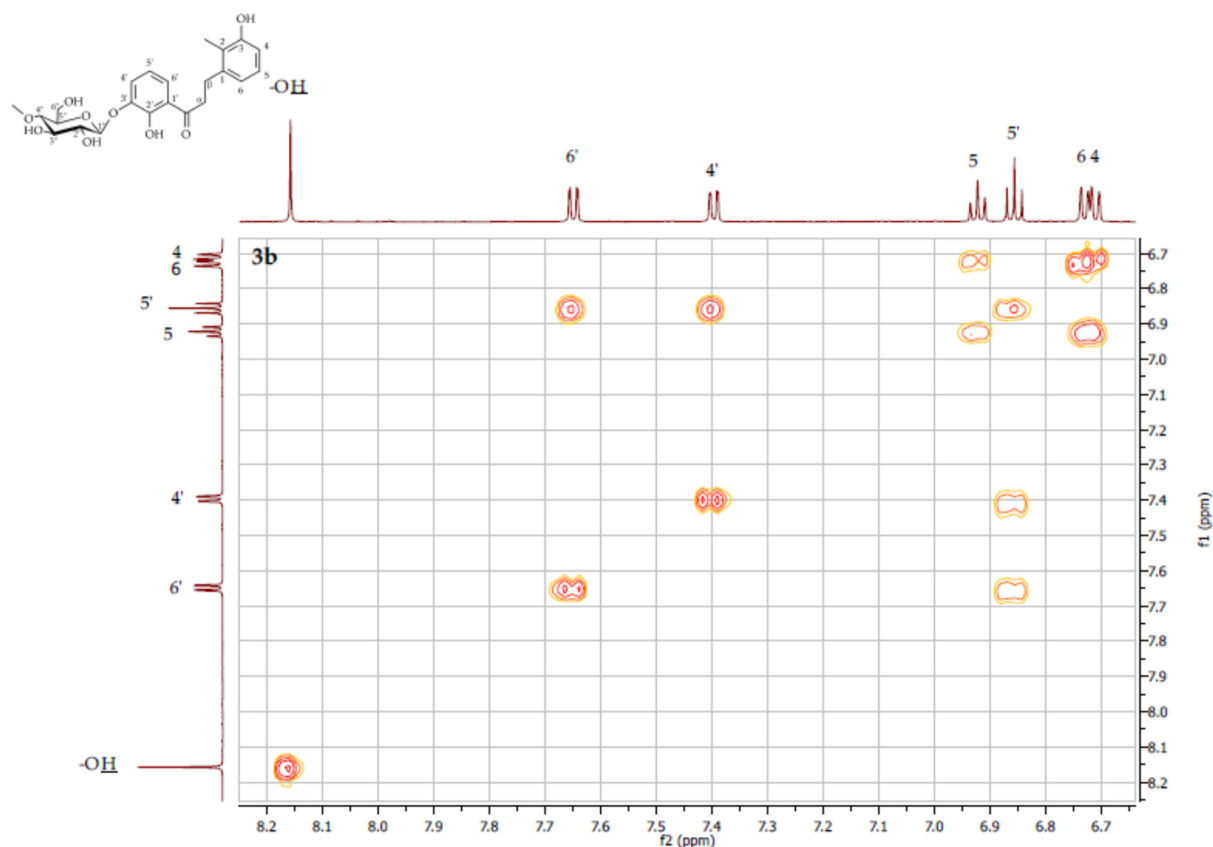


Figure S45. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

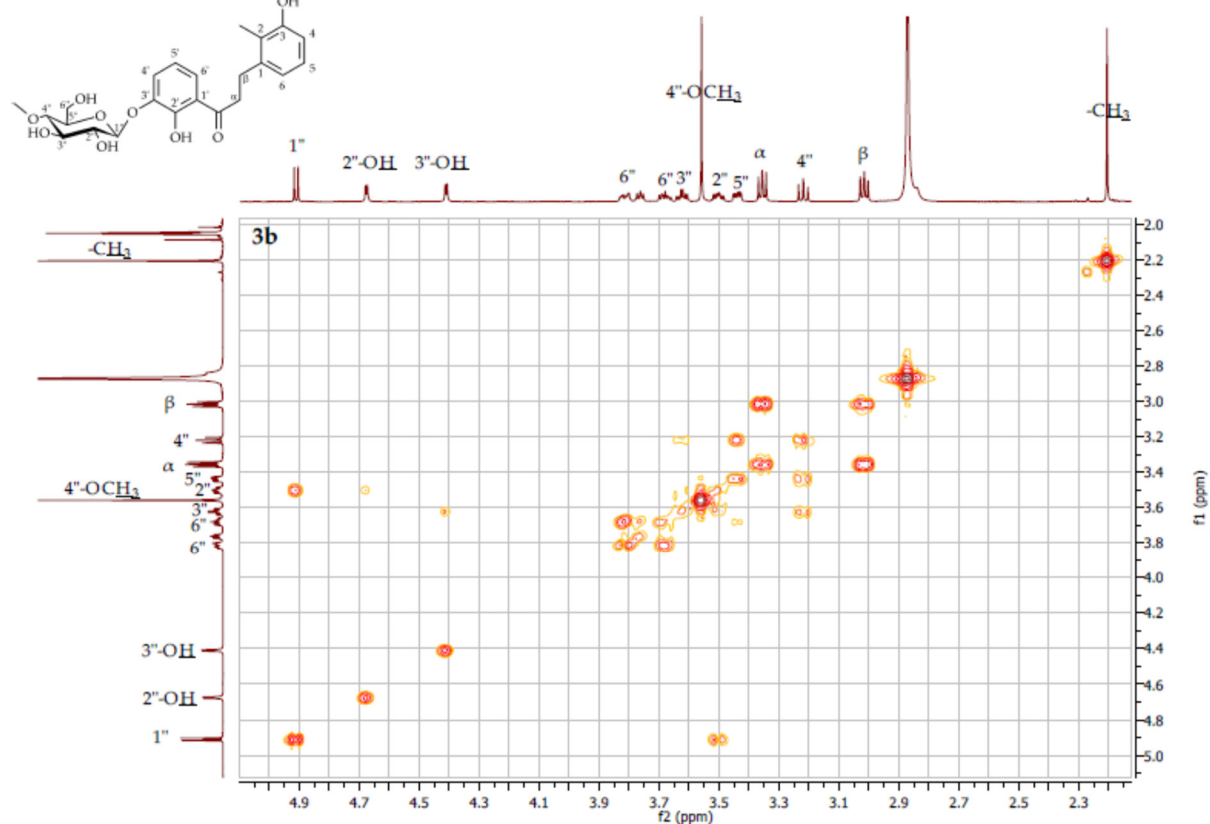


Figure S46. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

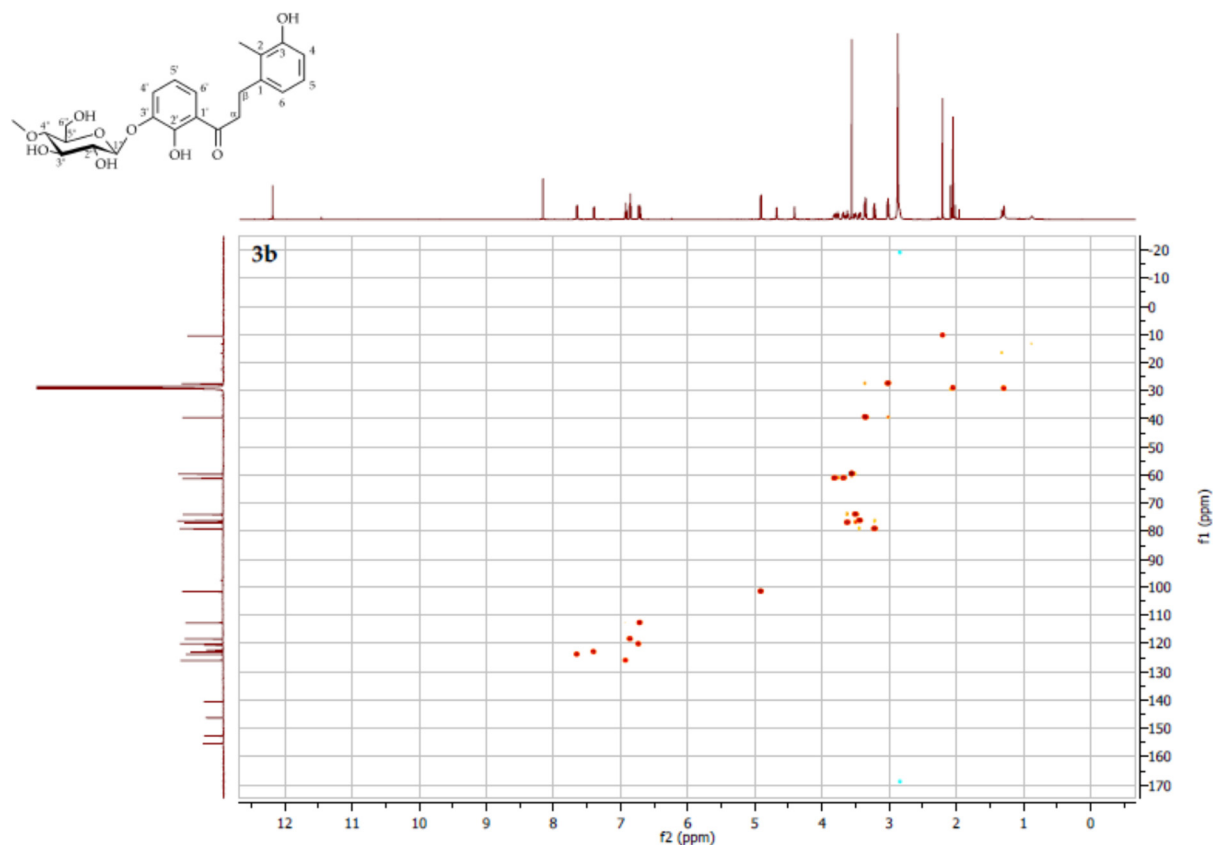


Figure S47. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

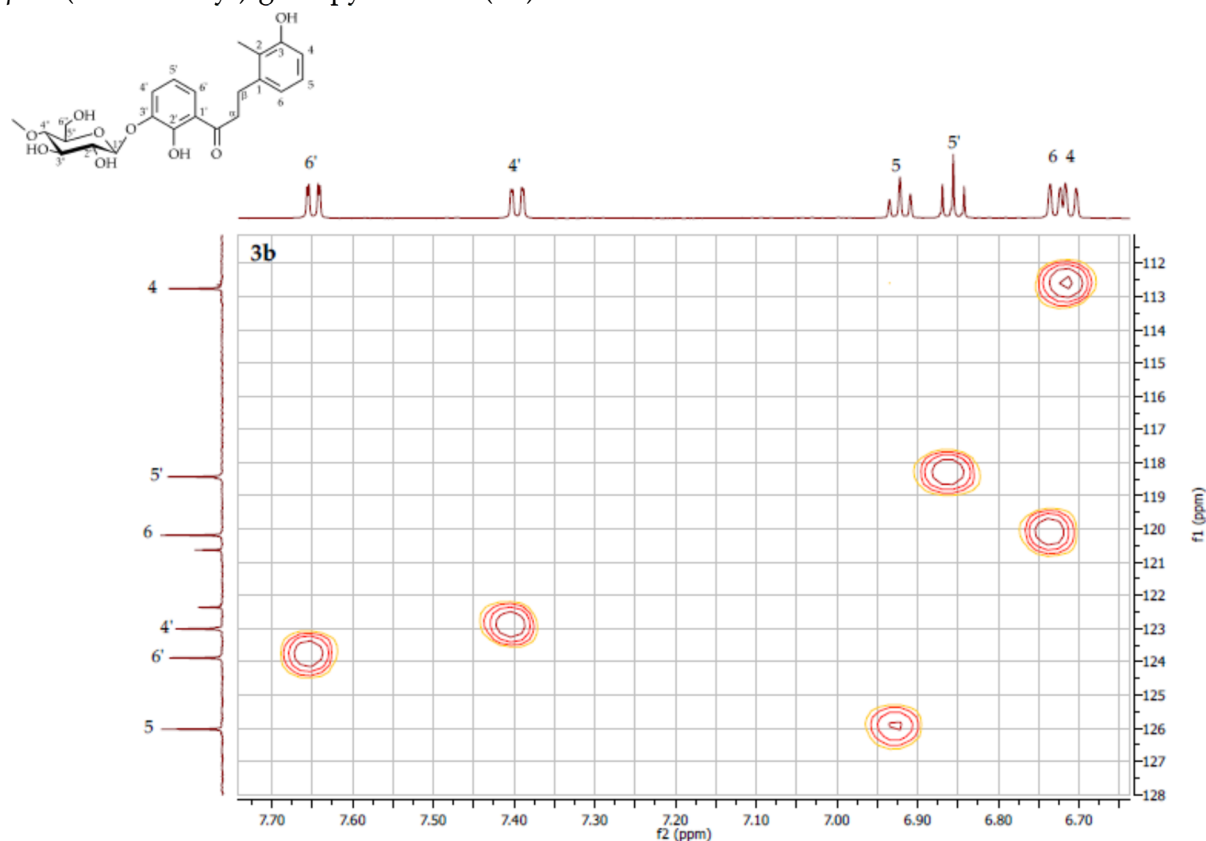


Figure S48. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

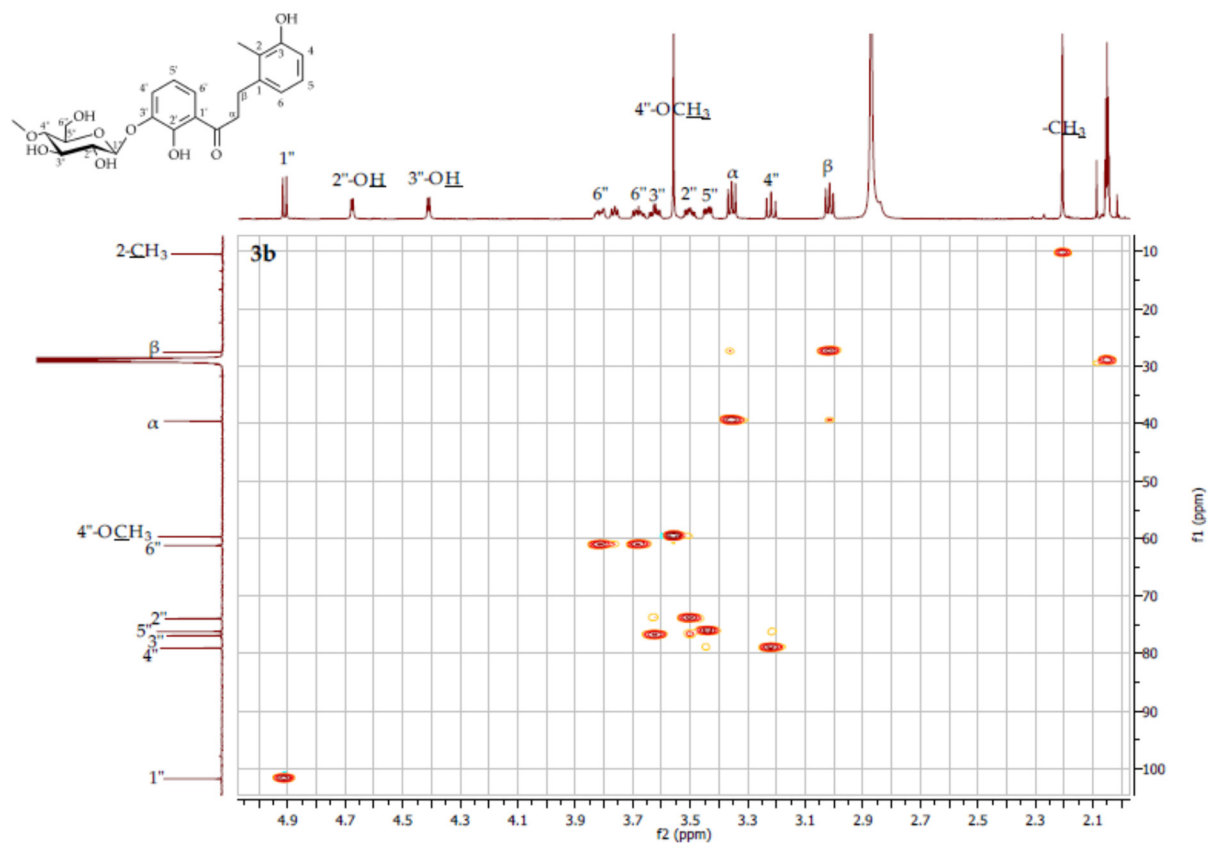


Figure S49. HSQC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

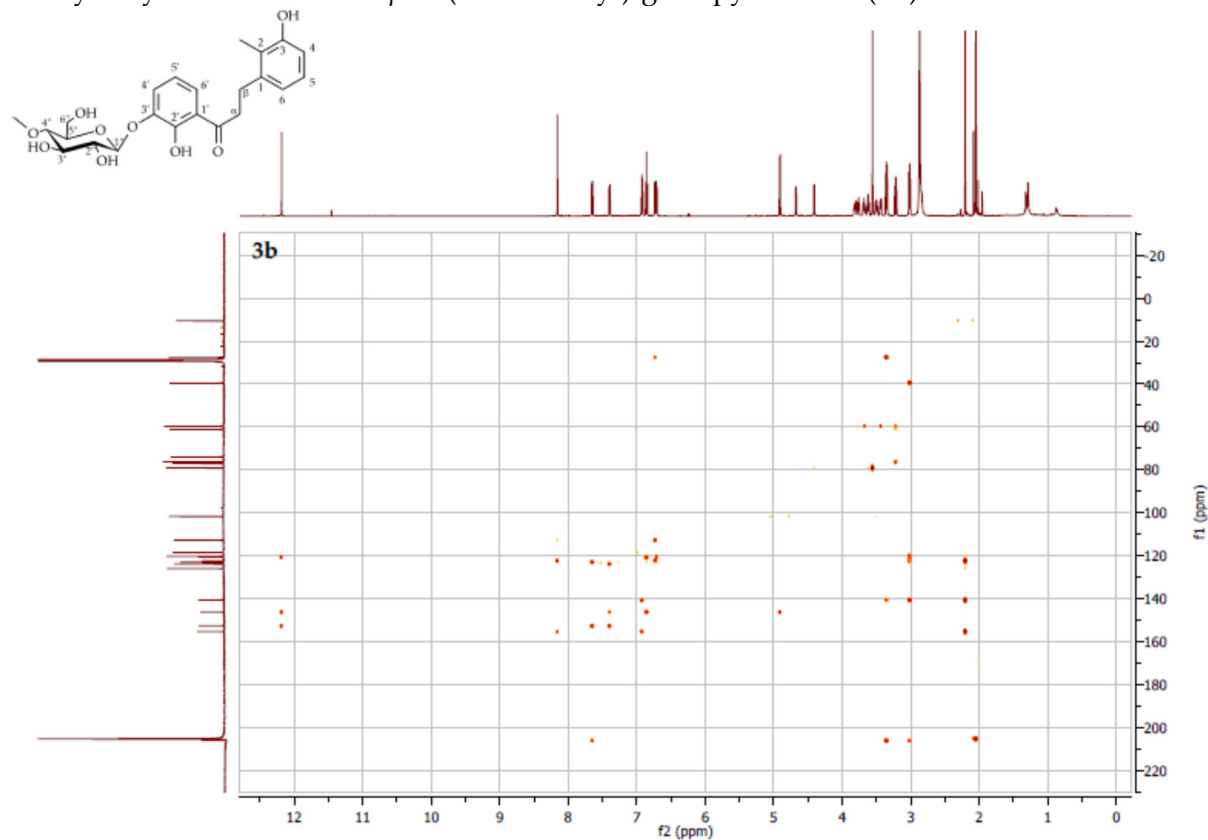


Figure S50. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

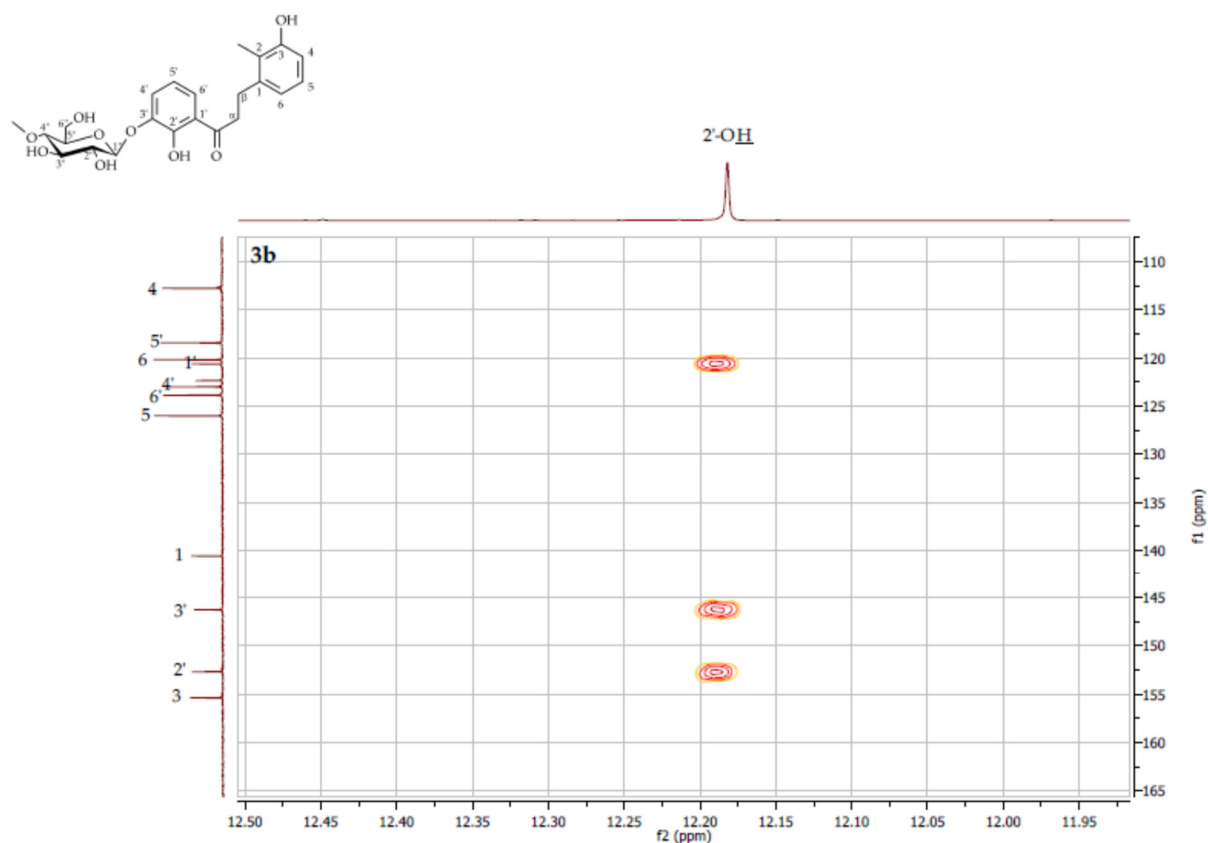


Figure S51. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-*O*- β -D-(4''-*O*-methyl)-glucopyranoside (**3b**)

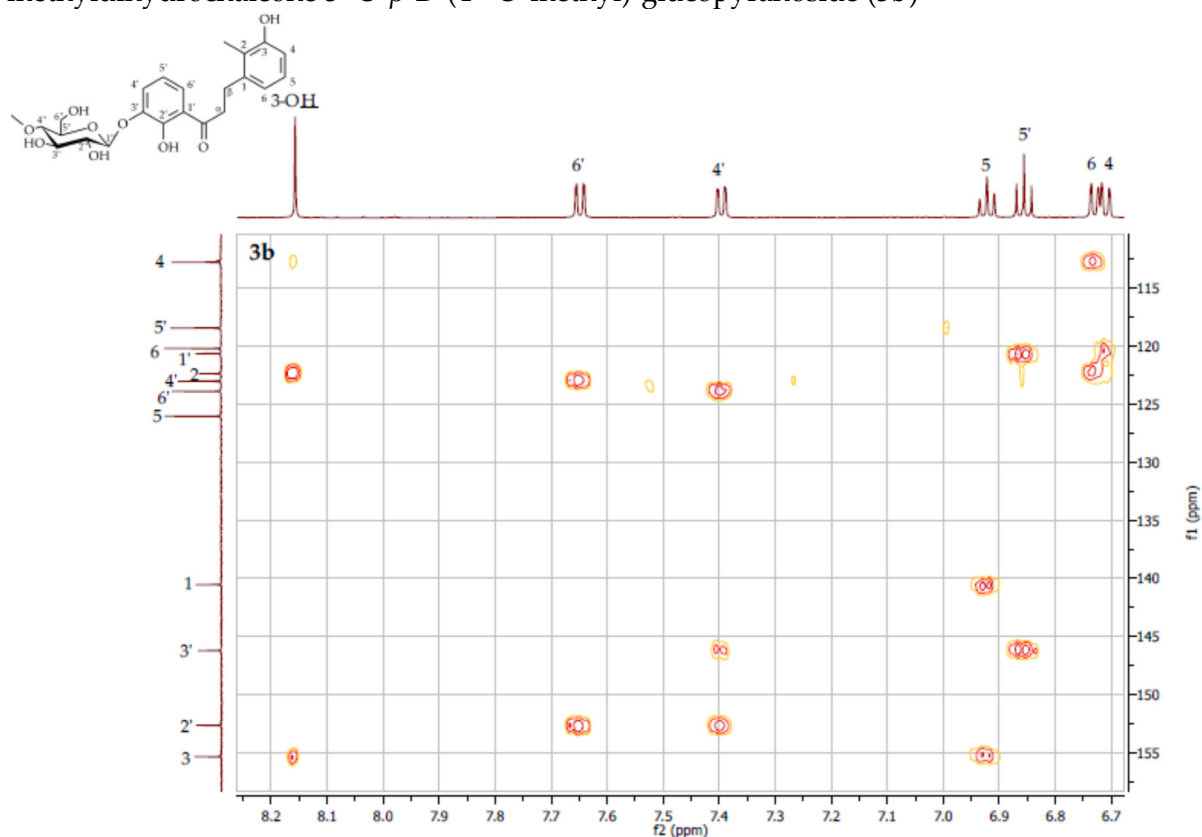


Figure S52. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-*O*- β -D-(4''-*O*-methyl)-glucopyranoside (**3b**)

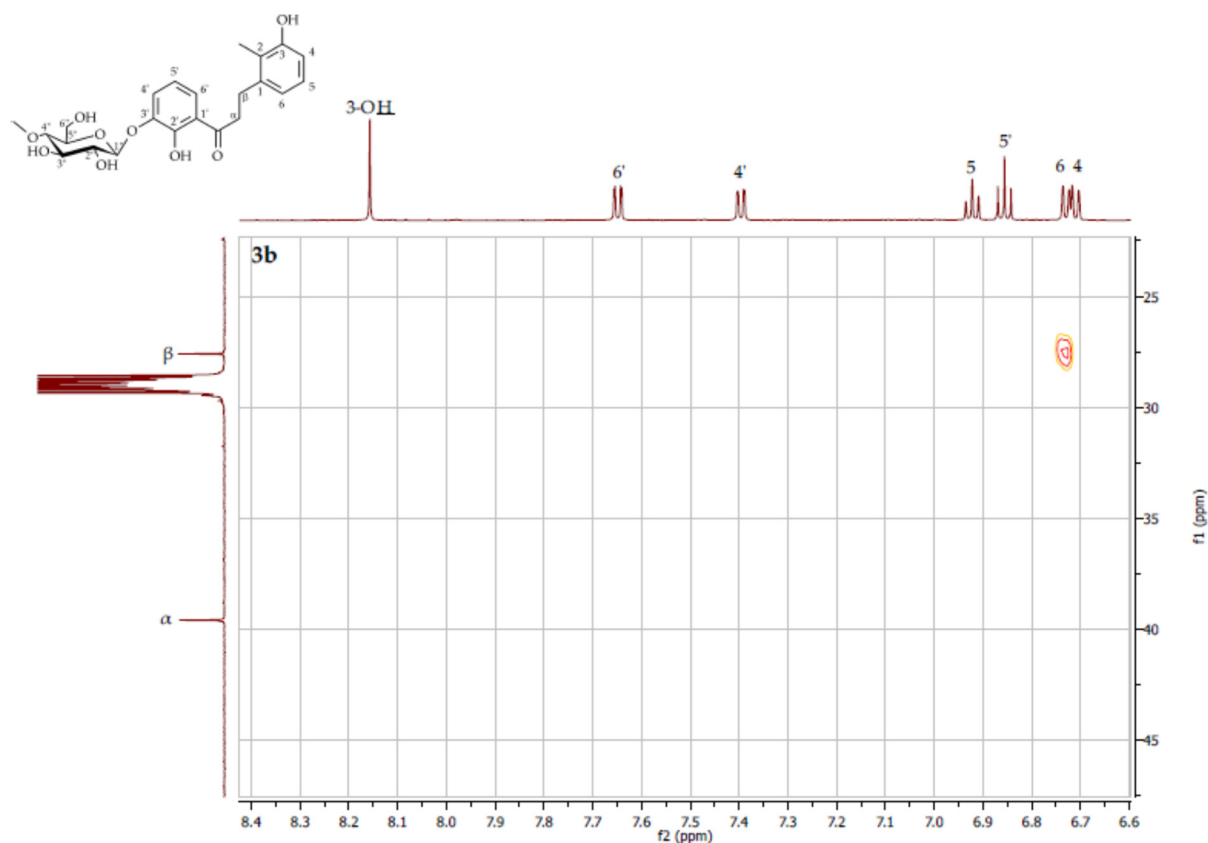


Figure S53. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

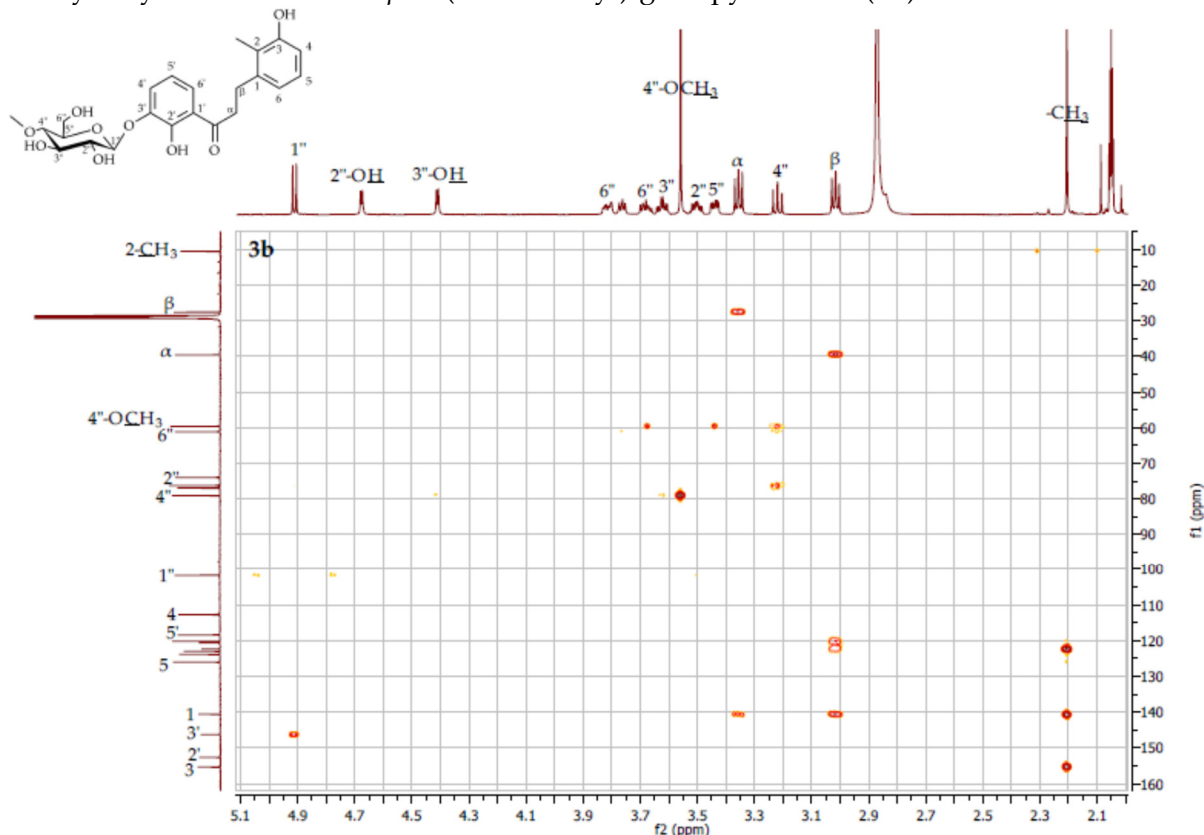


Figure S54. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

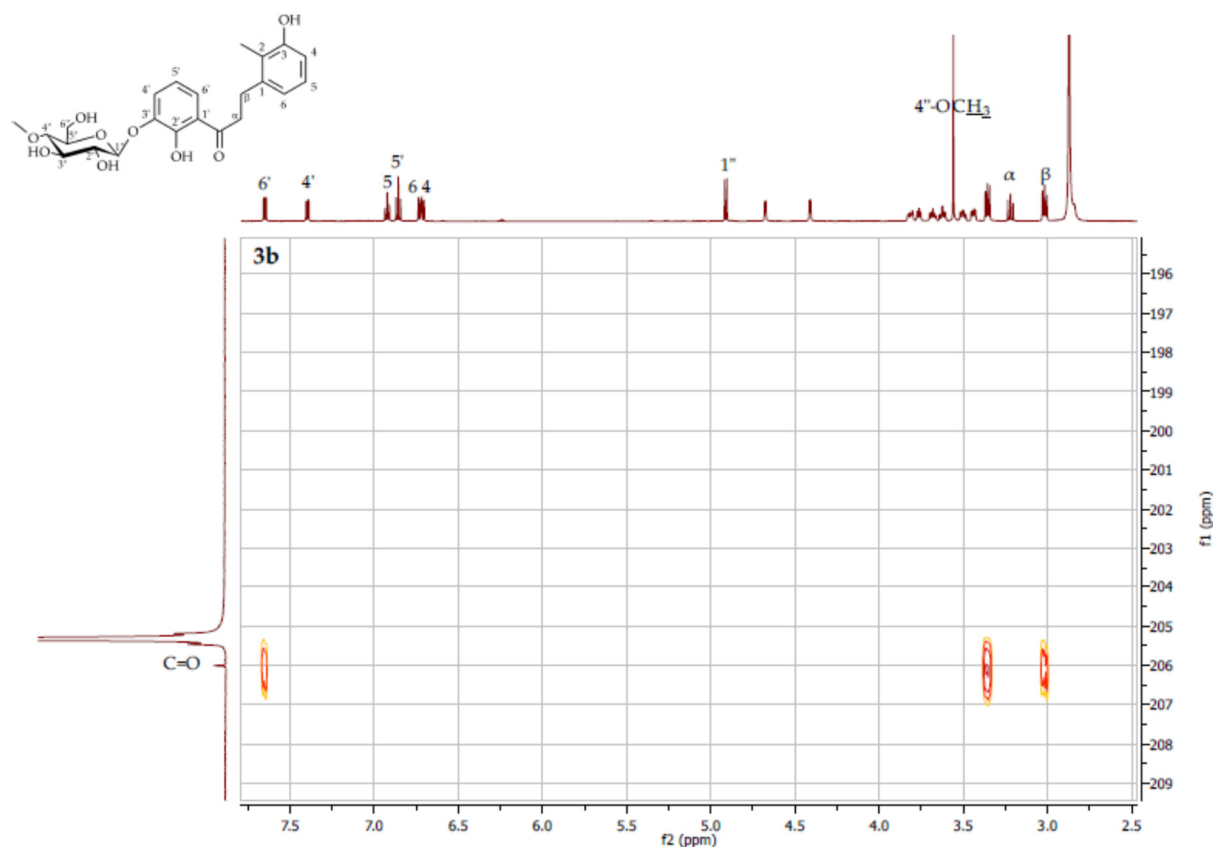


Figure S55. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2', 3-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3b**)

Molecular formula: $\text{C}_{23}\text{H}_{28}\text{O}_9$

Formula weight: 448.17

Ionization mode: negative

Precursor: $[\text{M} - \text{H}]^-$ 447.30

447.3000 > 271.1000 CE: 27.0

447.3000 > 108.0500 CE: 50.0

447.3000 > 235.0500 CE: 43.0

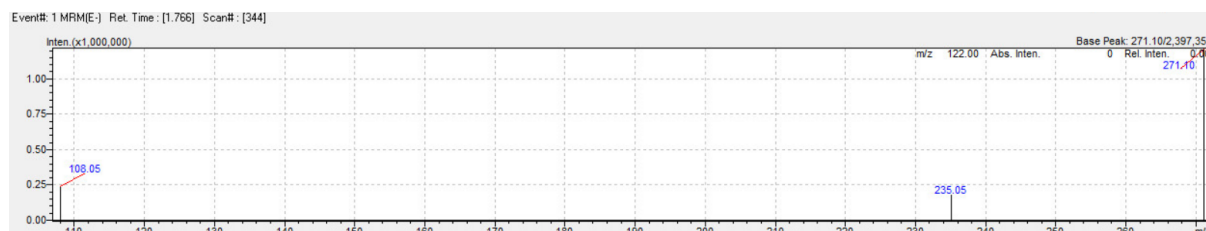
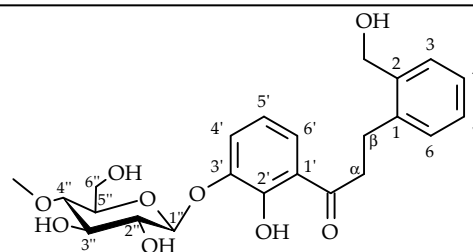


Figure S56. MS analysis of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

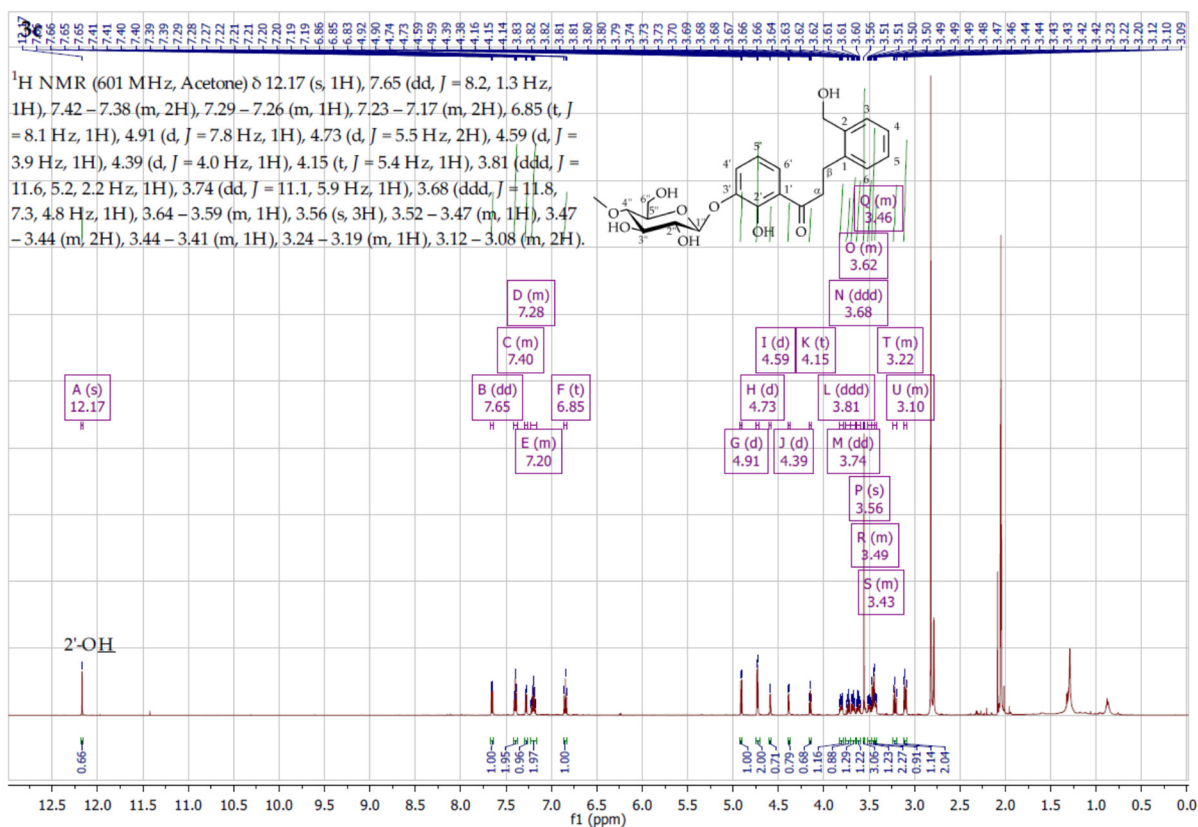


Figure S57. ¹H NMR spectrum (δ , acetone-d₆, 600 MHz) of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

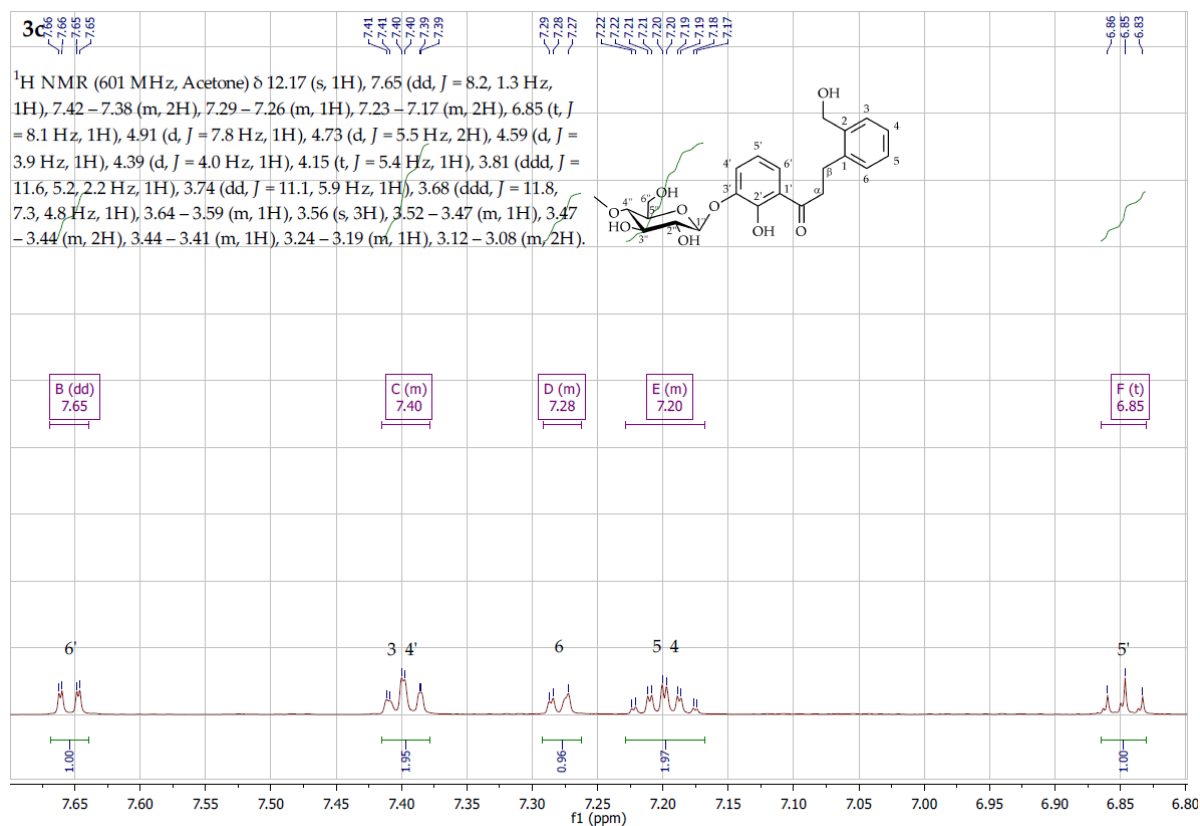


Figure S58. ¹H NMR spectrum expansion (δ , acetone-d₆, 600 MHz) of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

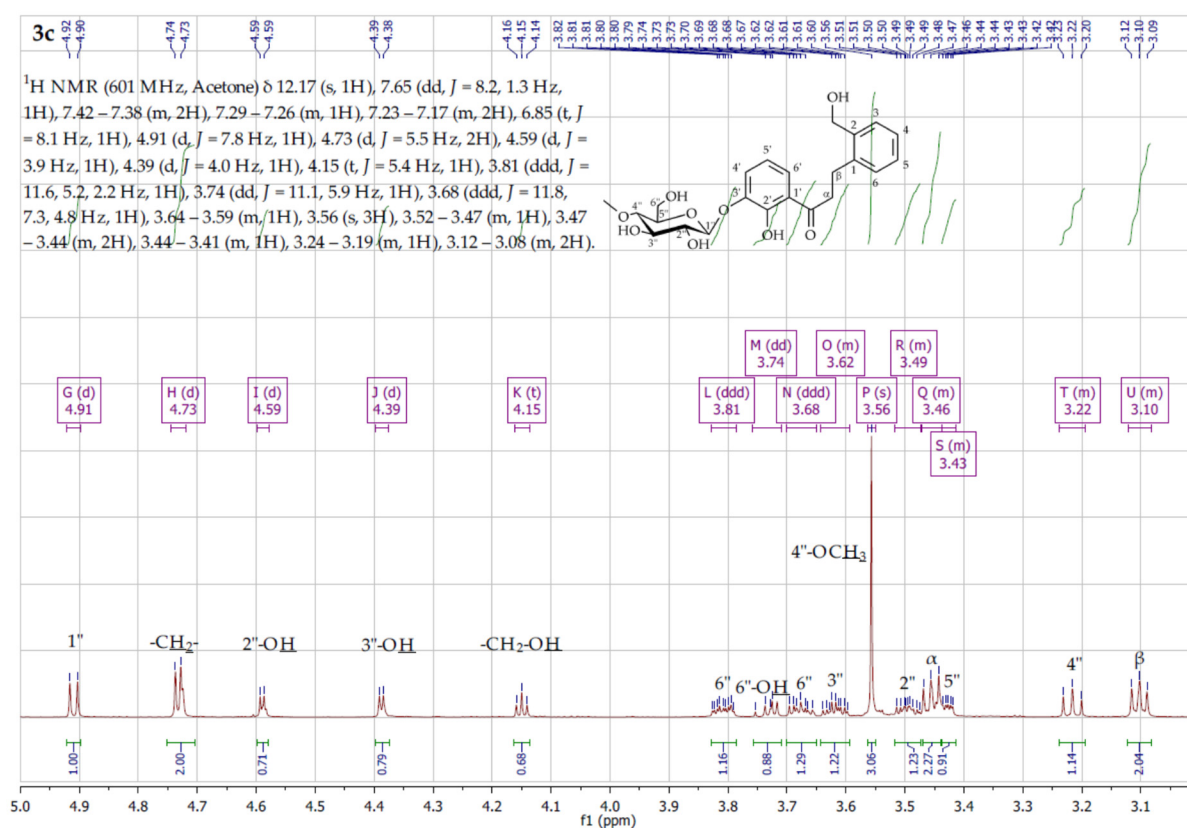


Figure S59. ^1H NMR spectrum expansion (δ , acetone- d_6 , 600 MHz) of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

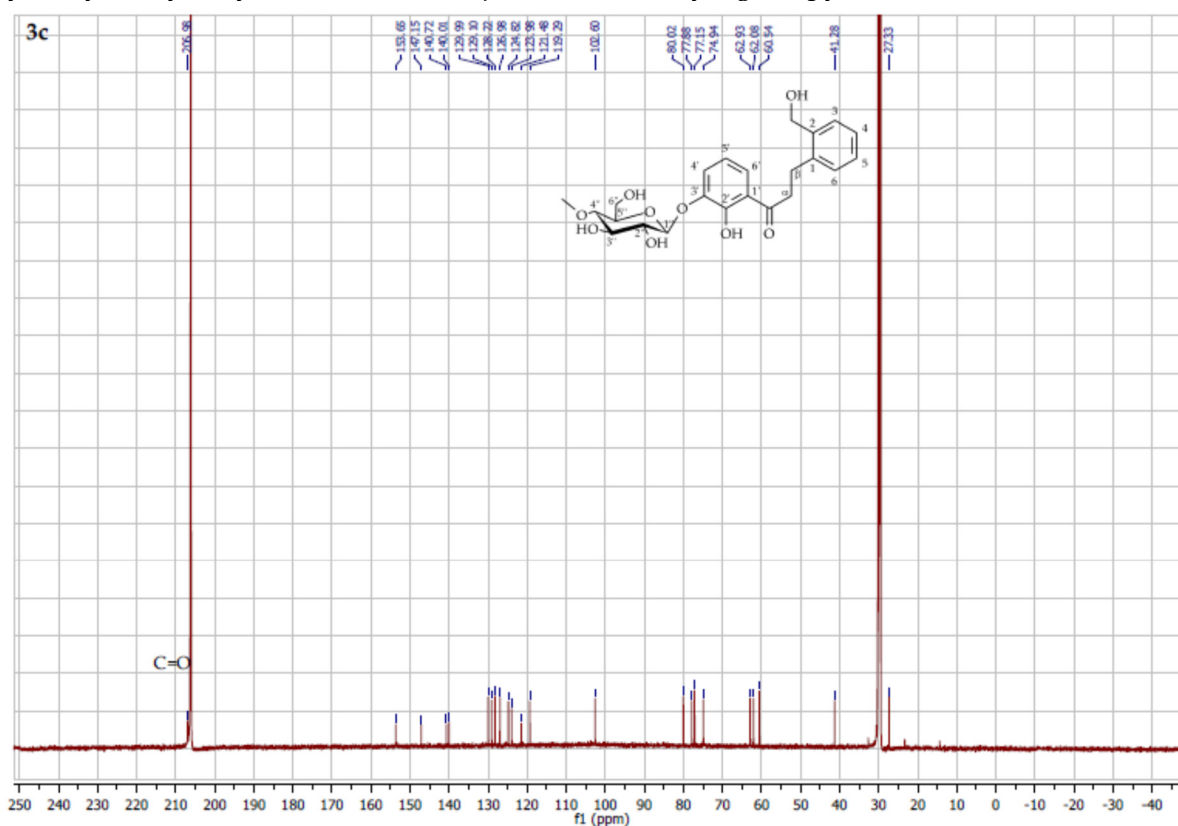


Figure S60. ^{13}C NMR spectrum (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

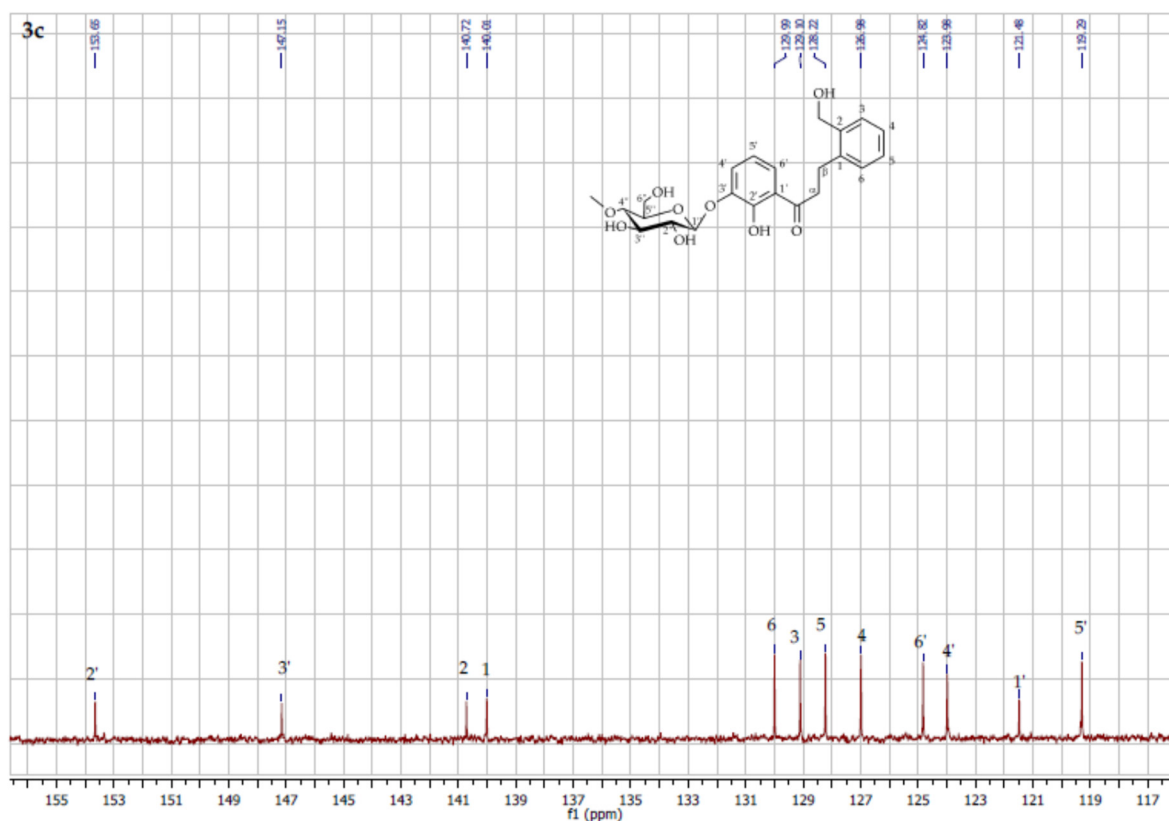


Figure S61. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (3c)

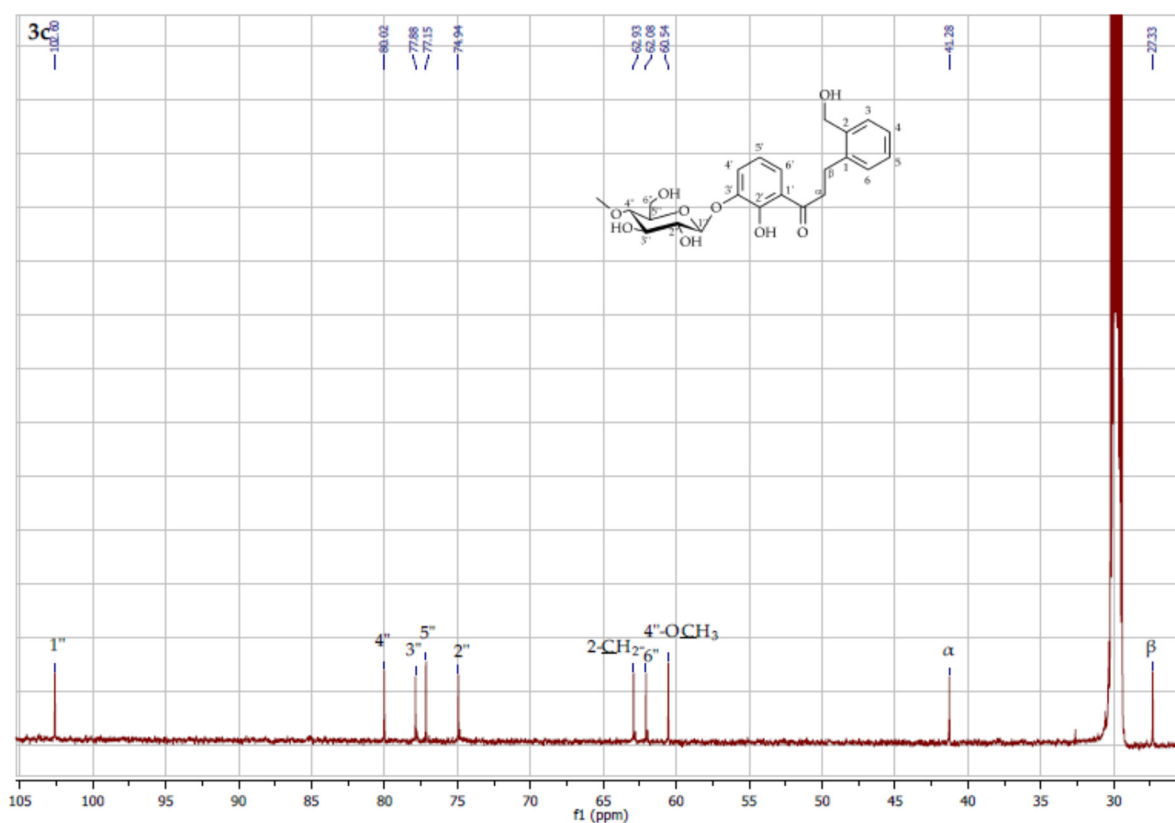


Figure S62. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (3c)

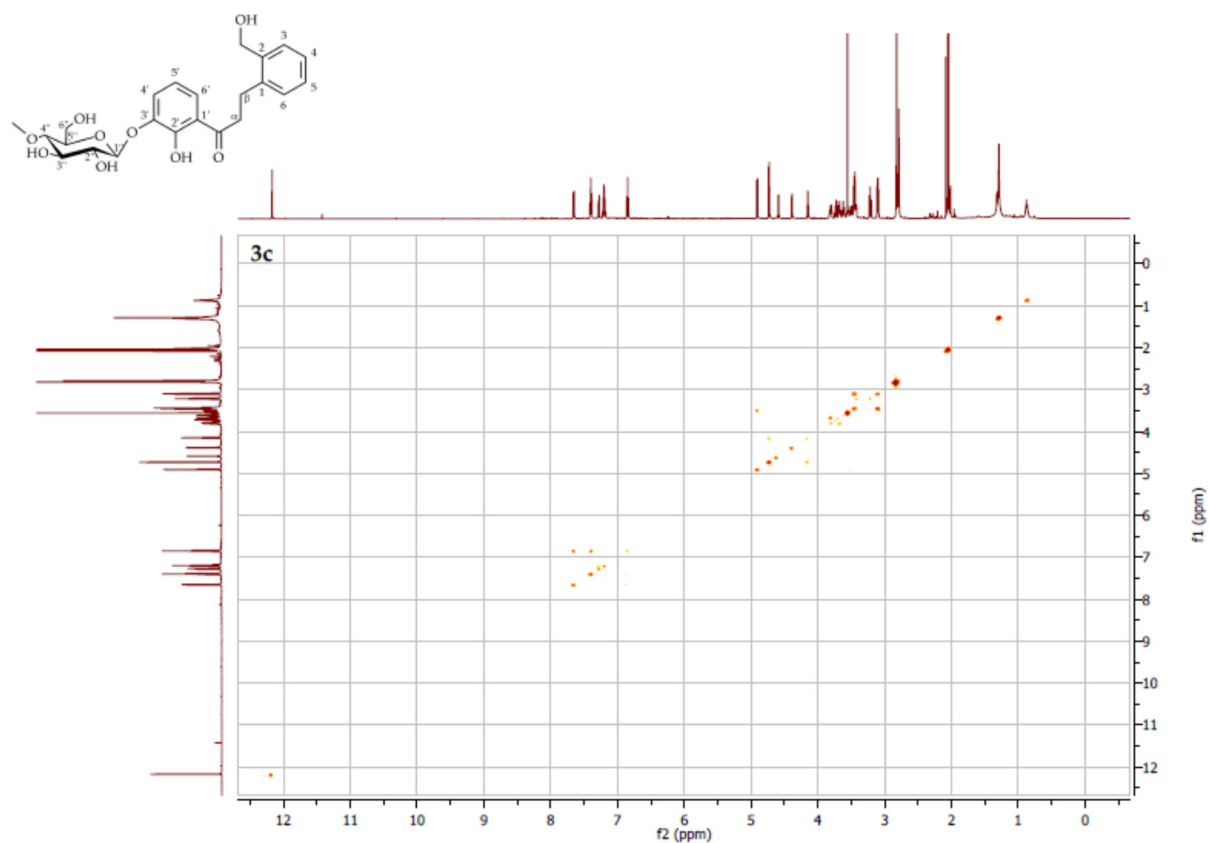


Figure S63. COSY contour map – $^1\text{H} \times ^1\text{H}$ of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

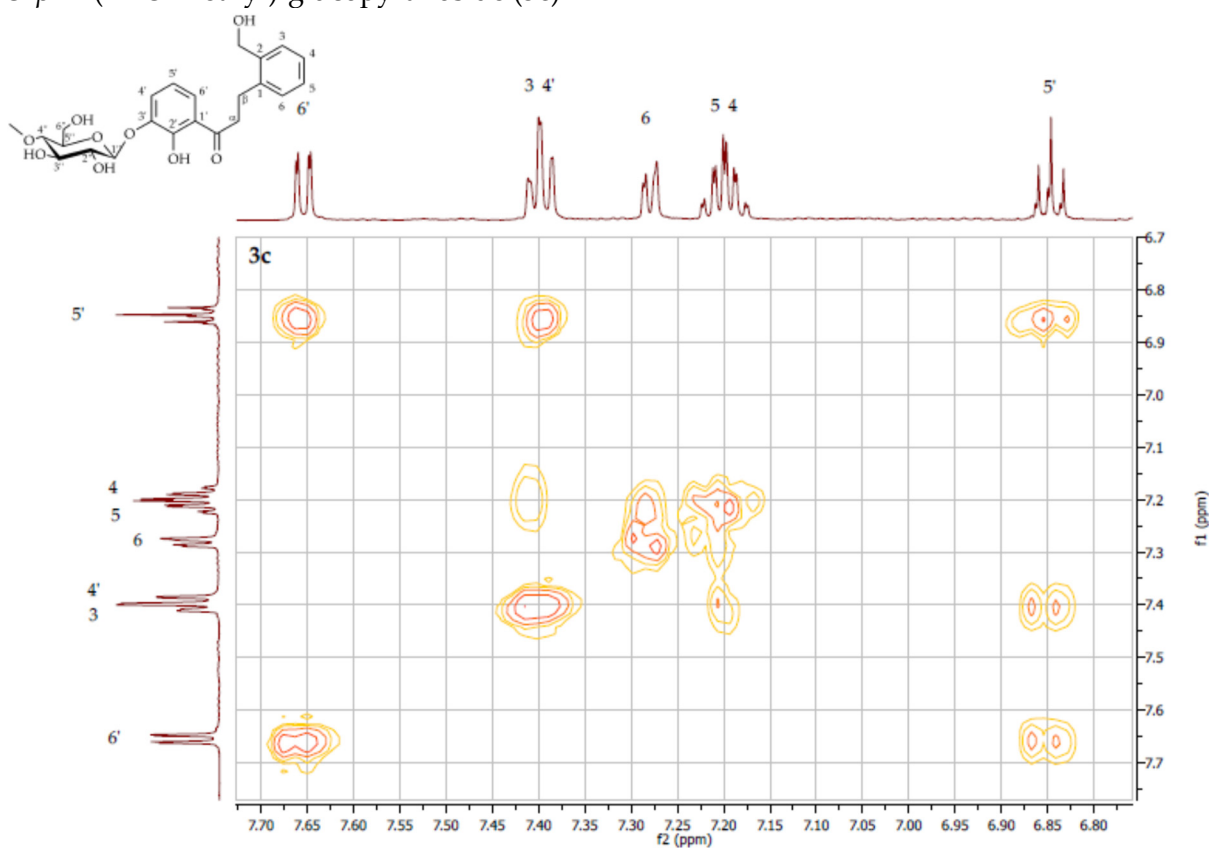


Figure S64. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

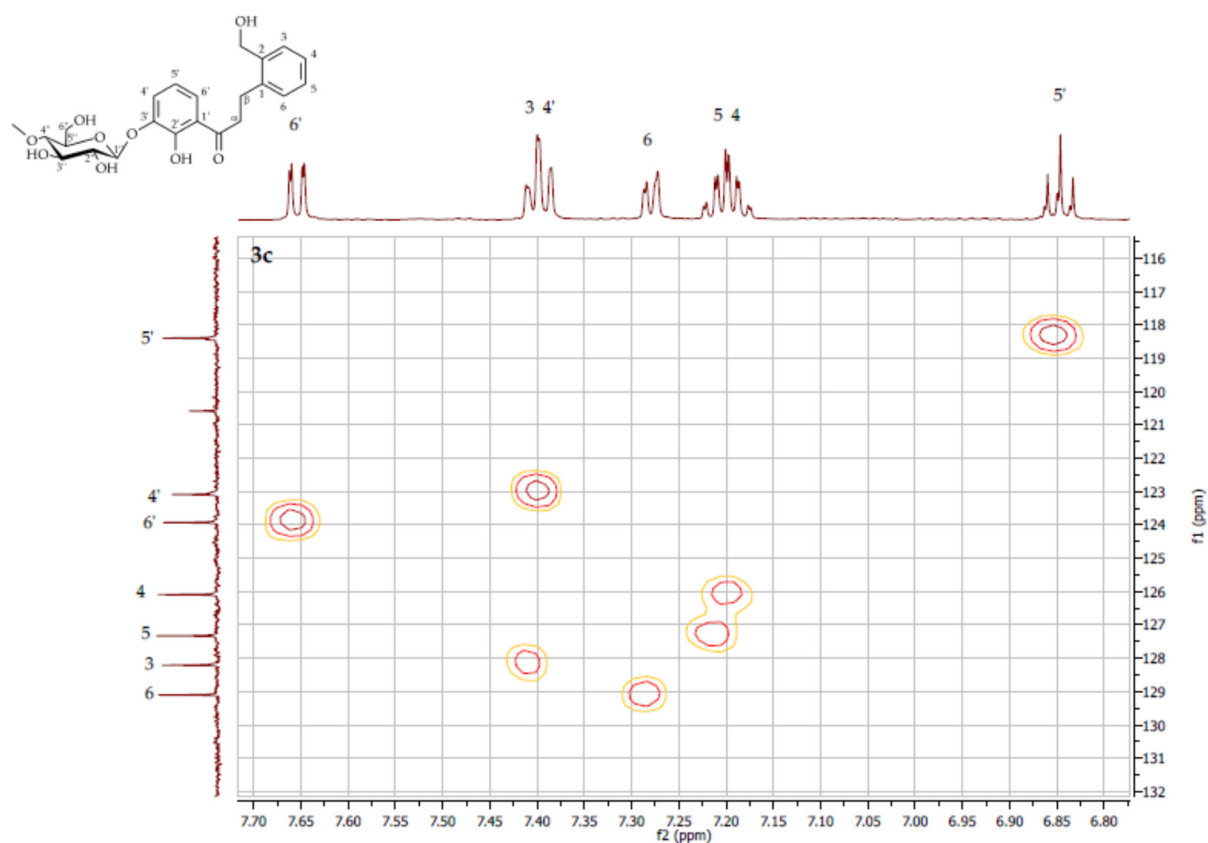


Figure S67. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

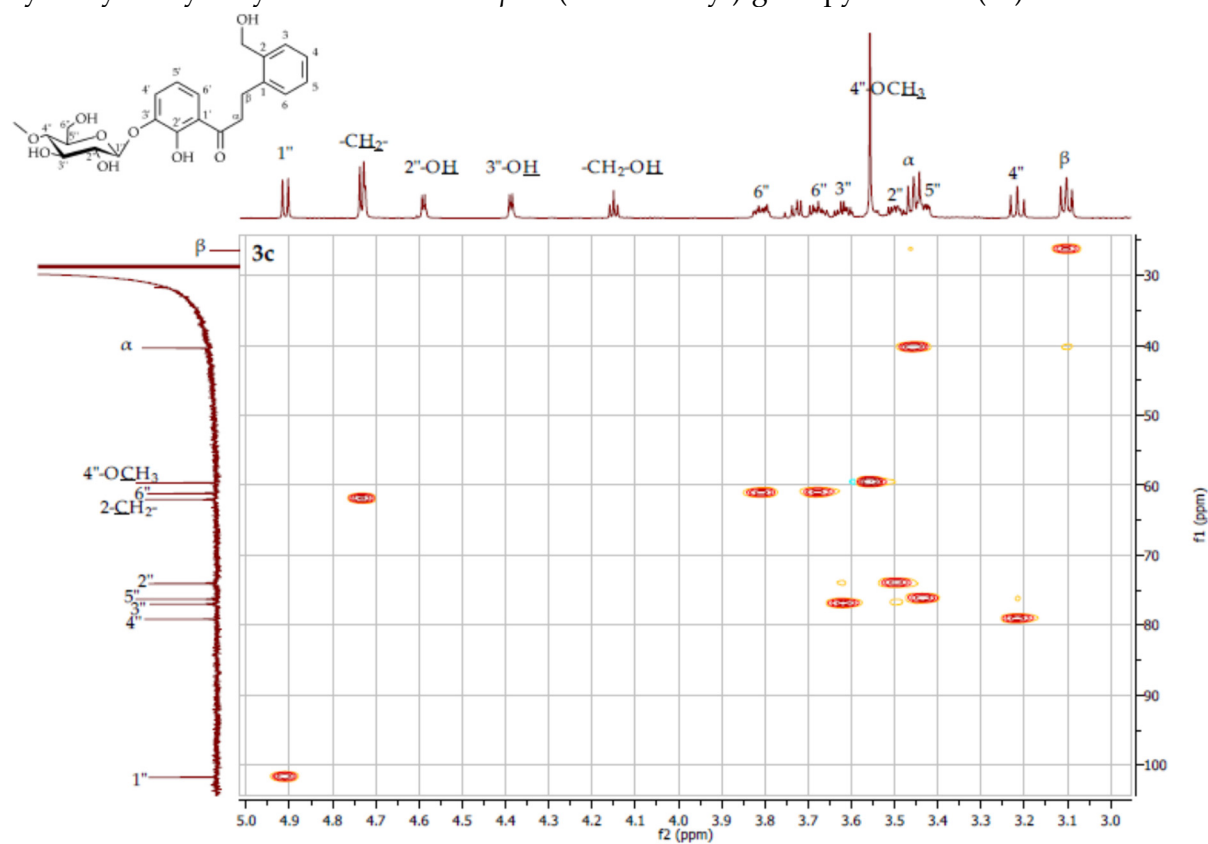


Figure S68. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

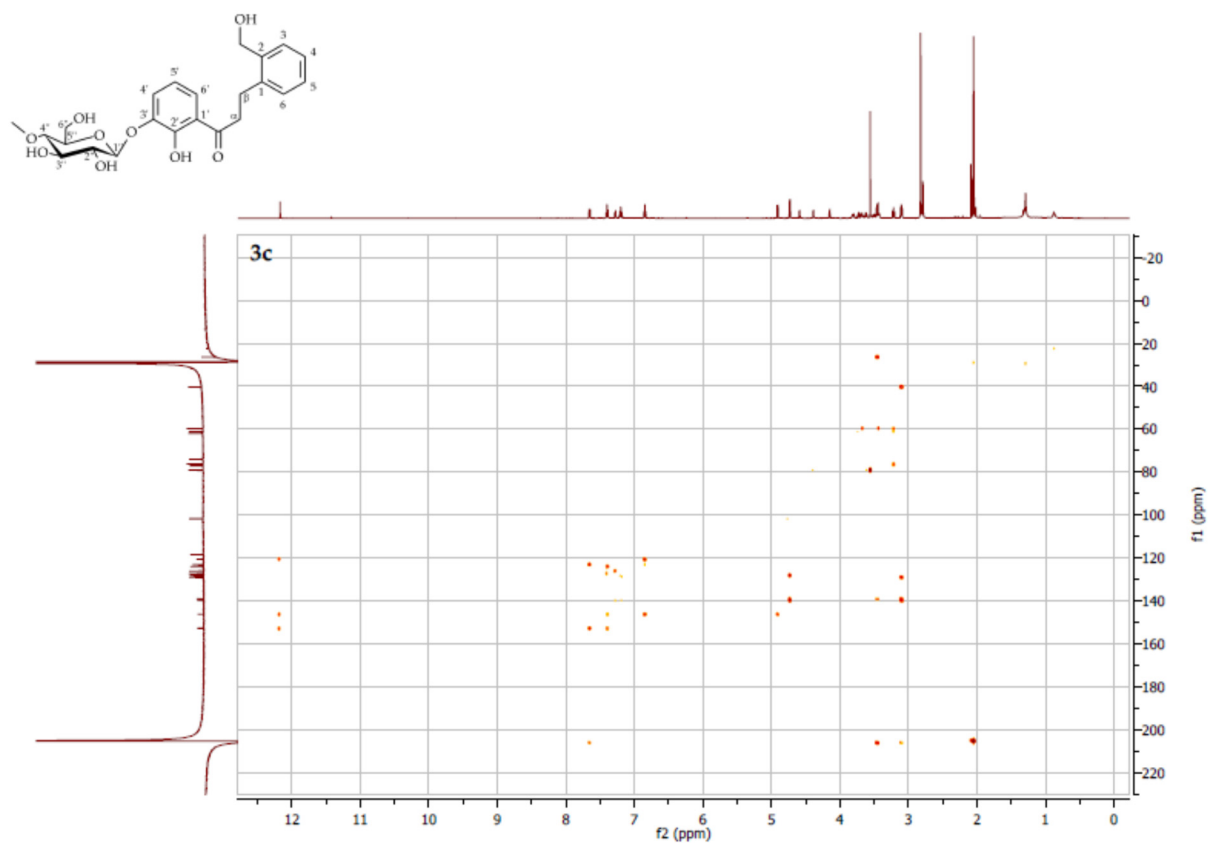


Figure S69. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

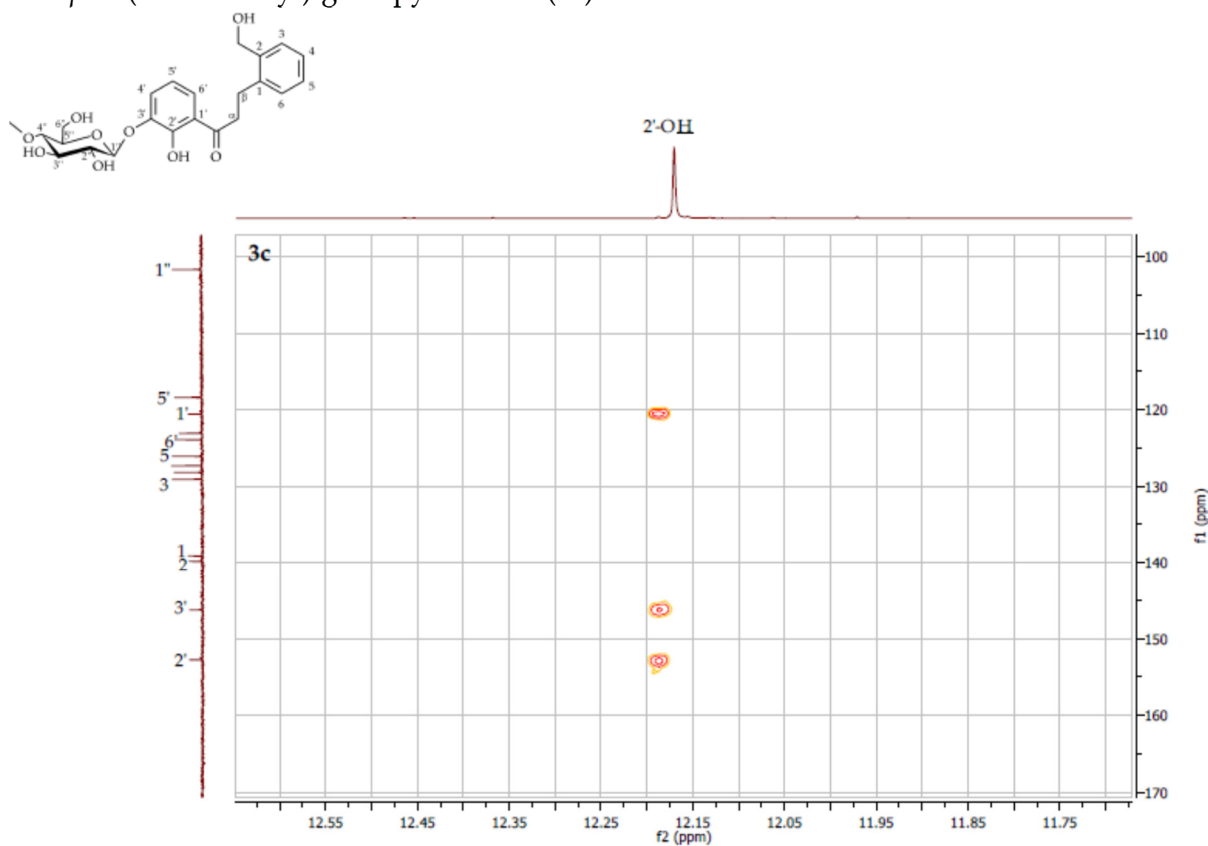


Figure S70. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

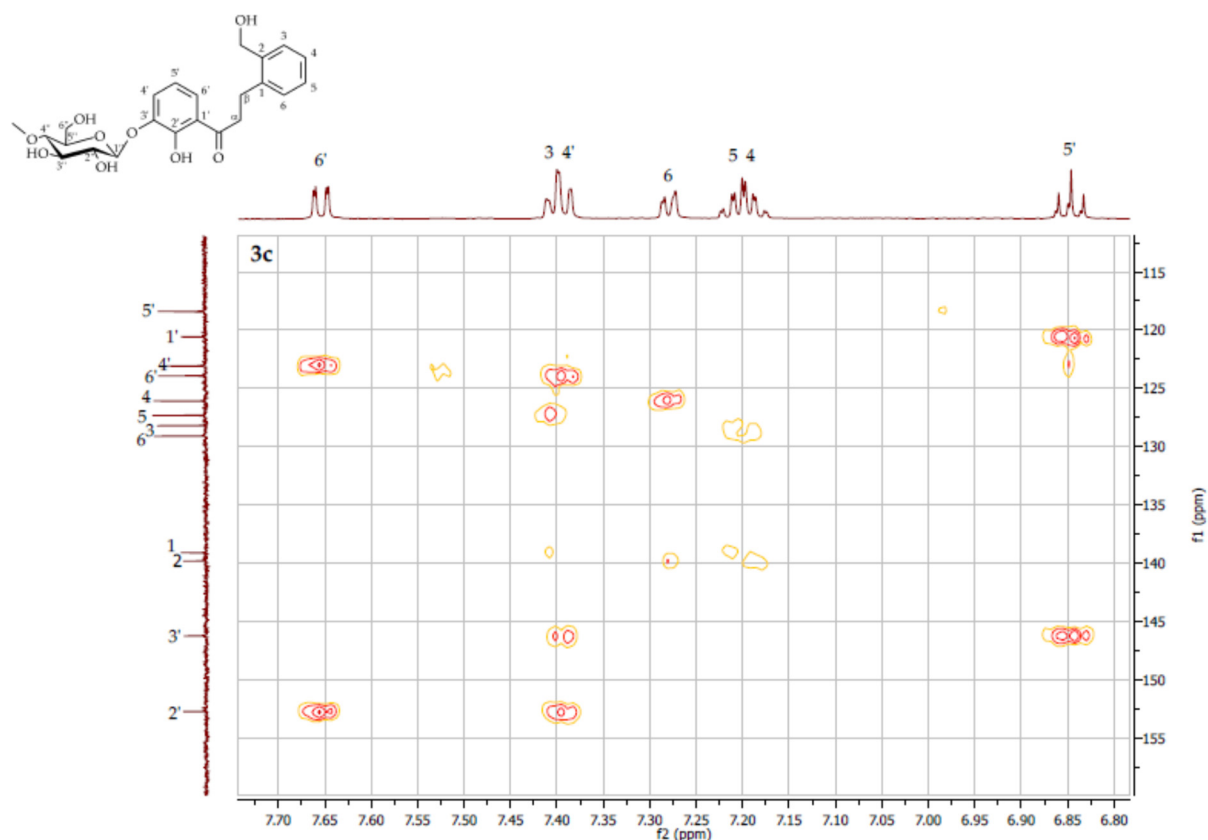


Figure S71. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

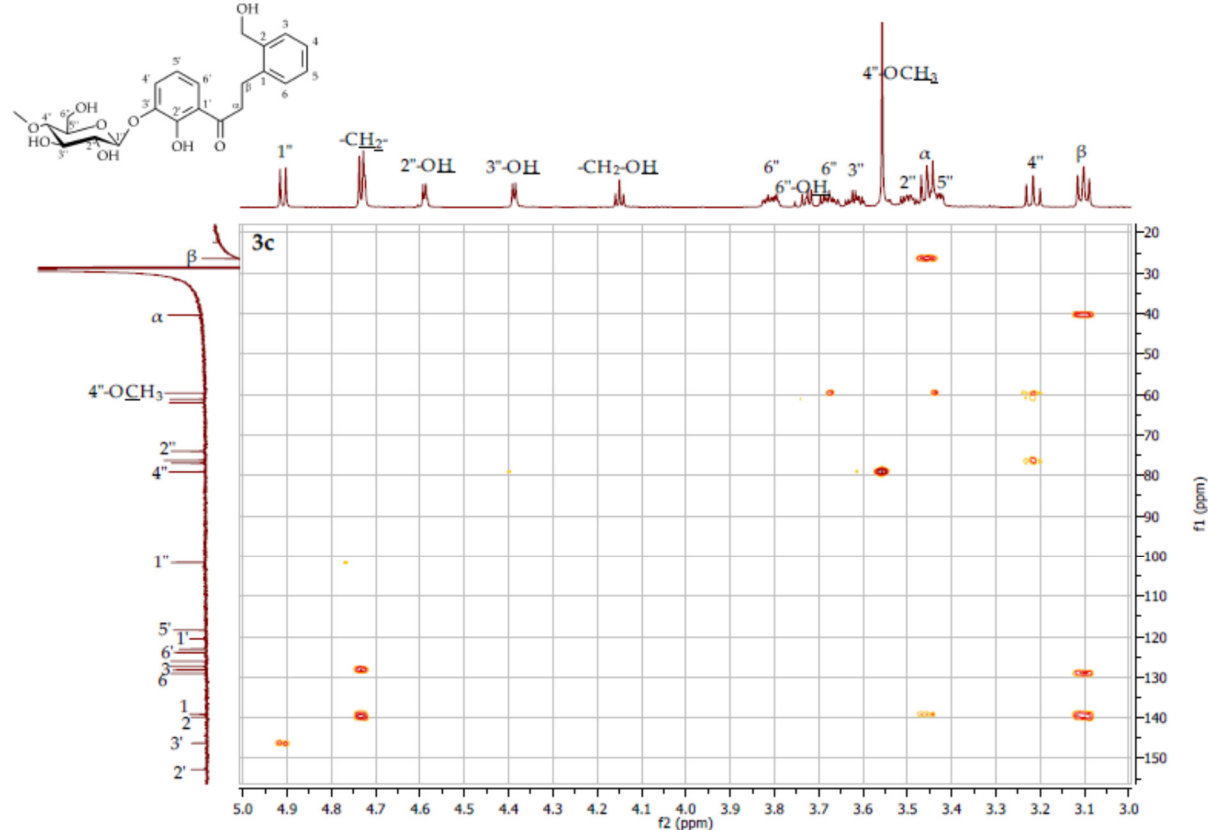


Figure S72. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

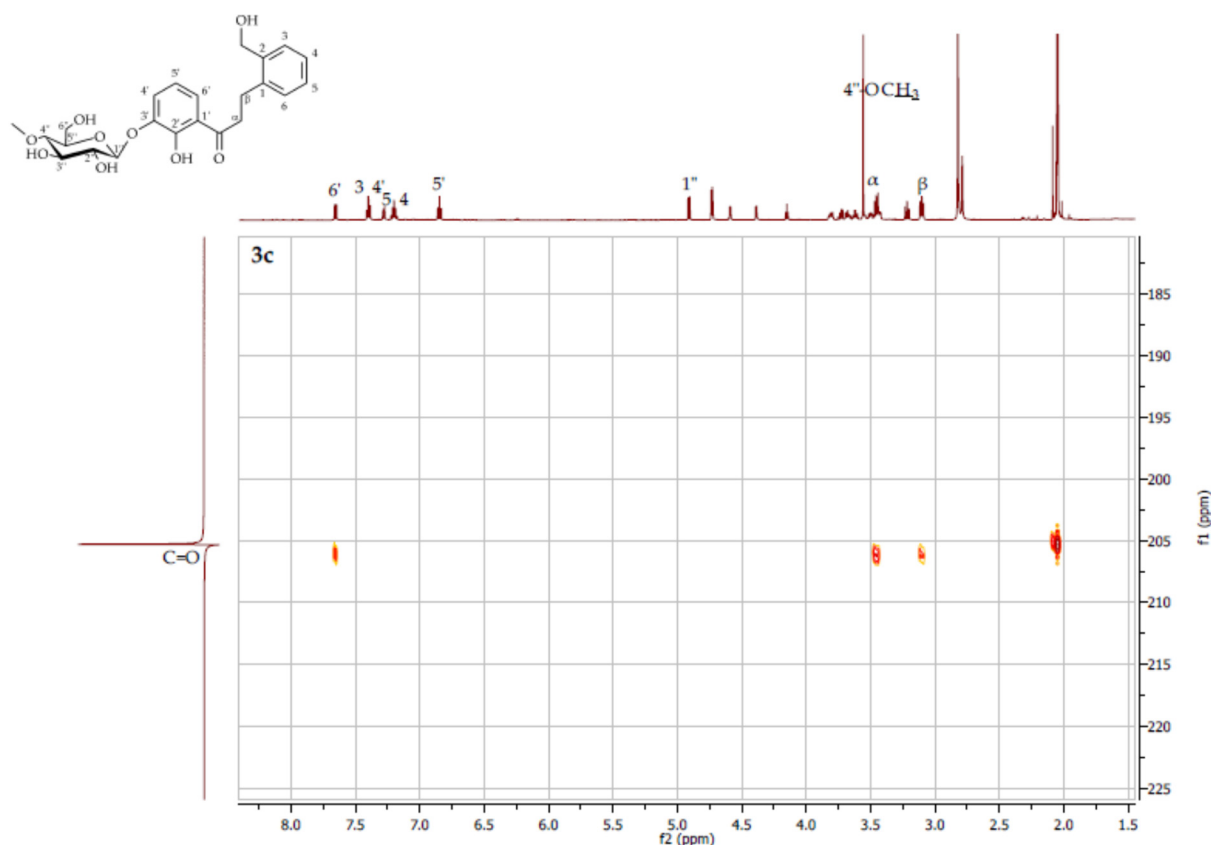


Figure S73. HMBC contour map— $^1\text{H} \times ^{13}\text{C}$ expansion of 2'-hydroxy-2-hydroxymethyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3c**)

Molecular formula: $\text{C}_{23}\text{H}_{28}\text{O}_9$

Formula weight: 448.17

Ionization mode: negative

Precursor: $[\text{M} - \text{H}]^-$ 447.30

447.3000 > 151.1000 CE: 32.0

447.3000 > 327.1000 CE: 20.0

447.3000 > 271.0000 CE: 19.0

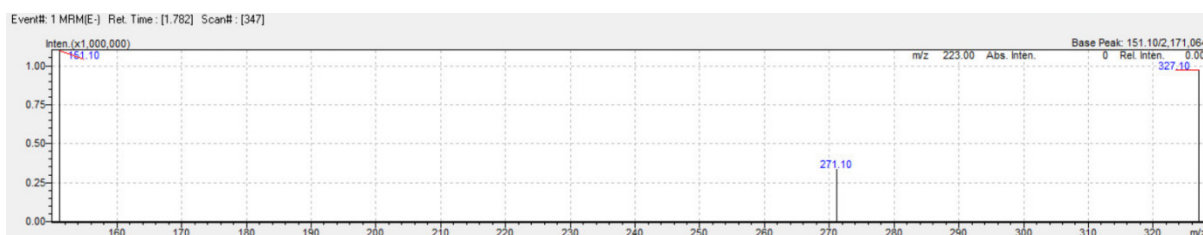
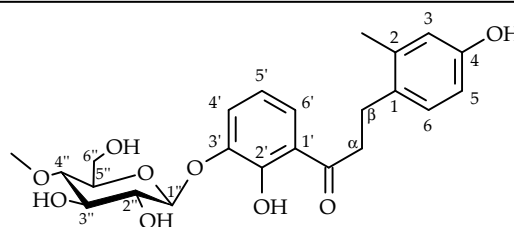


Figure S74. MS analysis of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

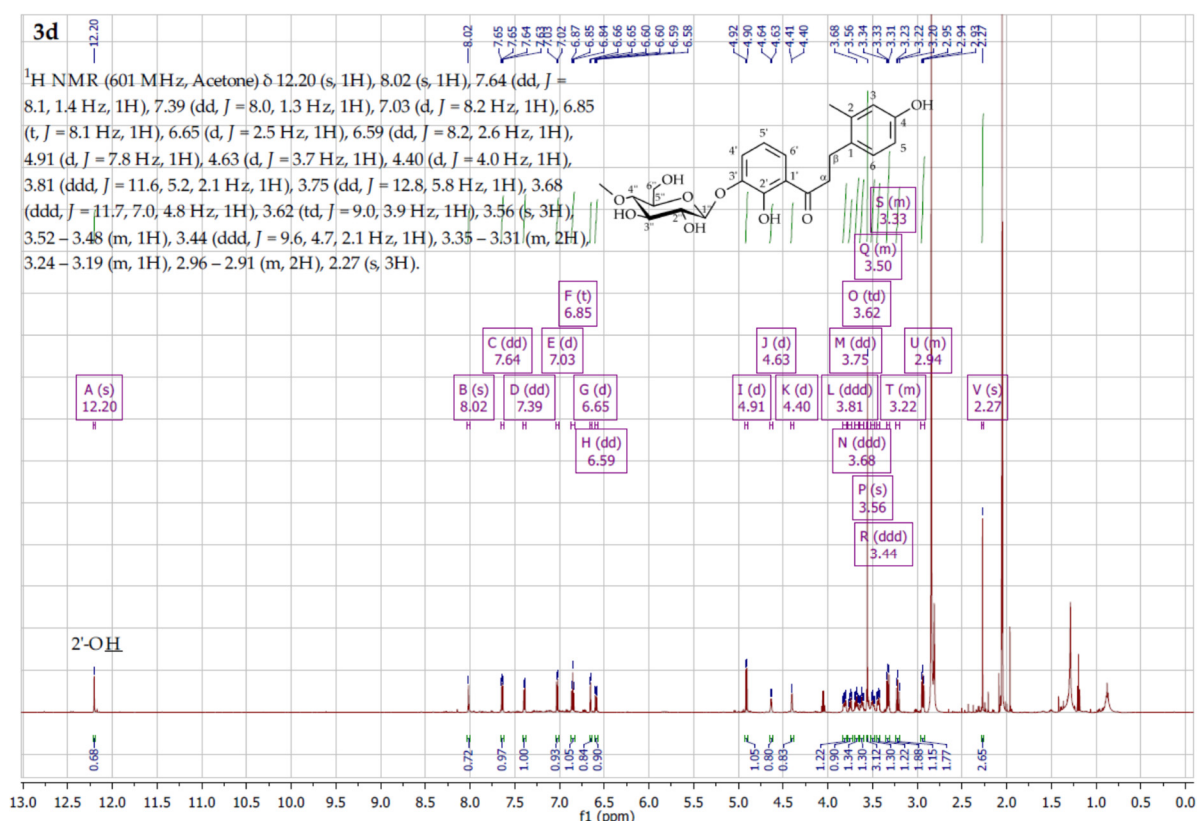


Figure S75. ¹H NMR spectrum (δ, acetone-d₆, 600 MHz) of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3d**)

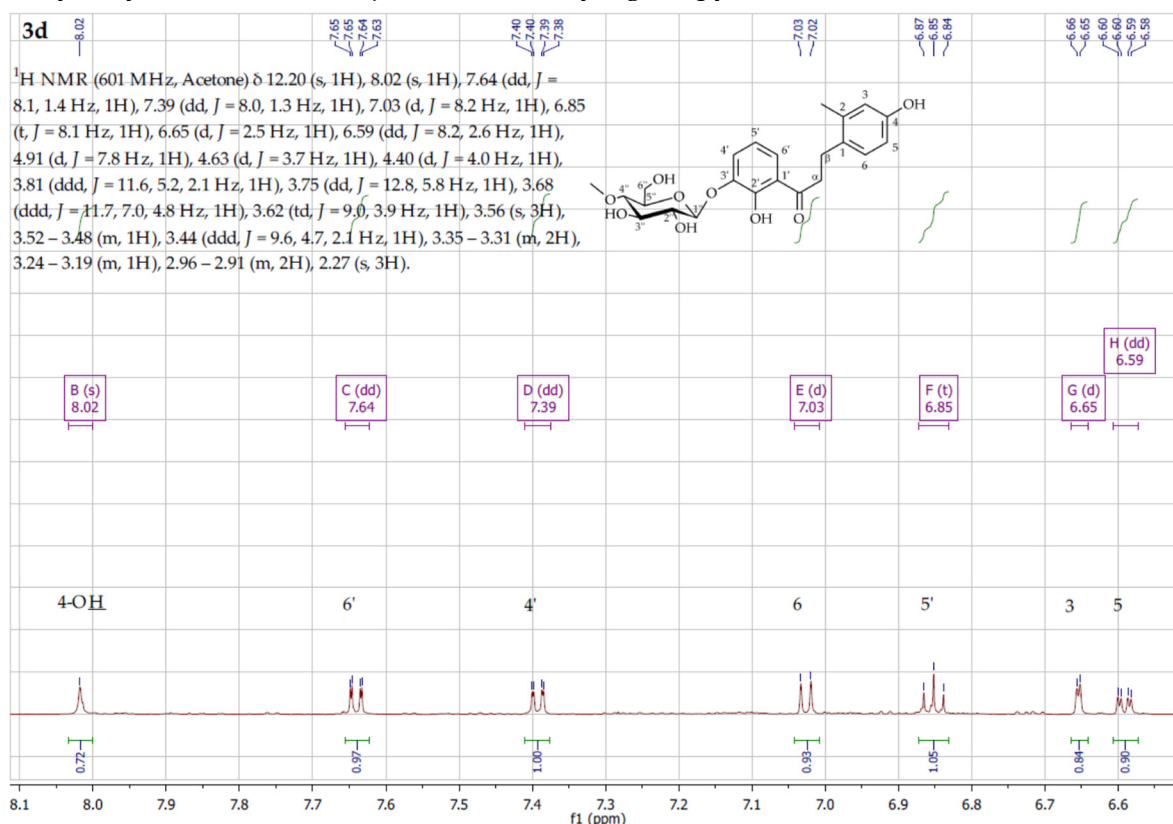


Figure S76. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3d**)

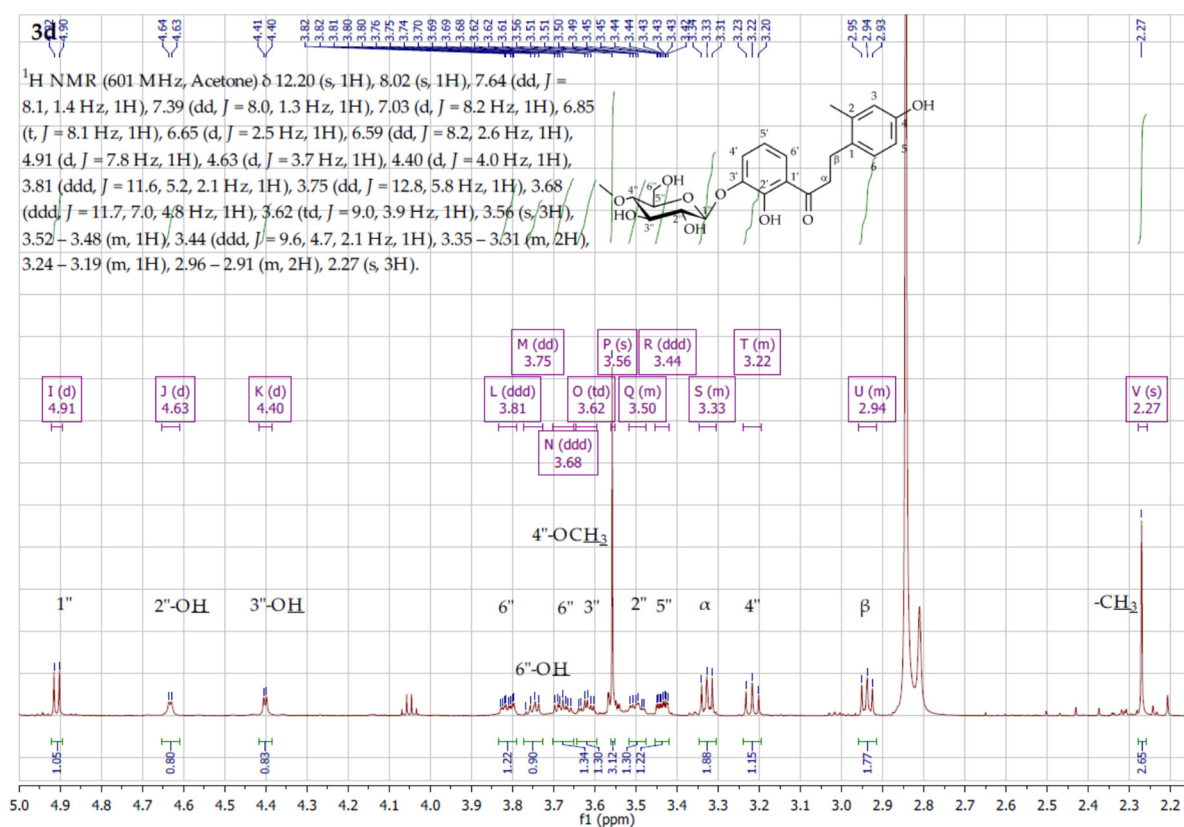


Figure S77. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3d**)

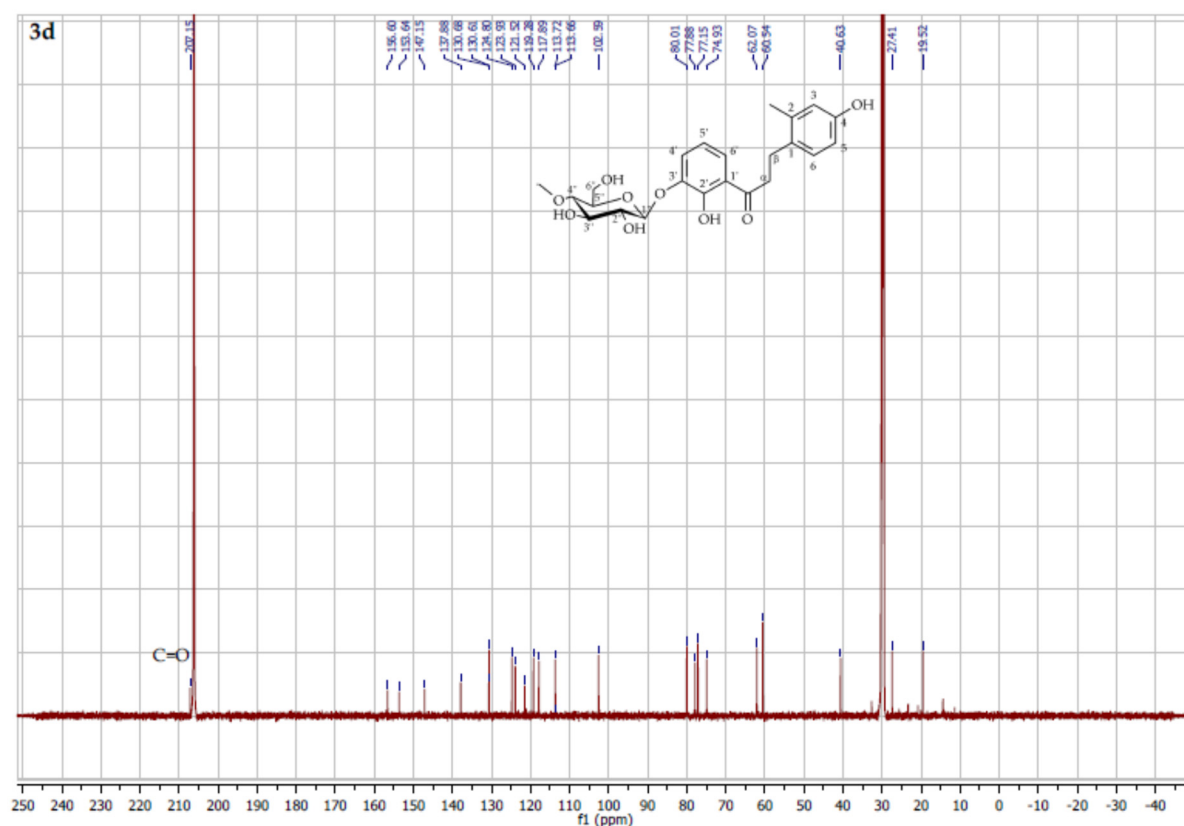


Figure S78. ¹³C NMR spectrum (δ, acetone-d₆, 151 MHz) of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3d**)

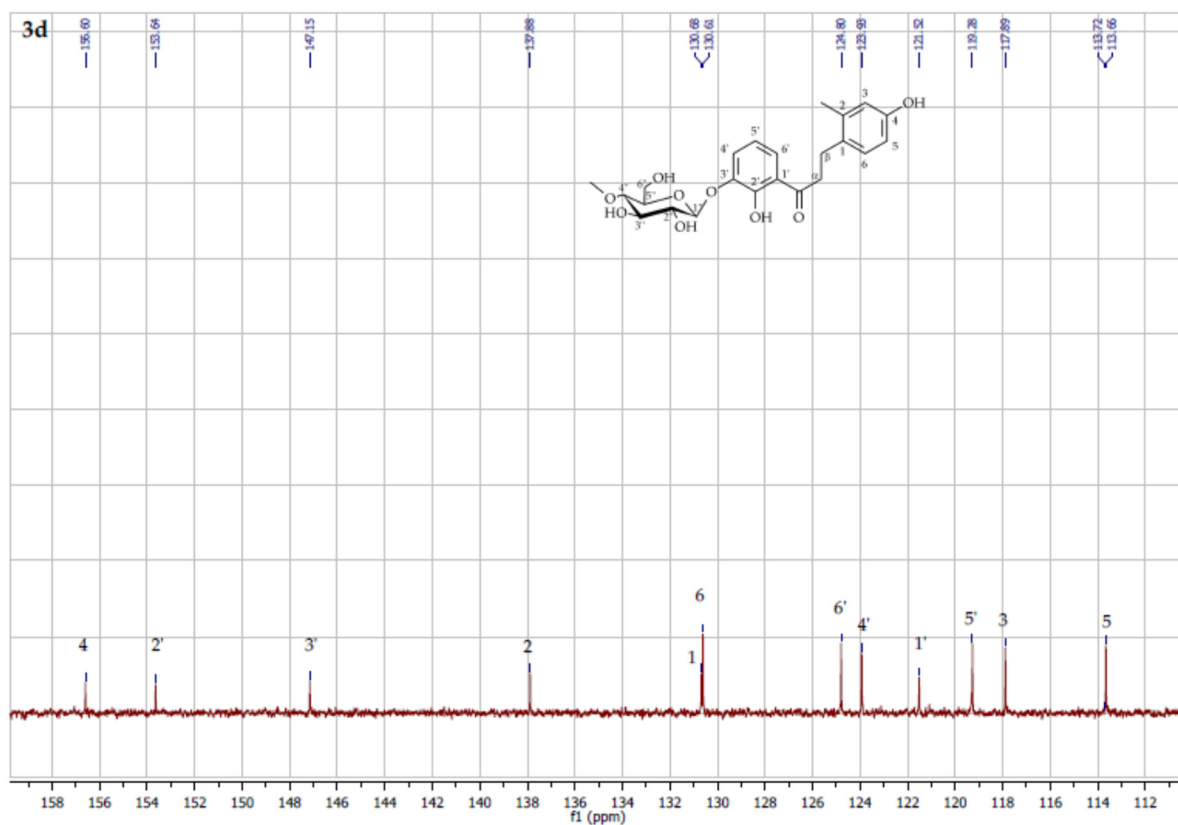


Figure S79. ¹³C NMR spectrum expansion (δ, acetone-d₆, 151 MHz) of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3d**)

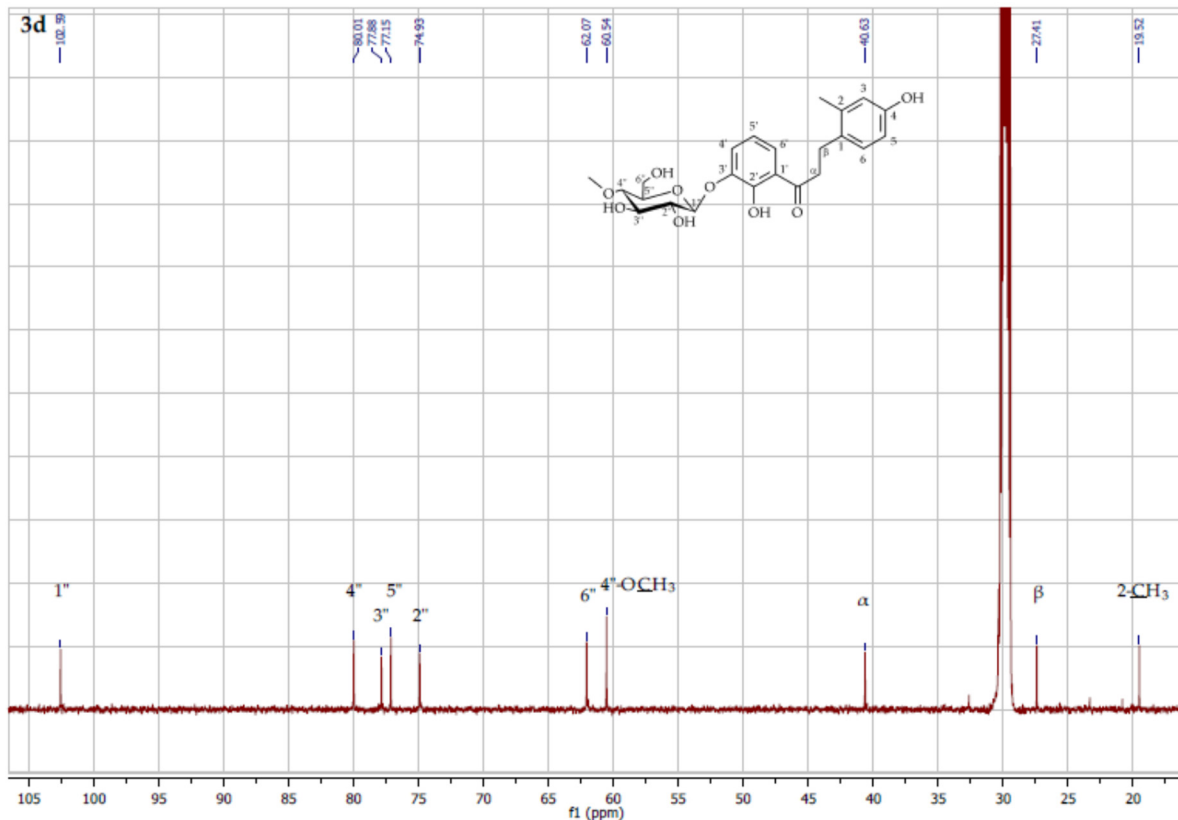


Figure S80. ¹³C NMR spectrum expansion (δ, acetone-d₆, 151 MHz) of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O-β-D-(4''-O-methyl)-glucopyranoside (**3d**)

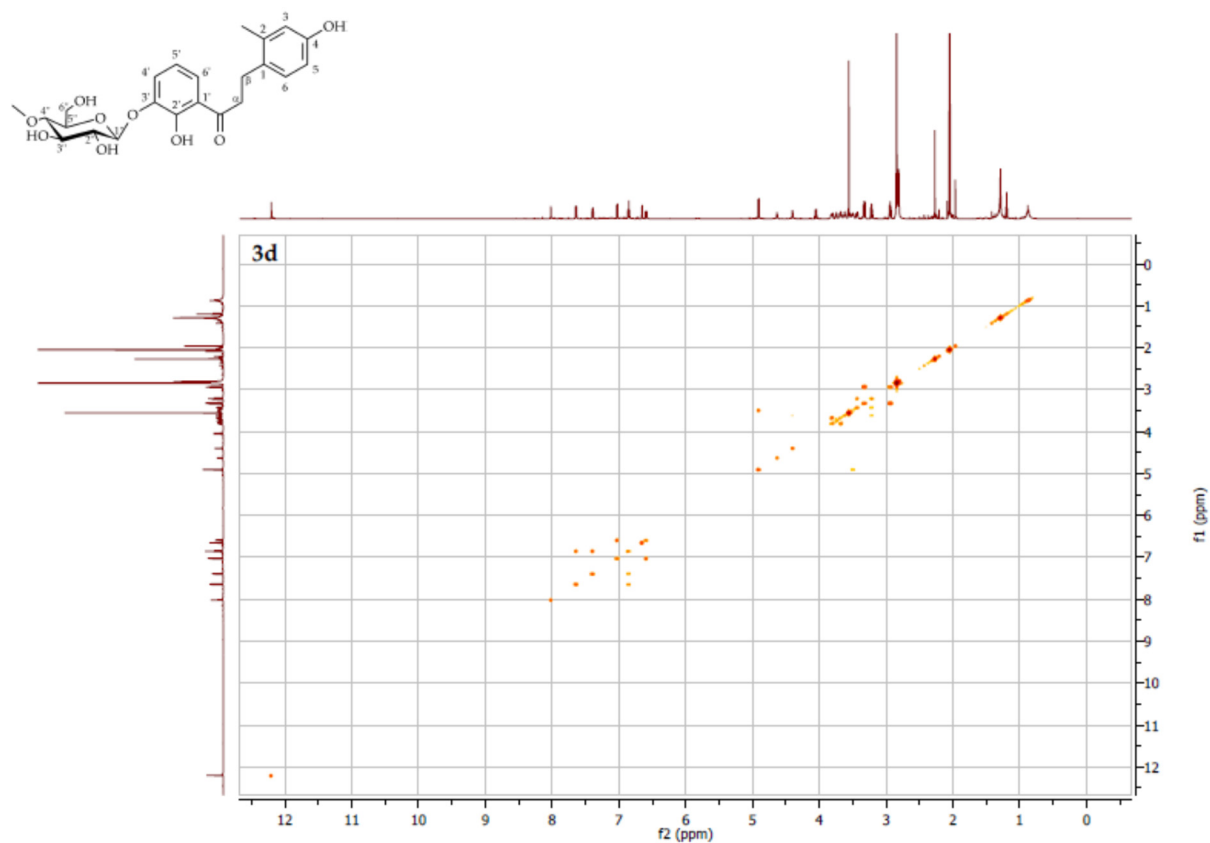


Figure S81. COSY contour map – $^1\text{H} \times ^1\text{H}$ of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

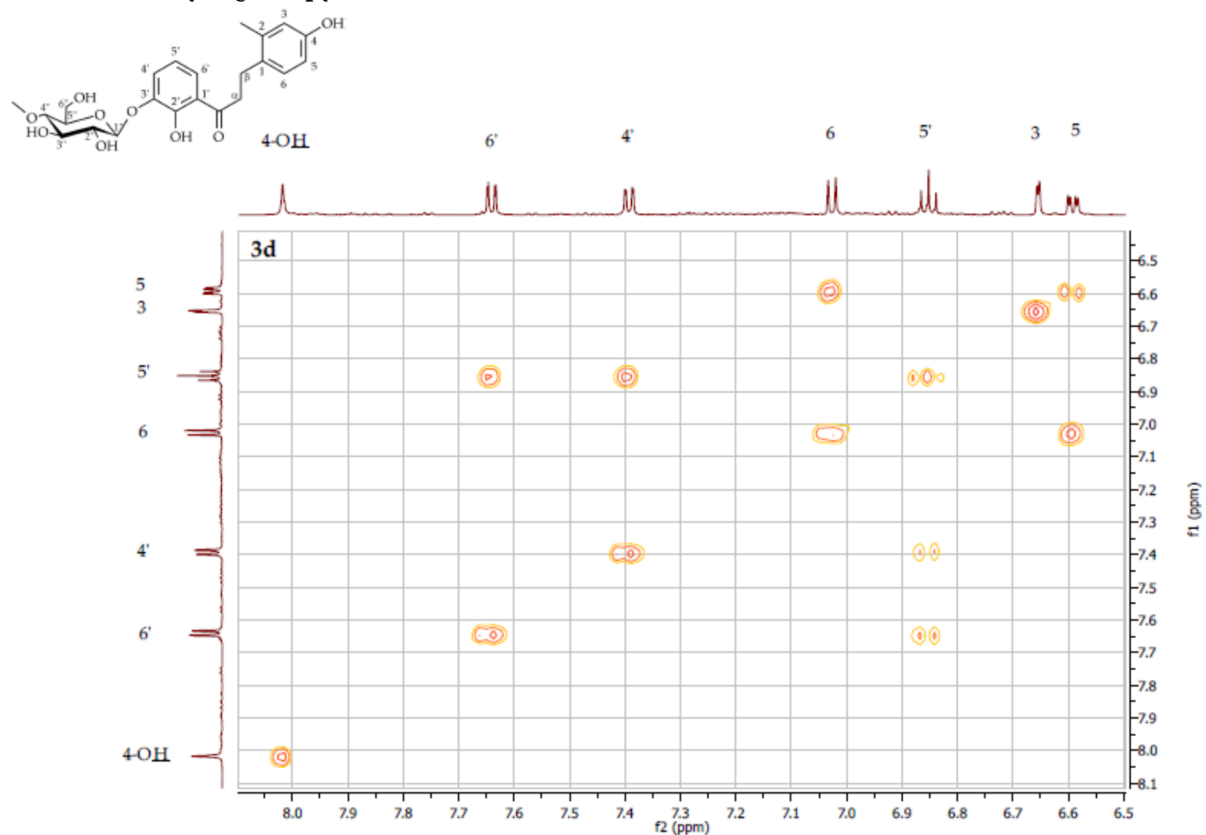


Figure S82. COSY contour map – $^1\text{H} \times ^1\text{H}$ Expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

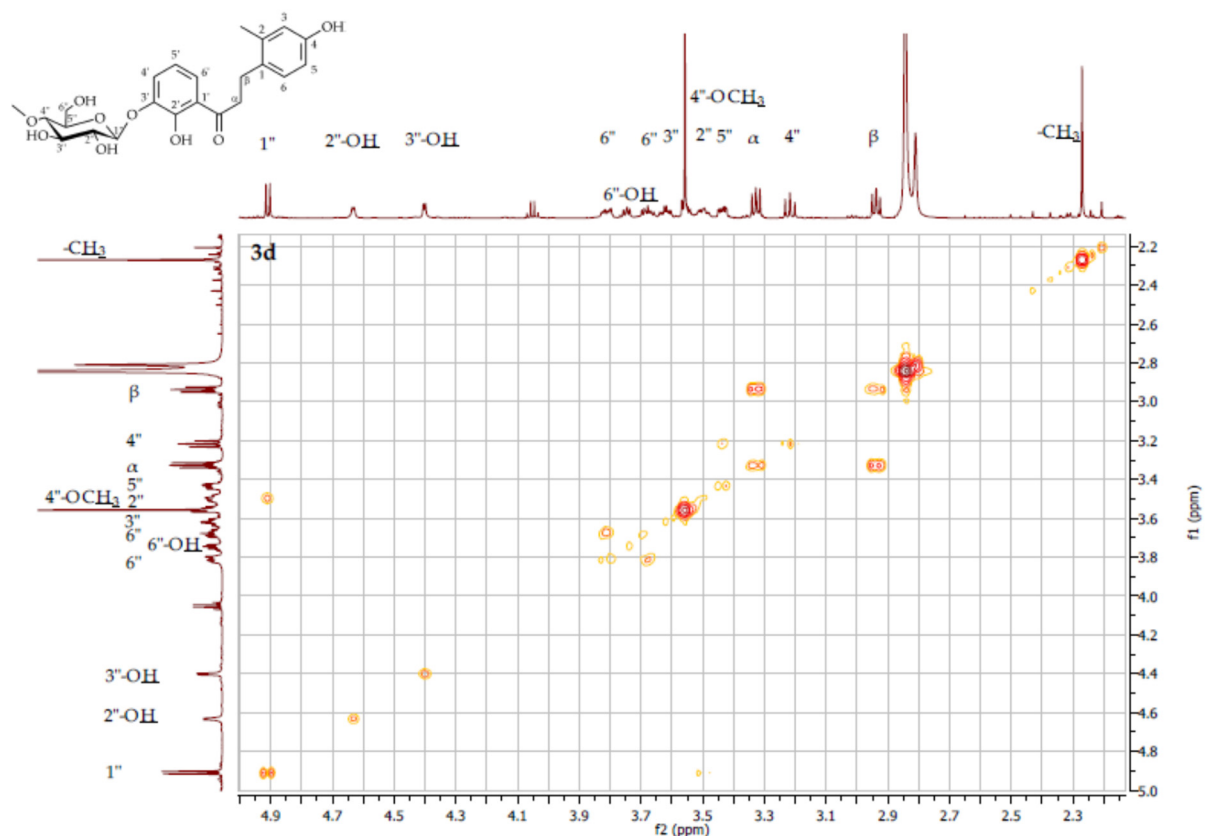


Figure S83. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

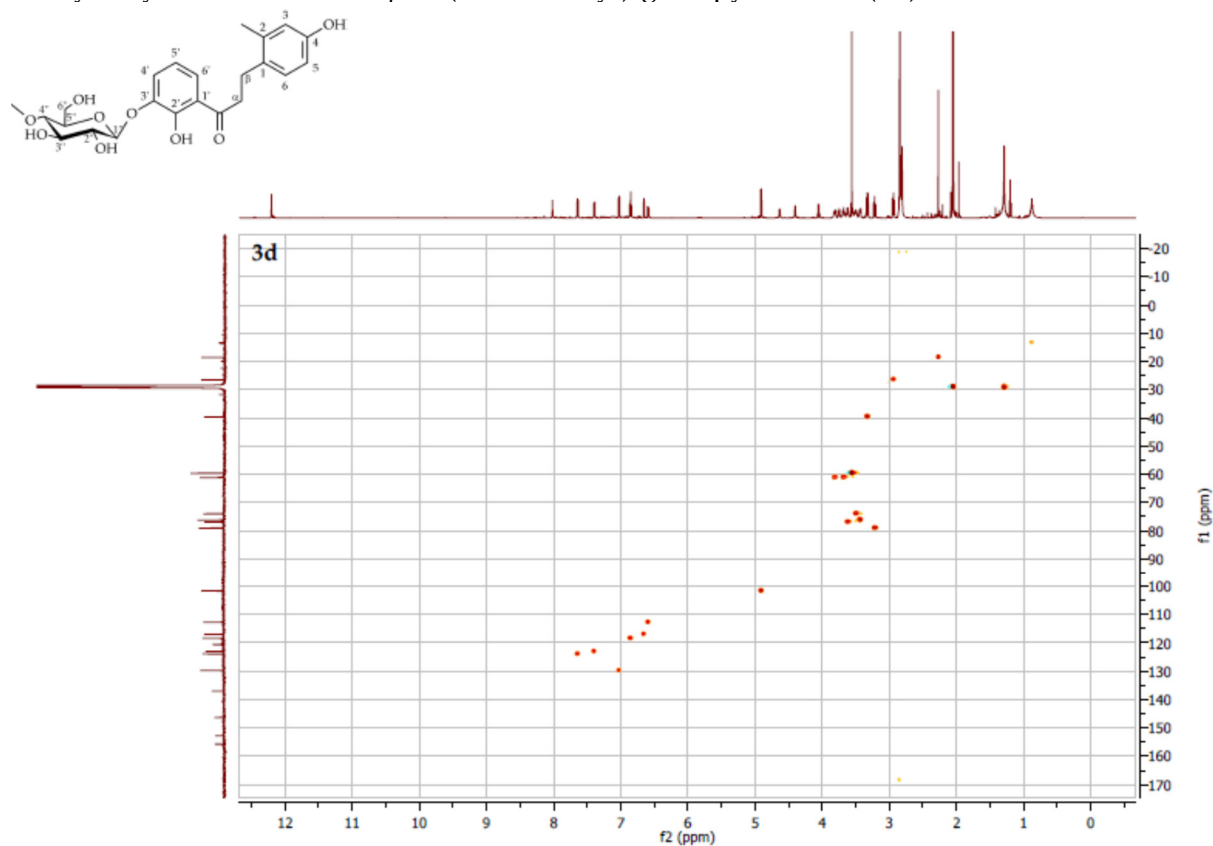


Figure S84. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

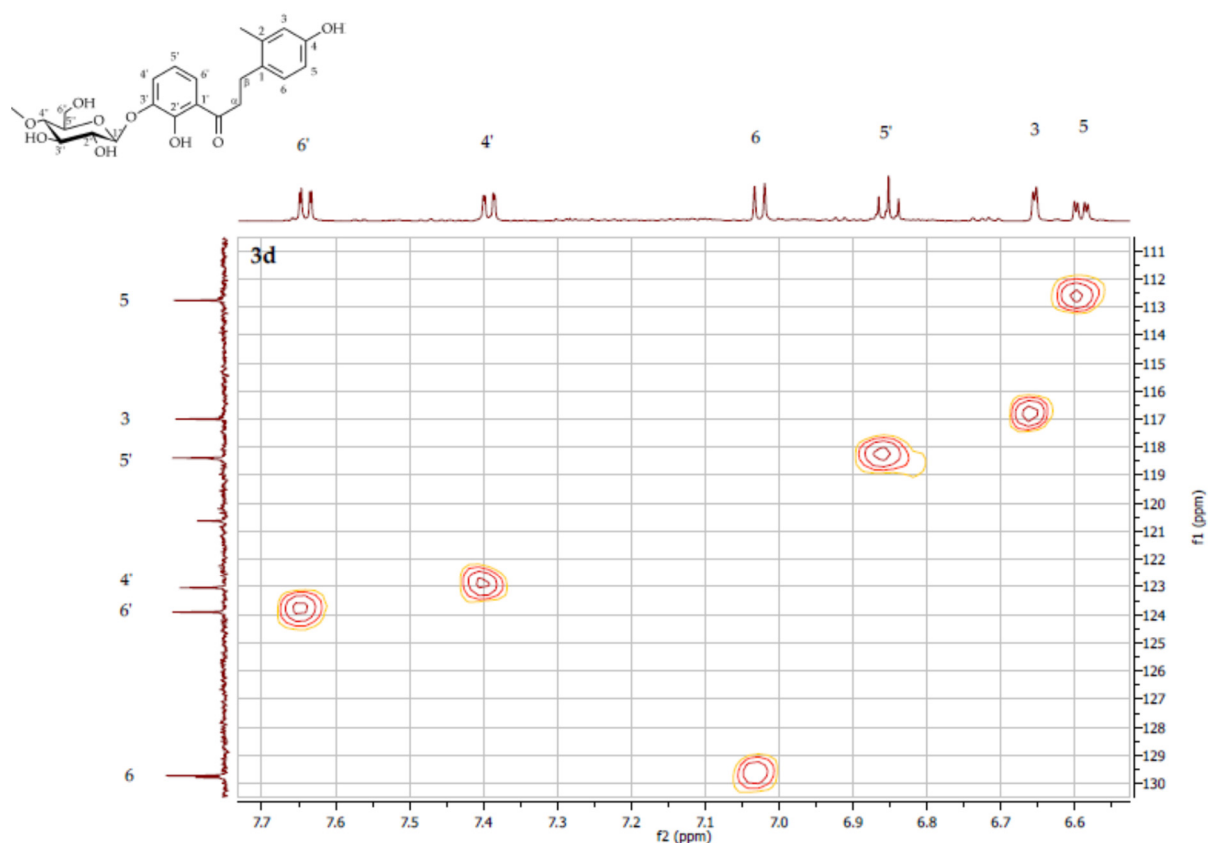


Figure S85. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

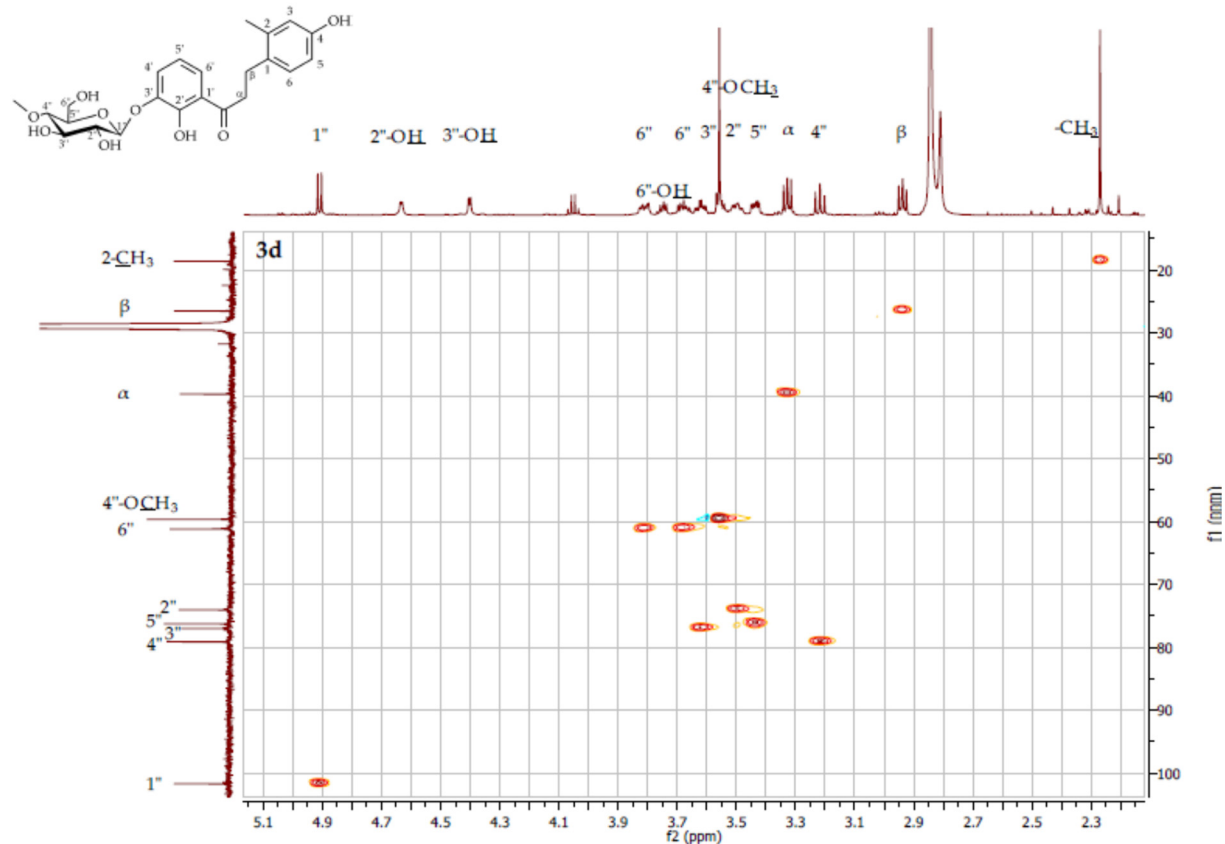


Figure S86. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

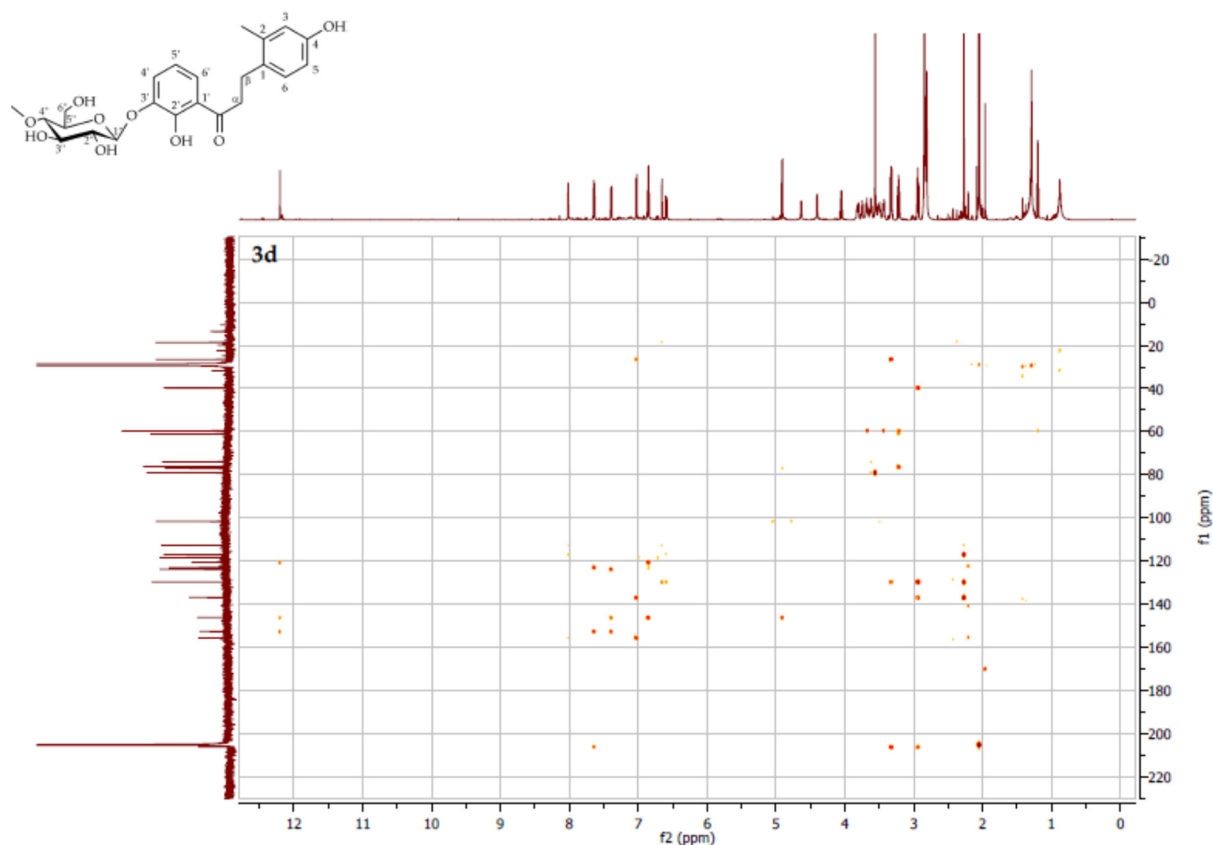


Figure S87. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

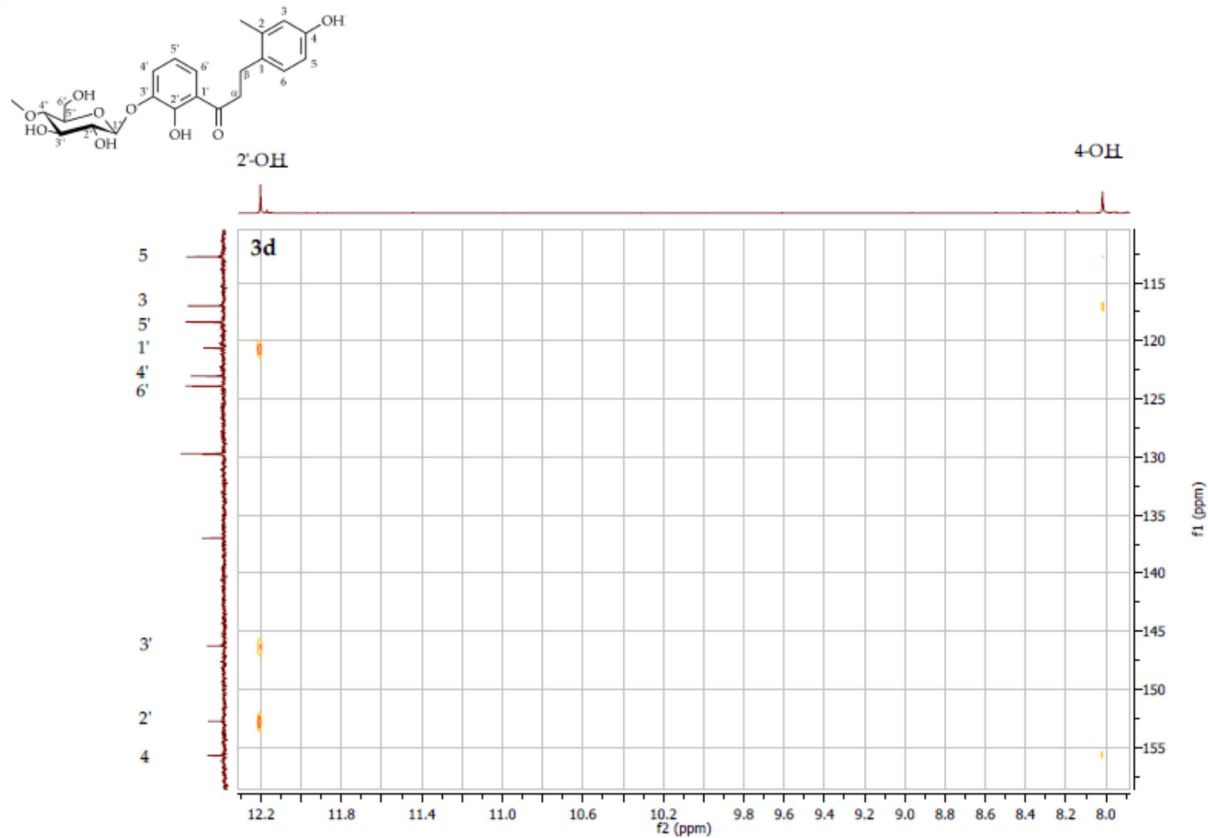


Figure S88. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

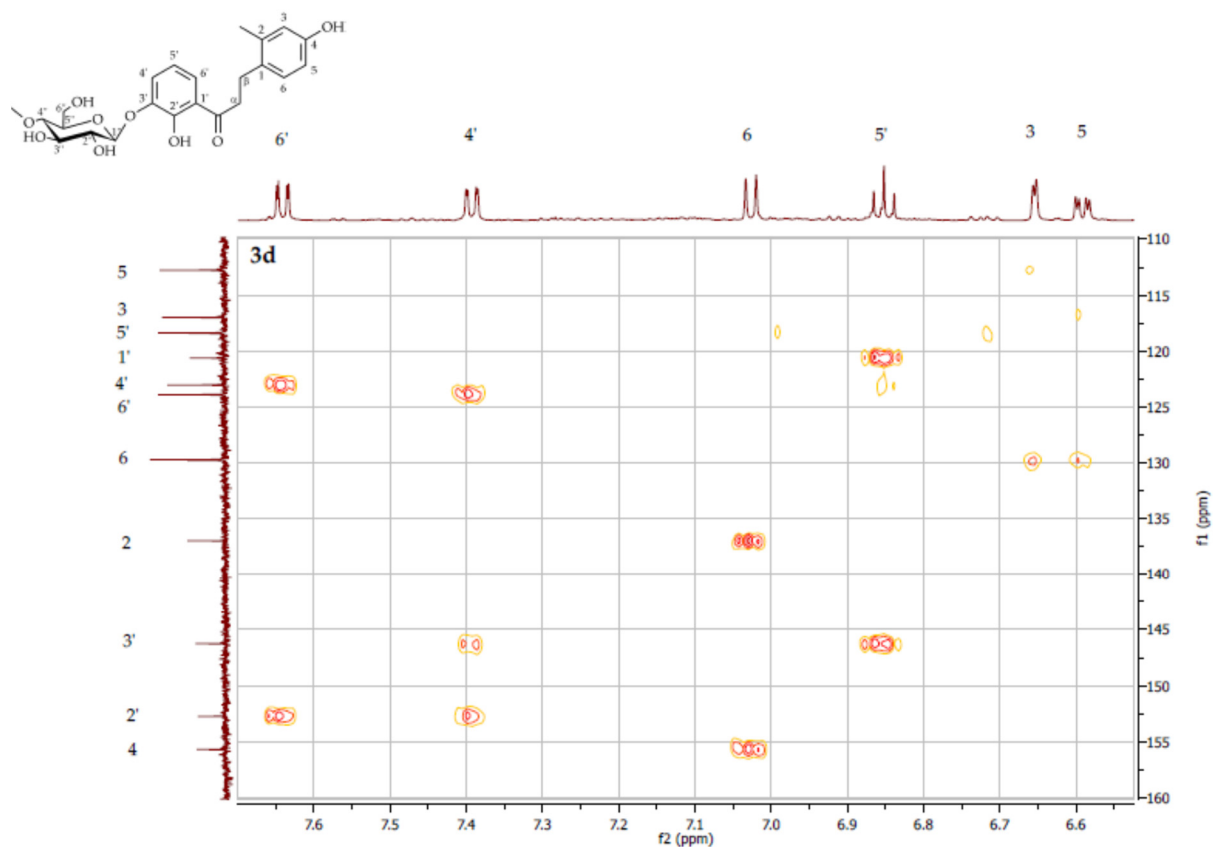


Figure S89. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

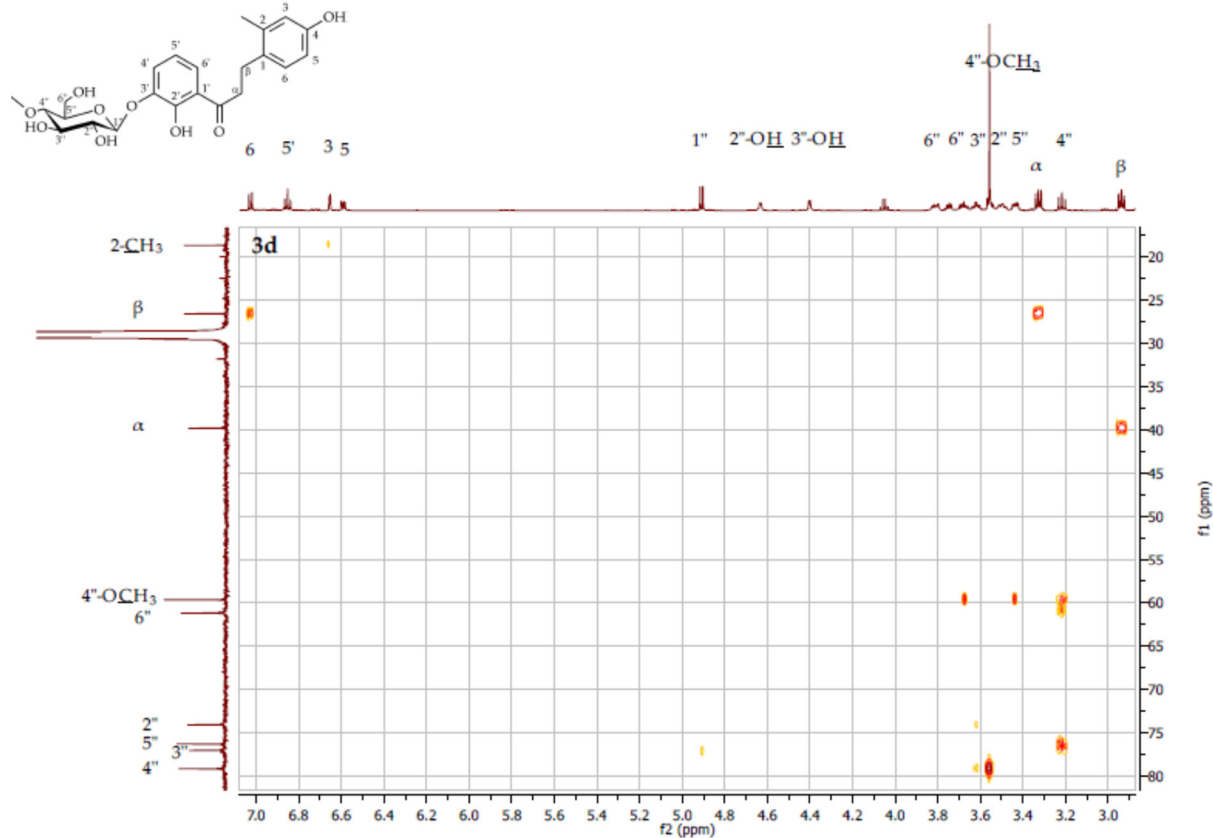


Figure S90. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

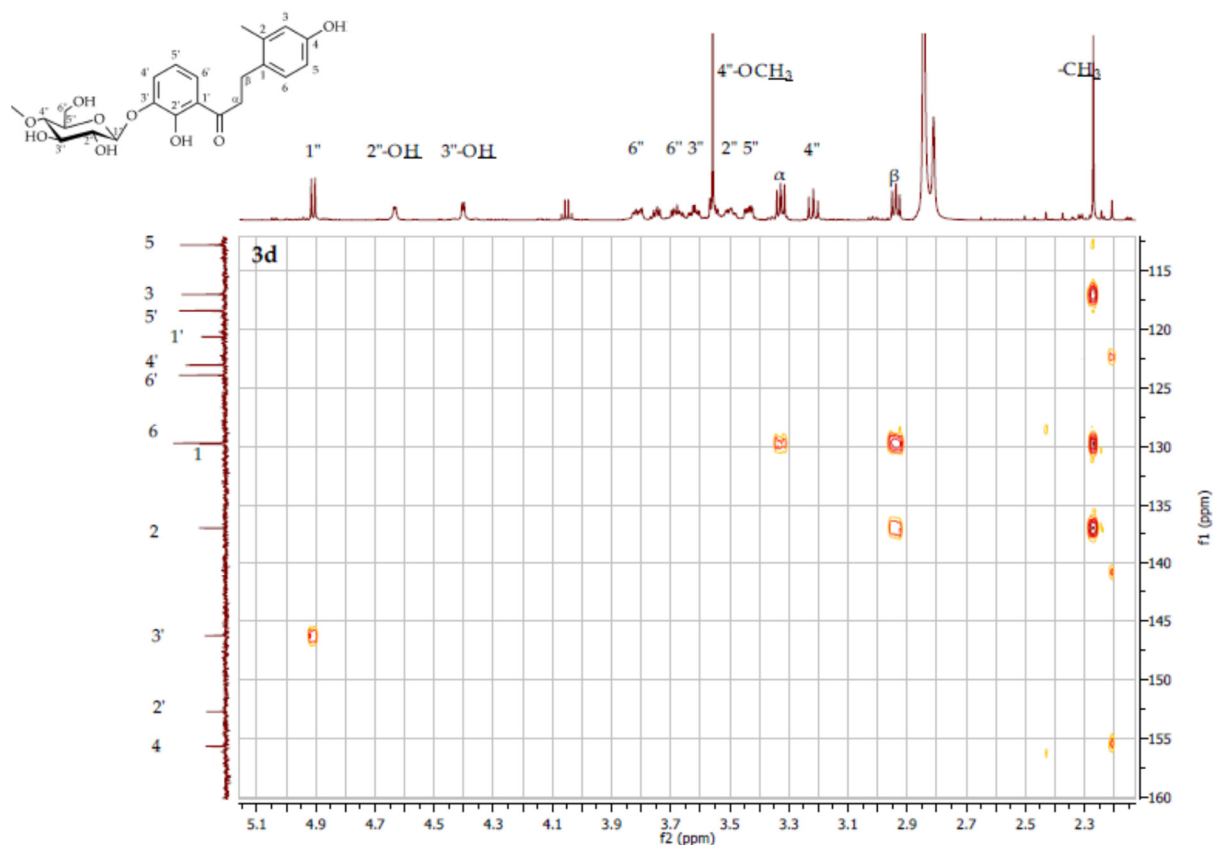


Figure S91. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

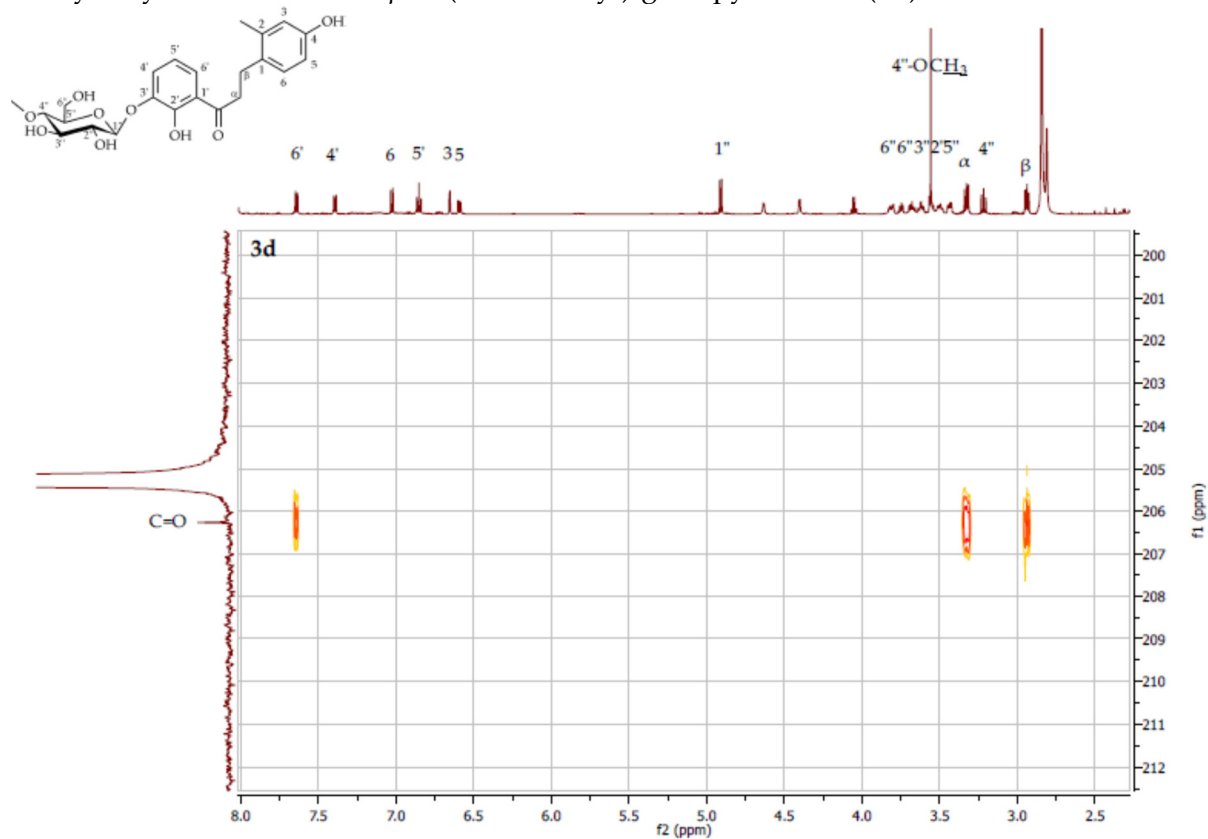


Figure S92. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 2',4-dihydroxy-2-methyldihydrochalcone 3'-O- β -D-(4''-O-methyl)-glucopyranoside (**3d**)

Molecular formula: $C_{23}H_{28}O_8$

Formula weight: 432.18

Ionization mode: negative

Precursor: $[M - H]^-$ 431.30

431.3000 > 237.1000 CE: 24.0

431.3000 > 255.0500 CE: 13.0

431.3000 > 222.0500 CE: 42.0

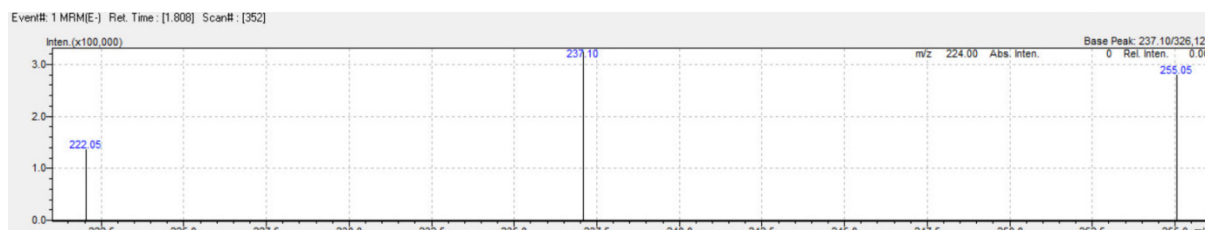
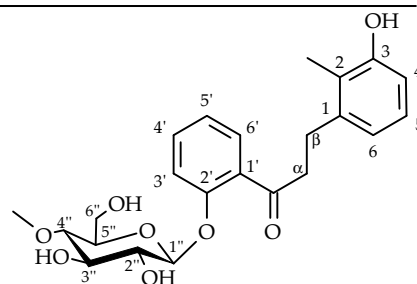


Figure S93. MS analysis of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

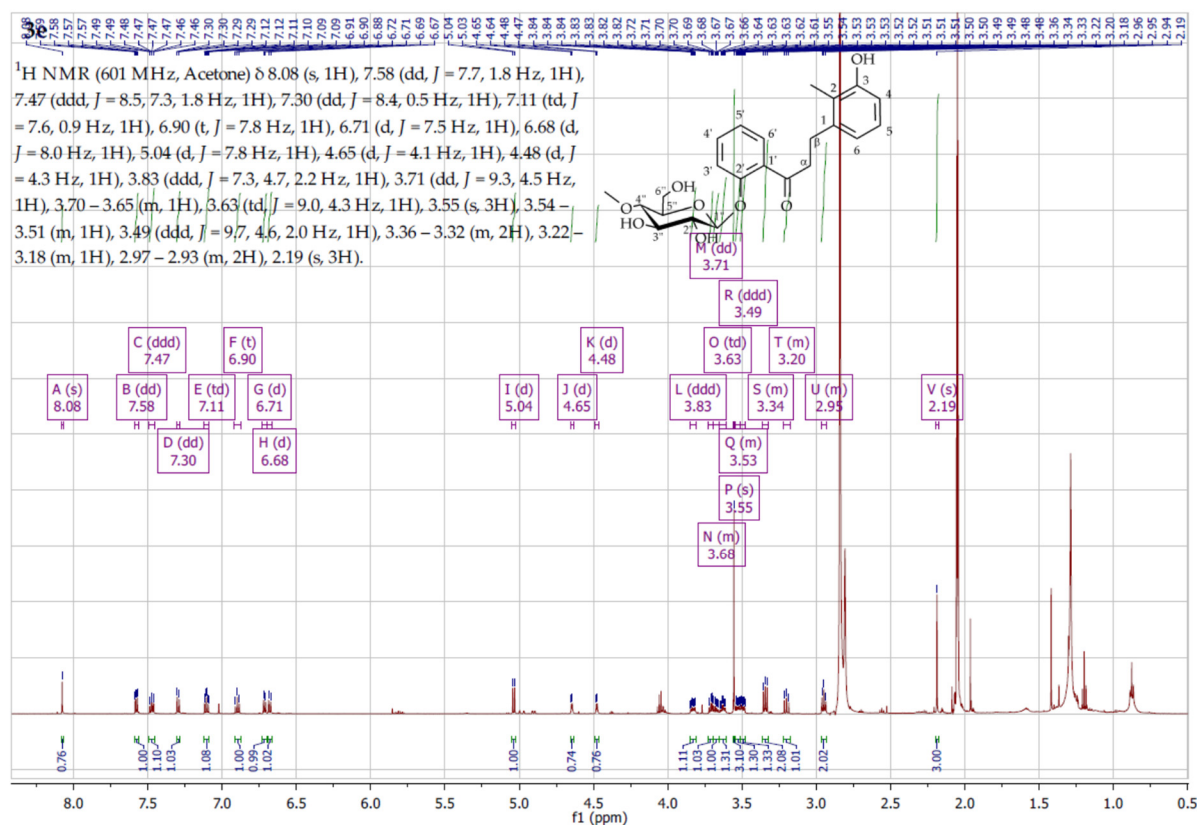


Figure S94. ^1H NMR spectrum (δ , acetone- d_6 , 600 MHz) of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

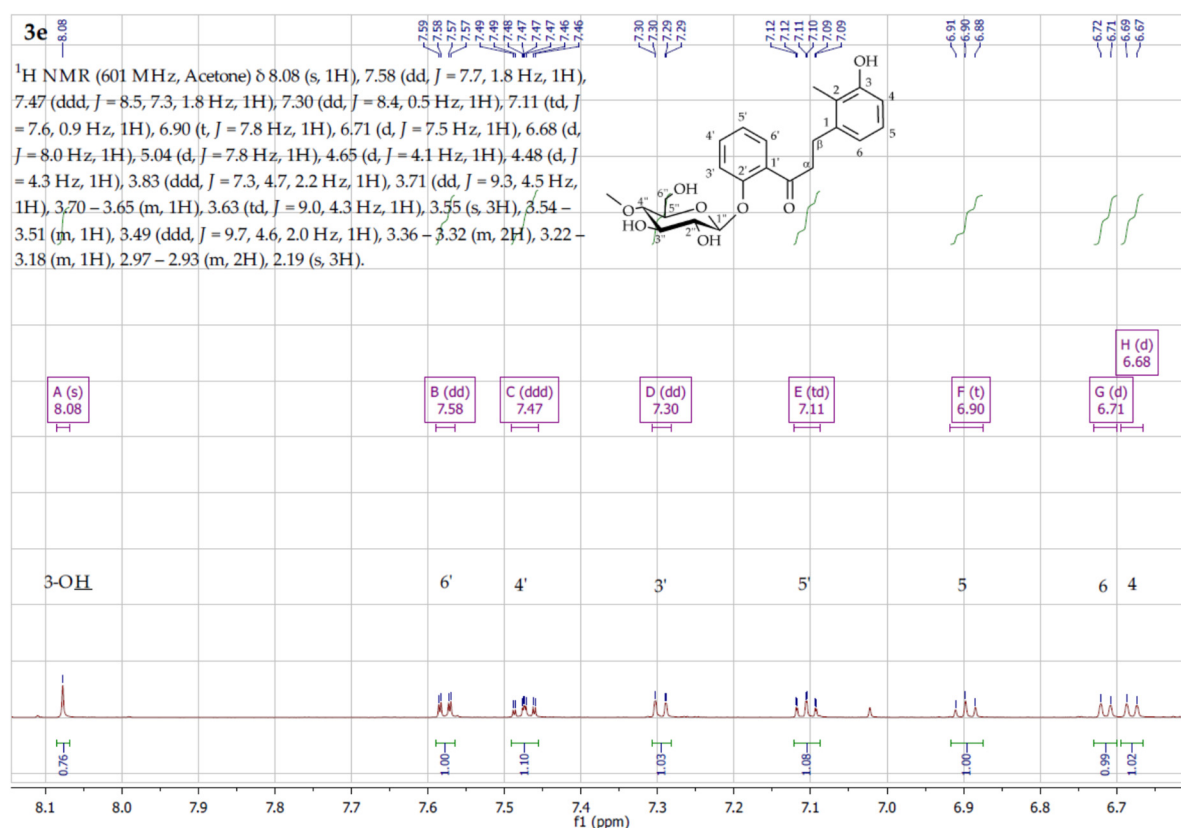


Figure S95. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 3-hydroxy-2-methyldihydrochalcone 2'-O-β-D-(4''-O-methyl)-glucopyranoside (**3e**)

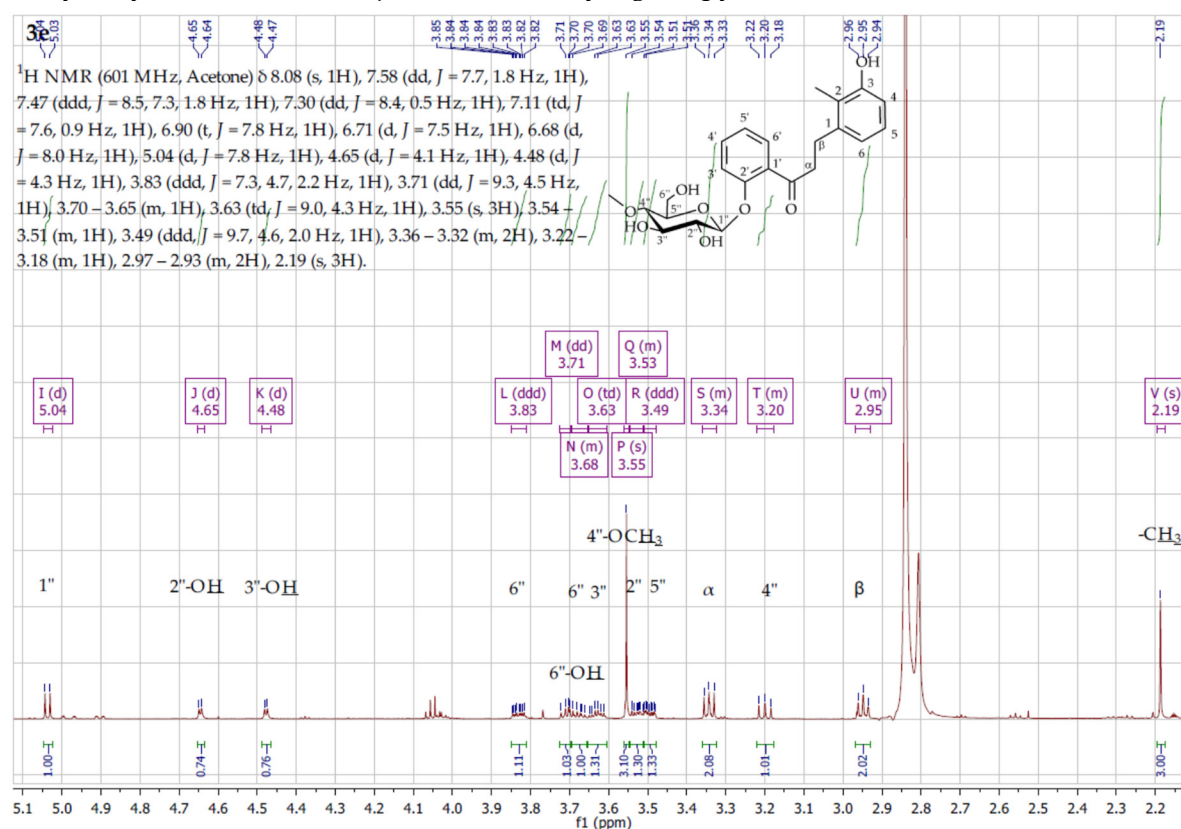


Figure S96. ¹H NMR spectrum expansion (δ, acetone-d₆, 600 MHz) of 3-hydroxy-2-methyldihydrochalcone 2'-O-β-D-(4''-O-methyl)-glucopyranoside (**3e**)

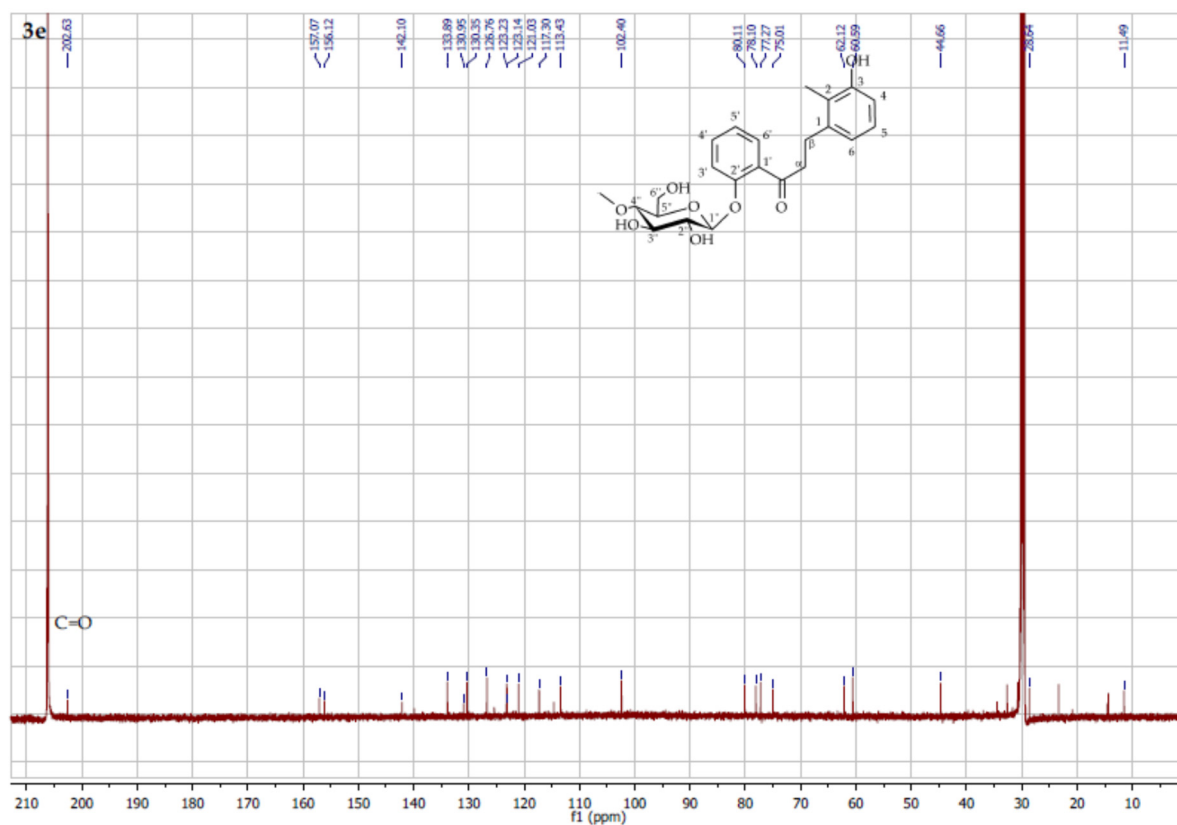


Figure S97. ^{13}C NMR spectrum (δ , acetone- d_6 , 151 MHz) of 3-hydroxy-2-methyldihydrochalcone 2'- O - β -D-(4''- O -methyl)-glucopyranoside (**3e**)

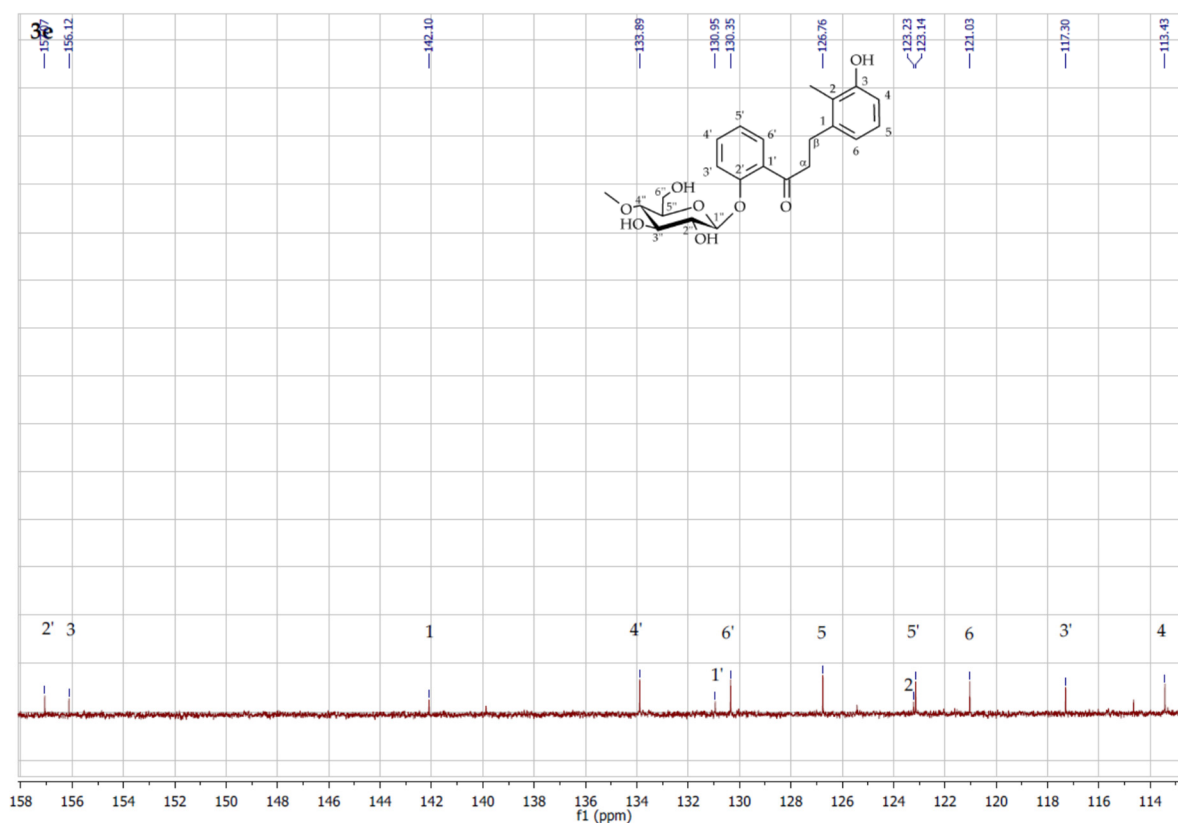


Figure S98. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 3-hydroxy-2-methyldihydrochalcone 2'- O - β -D-(4''- O -methyl)-glucopyranoside (**3e**)

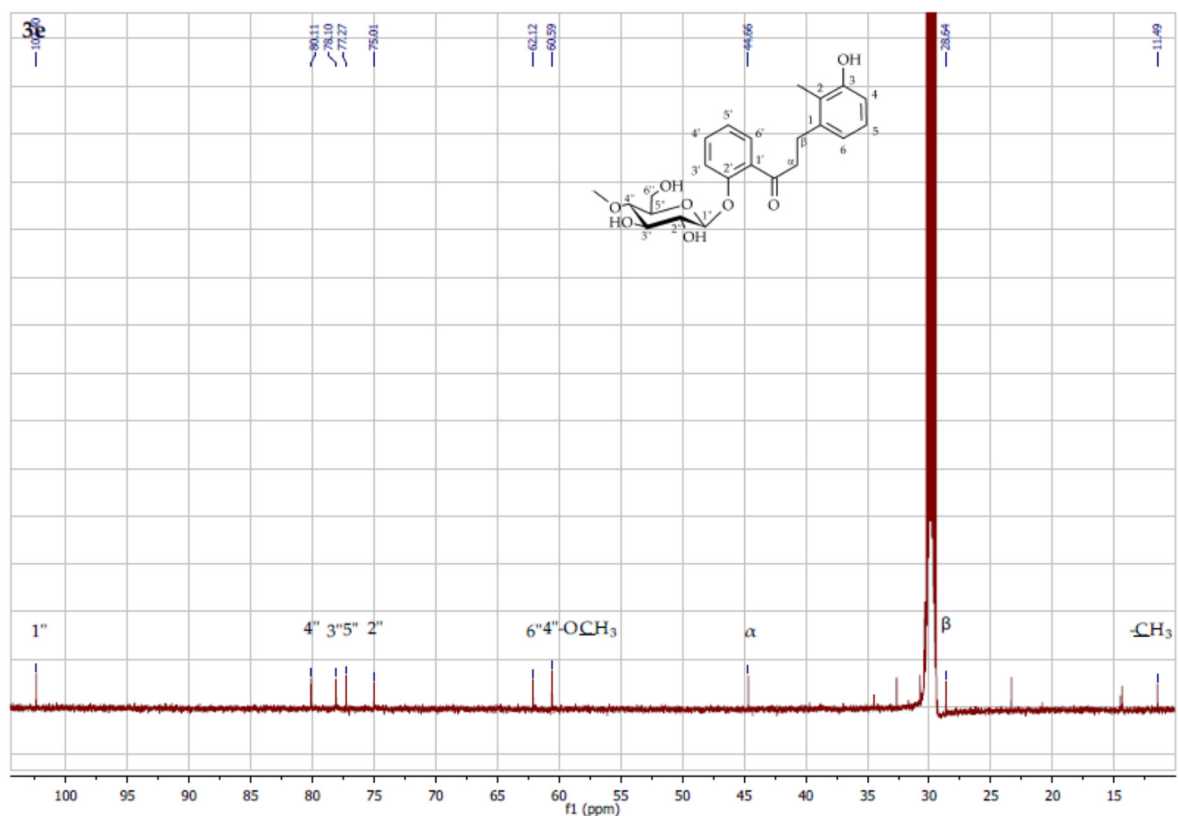


Figure S99. ^{13}C NMR spectrum expansion (δ , acetone- d_6 , 151 MHz) of 3-hydroxy-2-methyldihydrochalcone 2'- O - β -D-(4''- O -methyl)-glucopyranoside (**3e**)

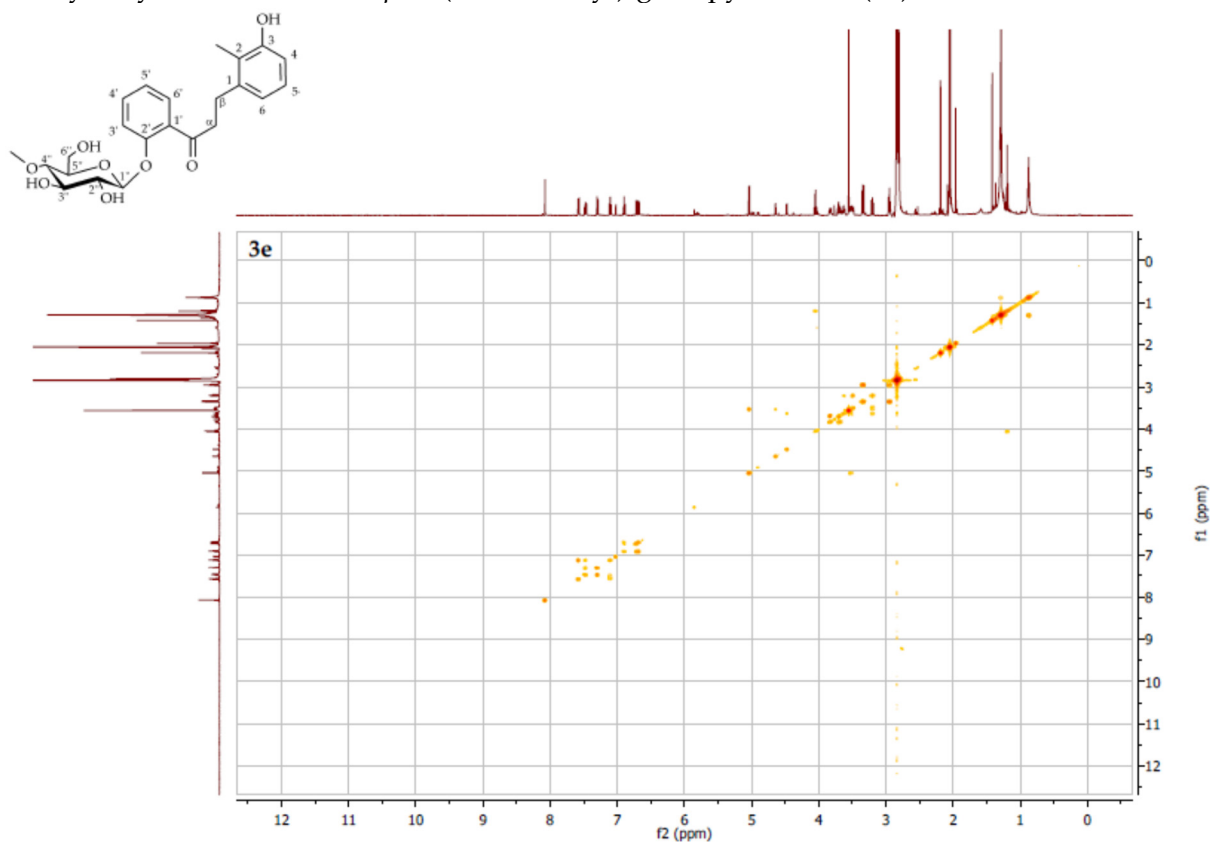


Figure S100. COSY contour map – $^1\text{H} \times ^1\text{H}$ of 3-hydroxy-2-methyldihydrochalcone 2'- O - β -D-(4''- O -methyl)-glucopyranoside (**3e**)

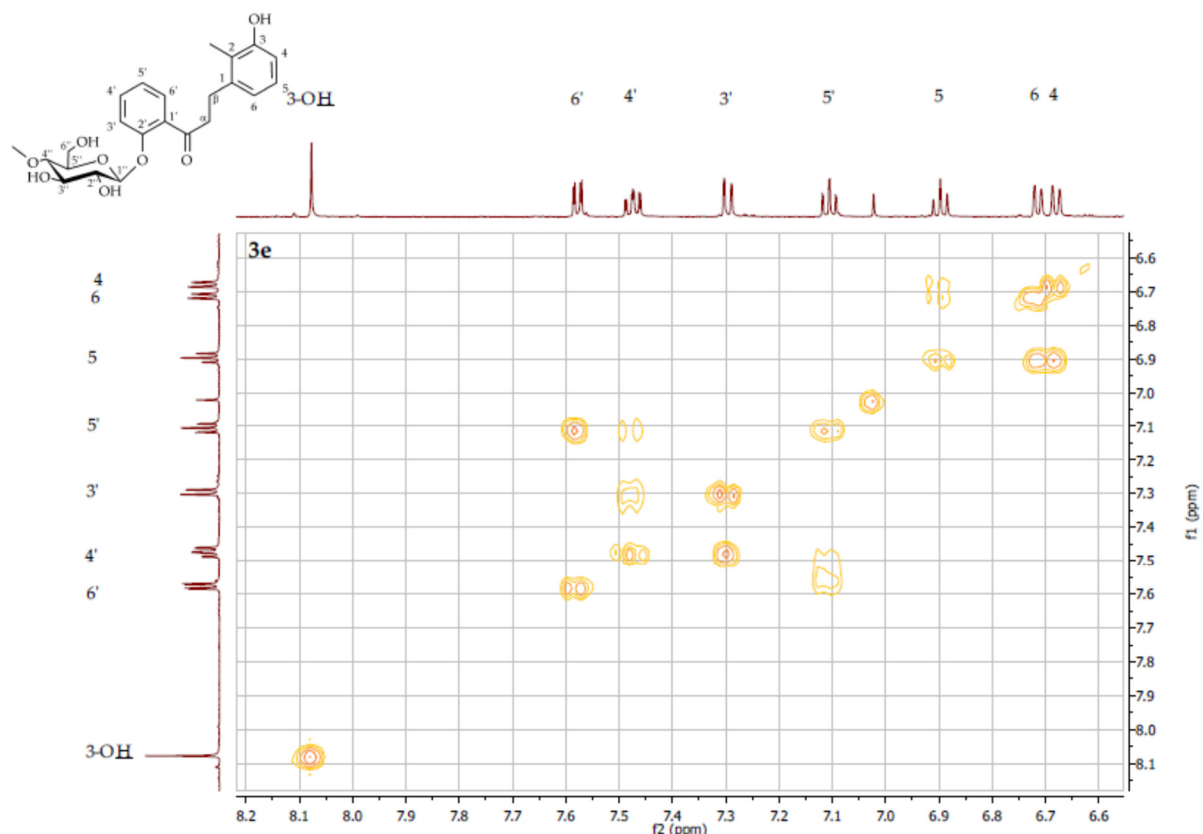


Figure S101. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

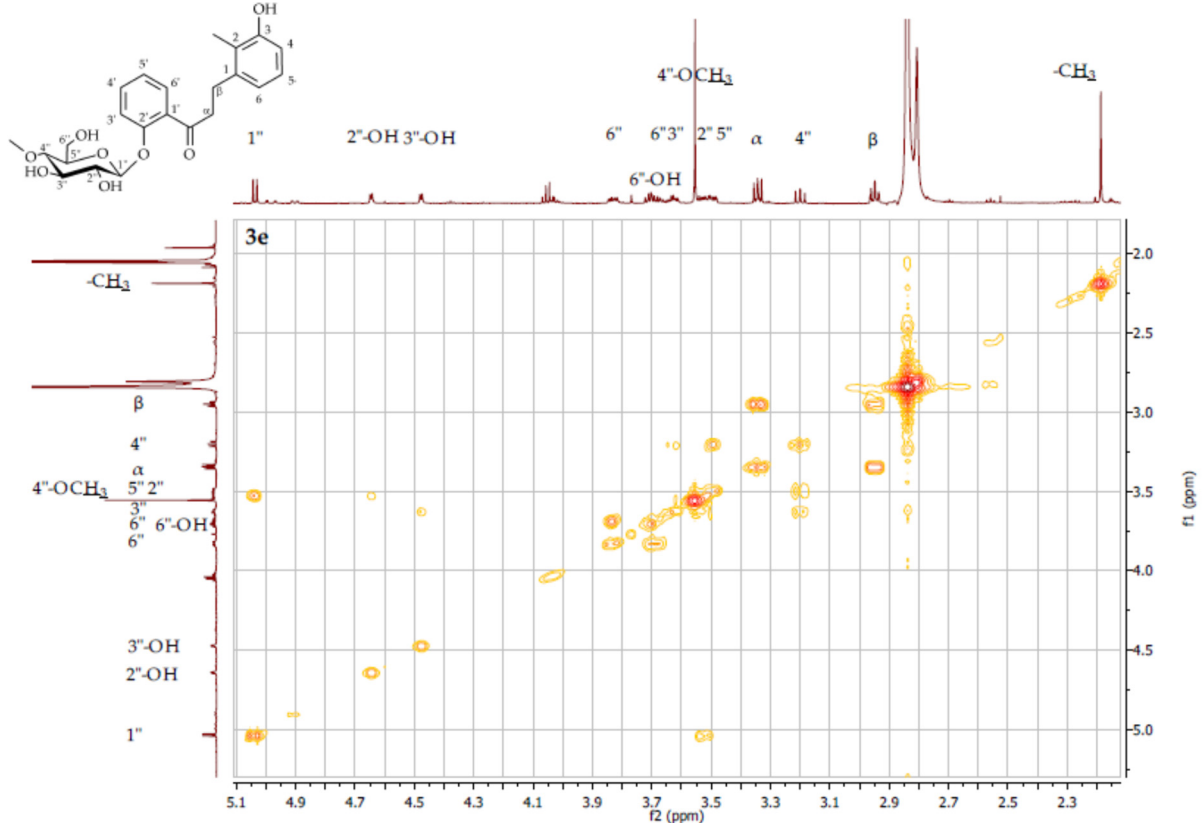


Figure S102. COSY contour map – $^1\text{H} \times ^1\text{H}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

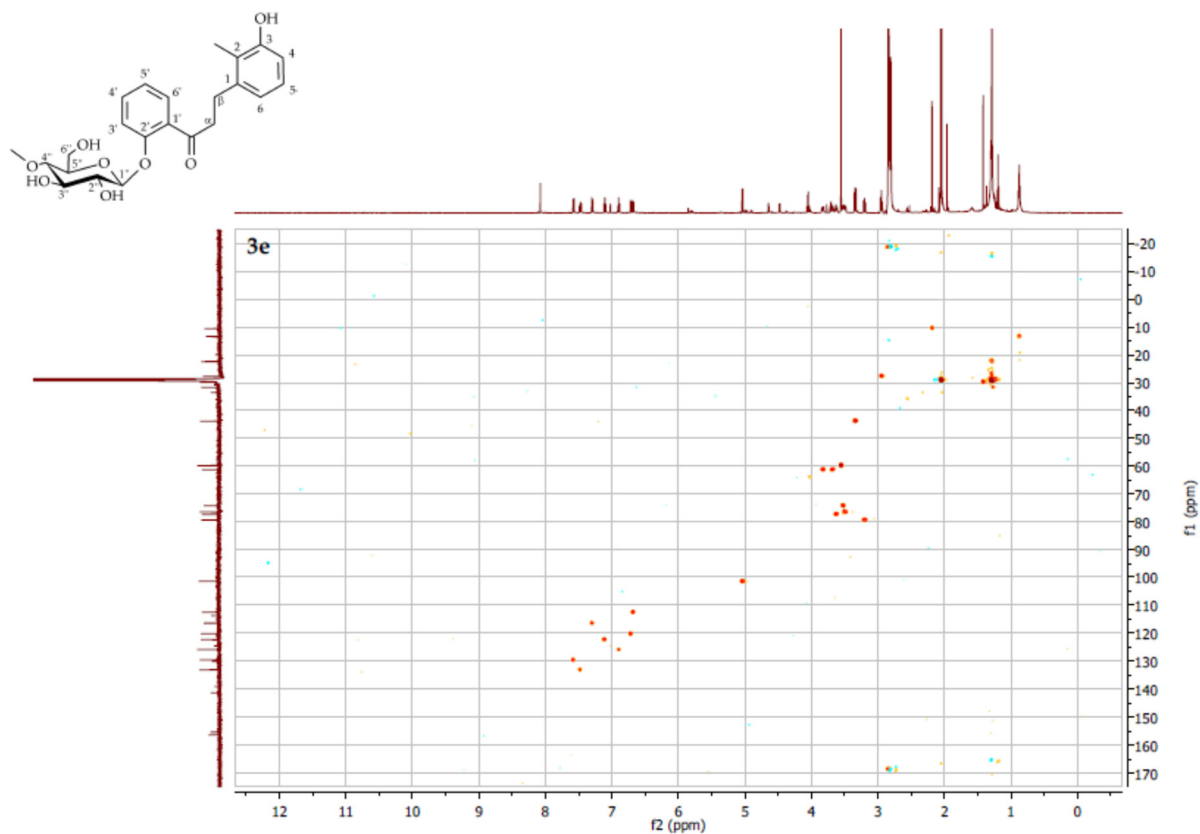


Figure S103. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

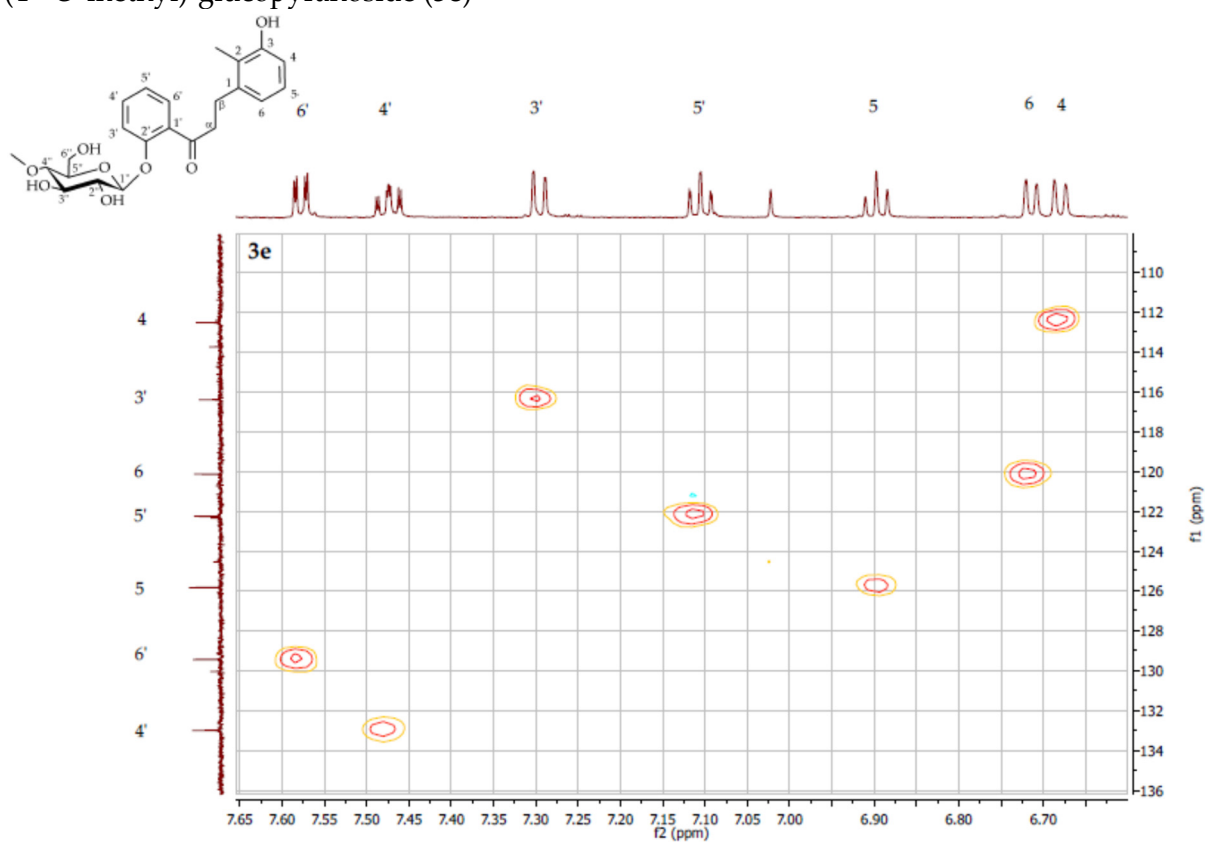


Figure S104. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

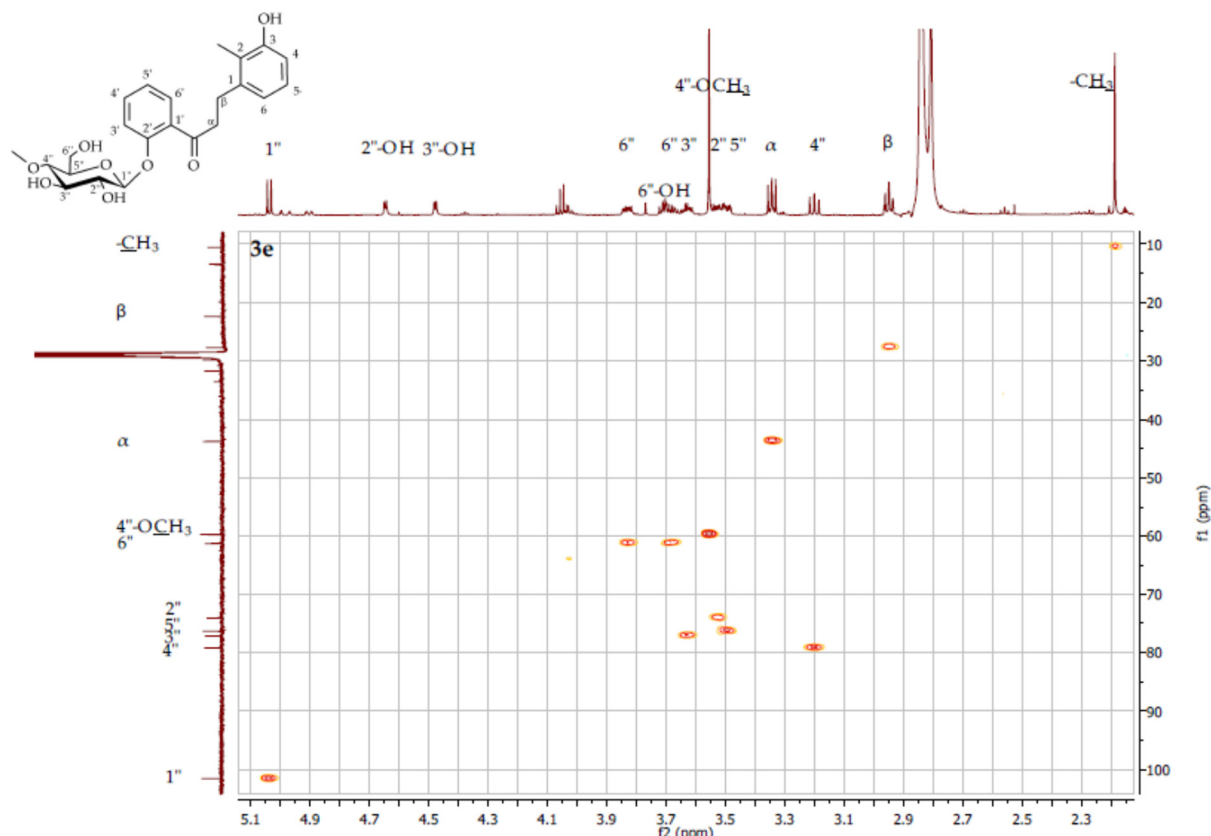


Figure S105. HSQC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

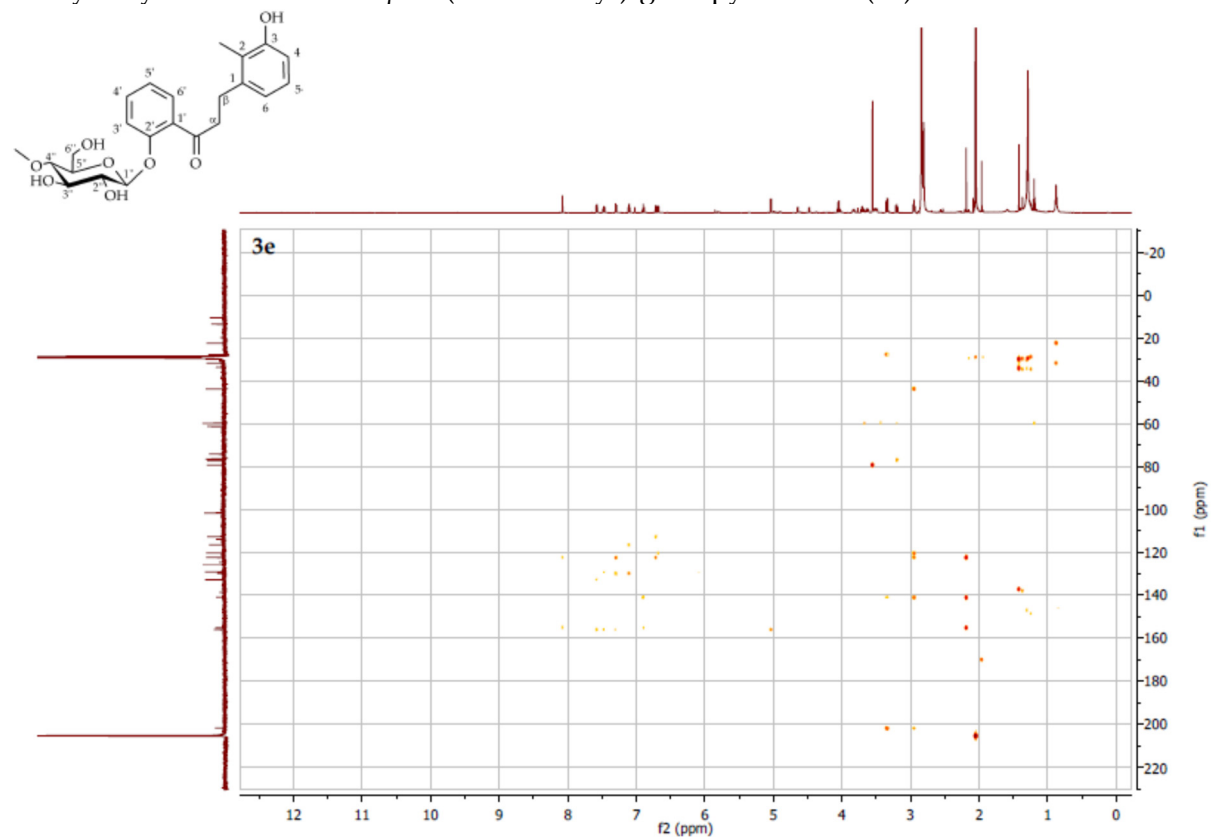


Figure S106. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ of 3-hydroxy-2-methyldihydrochalcone 2'-O- β -D-(4''-O-methyl)-glucopyranoside (**3e**)

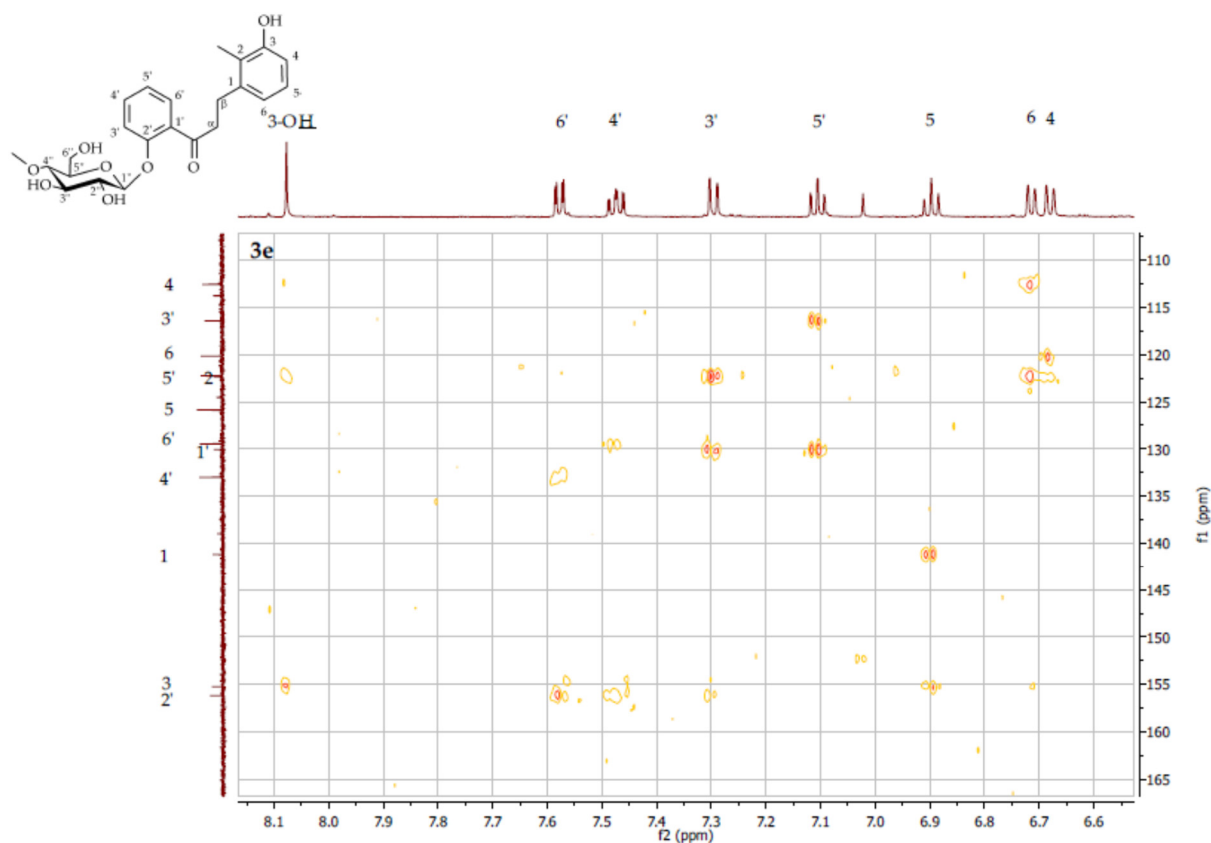


Figure S107. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O-β-D-(4''-O-methyl)-glucopyranoside (**3e**)

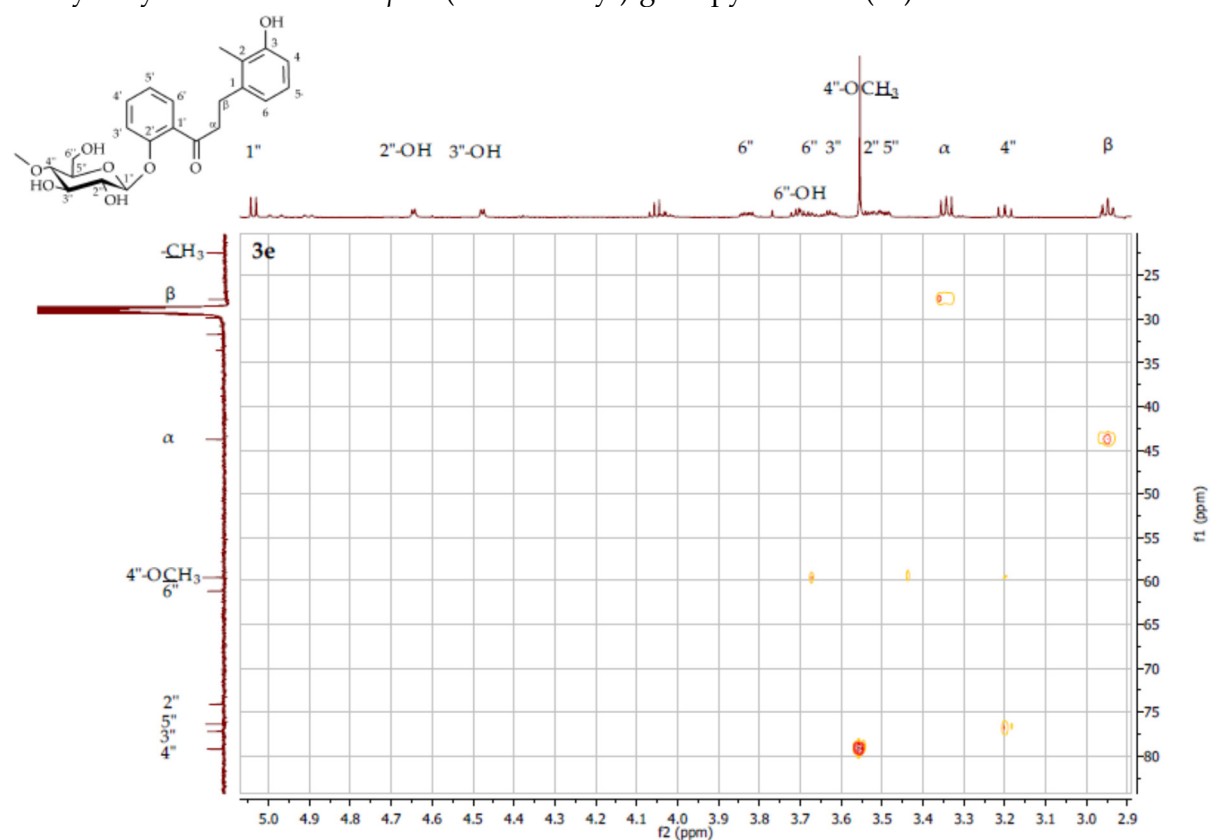


Figure S108. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O-β-D-(4''-O-methyl)-glucopyranoside (**3e**)

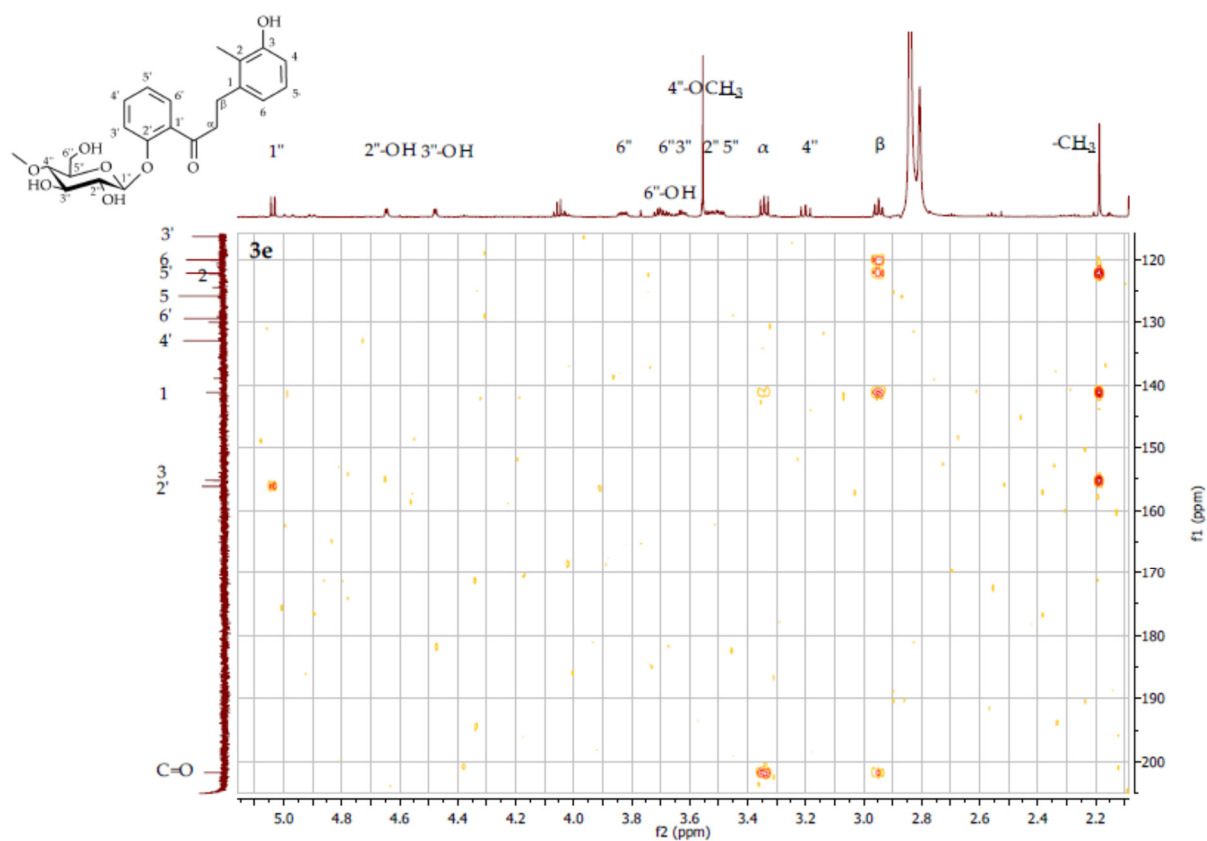


Figure S109. HMBC contour map– $^1\text{H} \times ^{13}\text{C}$ expansion of 3-hydroxy-2-methyldihydrochalcone 2'-O-β-D-(4''-O-methyl)-glucopyranoside (**3e**)