

Biotransformation of Hydroxychalcones as a Method of Obtaining Novel and Unpredictable Products Using Whole Cells of Bacteria

Joanna Kozłowska ^{1,*}, Bartłomiej Potaniec ^{1,2} and Mirosław Anioł ¹

¹ Department of Chemistry, Faculty of Biotechnology and Food Science, Wrocław University of Environmental and Life Sciences, Norwida 25, 50-375 Wrocław, Poland; mirosław.aniol@upwr.edu.pl (M.A.); b.potaniec@gmail.com (B.P.)

² Łukasiewicz Research Network—PORT Polish Center for Technology Development, Stabłowicka 147, 54-066 Wrocław, Poland

* Correspondence: joanna.kozłowska@upwr.edu.pl

Figure S1. ¹H-NMR (600 MHz, Acetone-*d*₆) spectrum of 2-hydroxy-4'-methylchalcone (1);

Figure S2. ¹³C-NMR (150 MHz, Acetone-*d*₆) spectrum of 2-hydroxy-4'-methylchalcone (1);

Figure S3. ¹H-NMR (600 MHz, Chloroform-*d*) spectrum of 2-hydroxy-4'-methyldihydrochalcone (2);

Figure S4. ¹³C-NMR (150 MHz, Chloroform-*d*) spectrum of 2-hydroxy-4'-methyldihydrochalcone (2);

Figure S5. ¹H-NMR (600 MHz, Chloroform-*d*) spectrum of 2,4-dihydroxy-4'-methyldihydrochalcone (3);

Figure S6. ¹³C-NMR (150 MHz, Chloroform-*d*) spectrum of 2,4-dihydroxy-4'-methyldihydrochalcone (3);

Figure S7. ¹H-NMR (600 MHz, Acetone-*d*₆) spectrum of 4-hydroxy-4'-methylchalcone (4);

Figure S8. ¹³C-NMR (150 MHz, Acetone-*d*₆) spectrum of 4-hydroxy-4'-methylchalcone (4);

Figure S9. ¹H-NMR (600 MHz, Chloroform-*d*) spectrum of 4-hydroxy-4'-methyldihydrochalcone (5);

Figure S10. ¹³C-NMR (150 MHz, Chloroform-*d*) spectrum of 4-hydroxy-4'-methyldihydrochalcone (5);

Figure S11. ¹H-NMR (600 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol (6);

Figure S12. ¹³C-NMR (150 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol (6);

Figure S13. ¹H-NMR (600 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1,5-di-(4-methylphenyl)pentane-1,5-dione (7);

Figure S14. ¹³C-NMR (150 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1,5-di-(4-methylphenyl)pentane-1,5-dione (7);

Figure S15. Chiral HPLC analysis and UV ($\lambda = 270$ nm) profile of (*rac*)-3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol;

Figure S16. Chiral HPLC analysis and UV ($\lambda = 270$ nm) profile of 3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol (6).

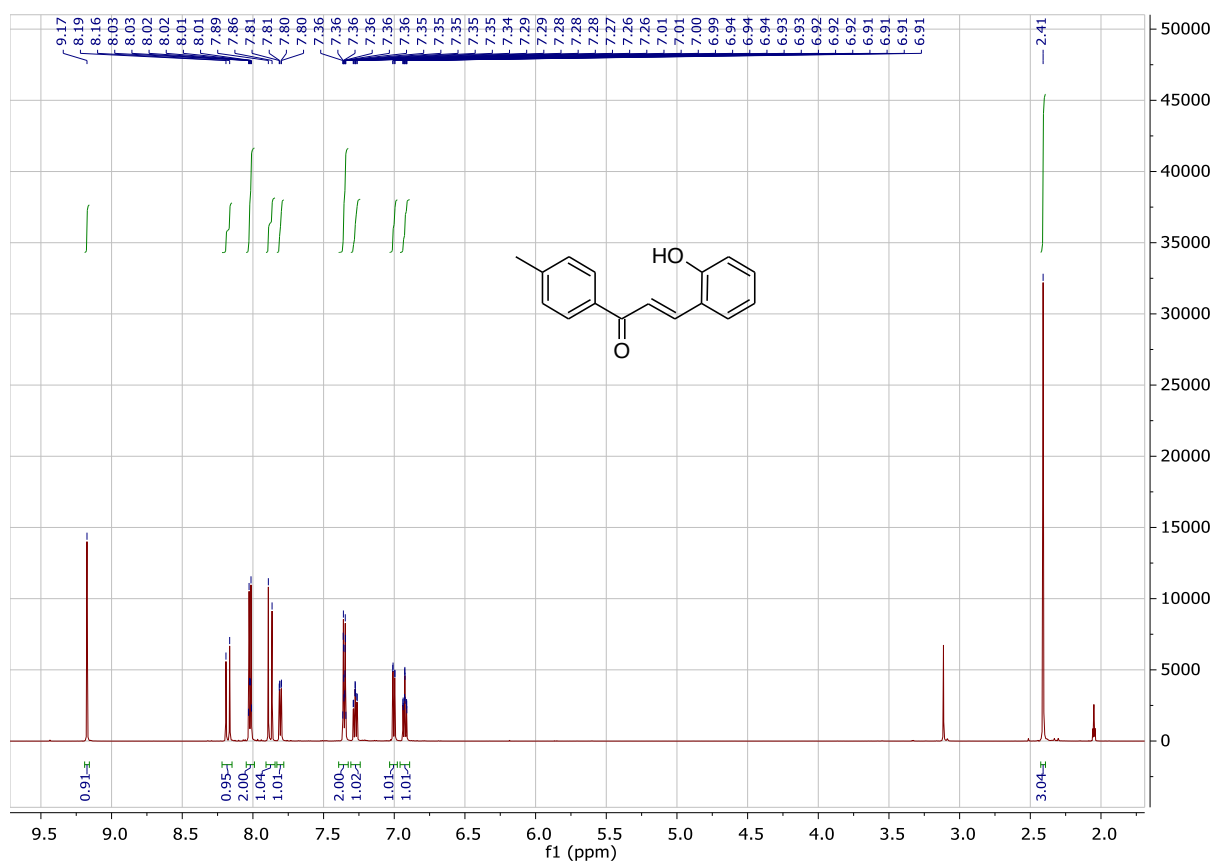


Figure S1. ¹H-NMR (600 MHz, Acetone-*d*₆) spectrum of 2-hydroxy-4'-methylchalcone (1)

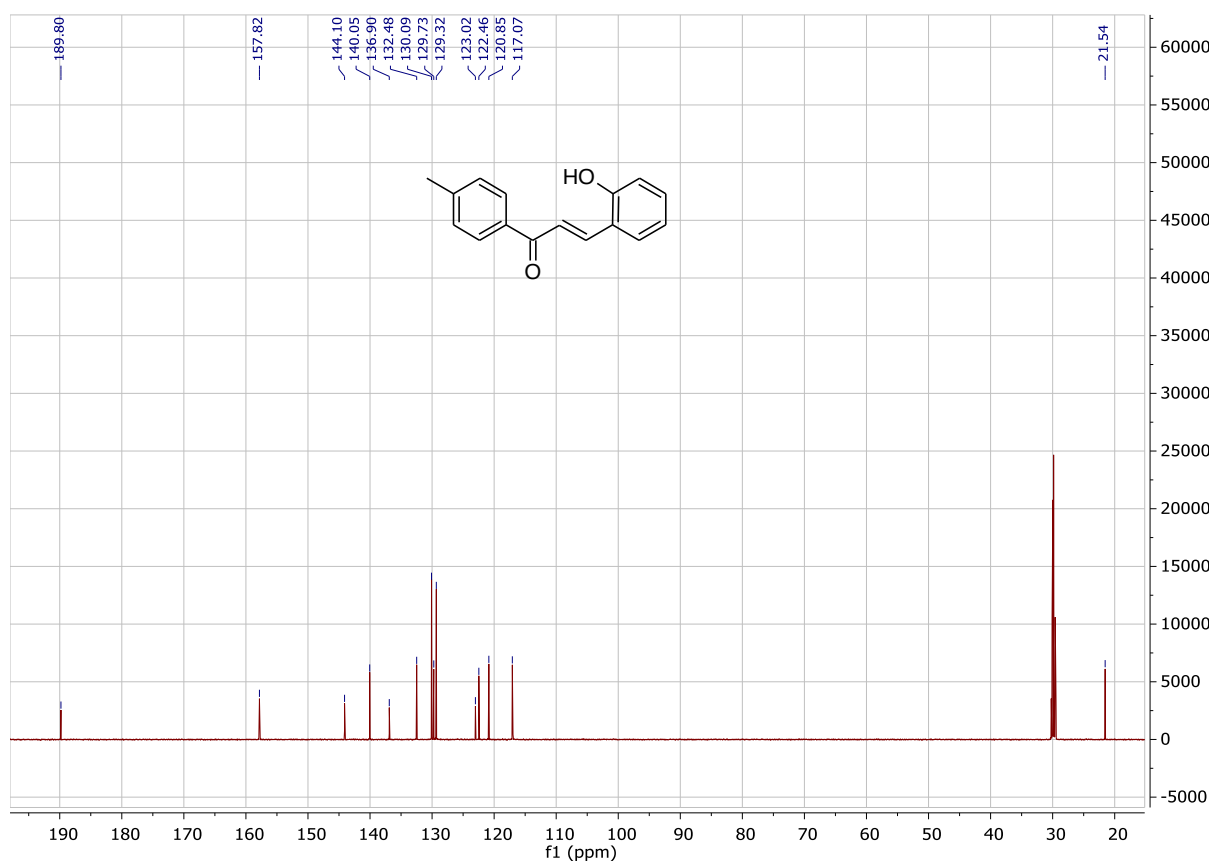


Figure S2. ¹³C-NMR (150 MHz, Acetone-*d*₆) spectrum of 2-hydroxy-4'-methylchalcone (1)

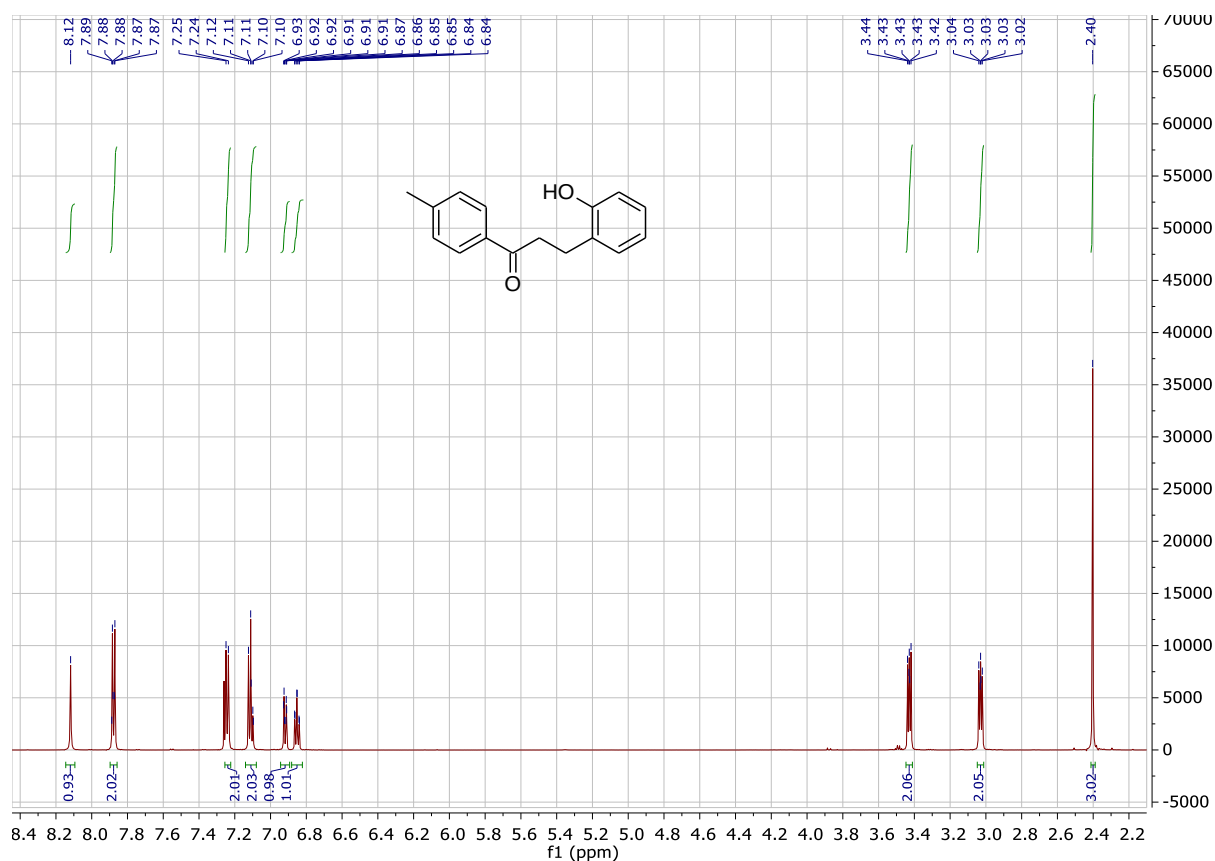


Figure S3. ^1H -NMR (600 MHz, Chloroform- d) spectrum of 2-hydroxy-4'-methyldihydrochalcone (**2**)

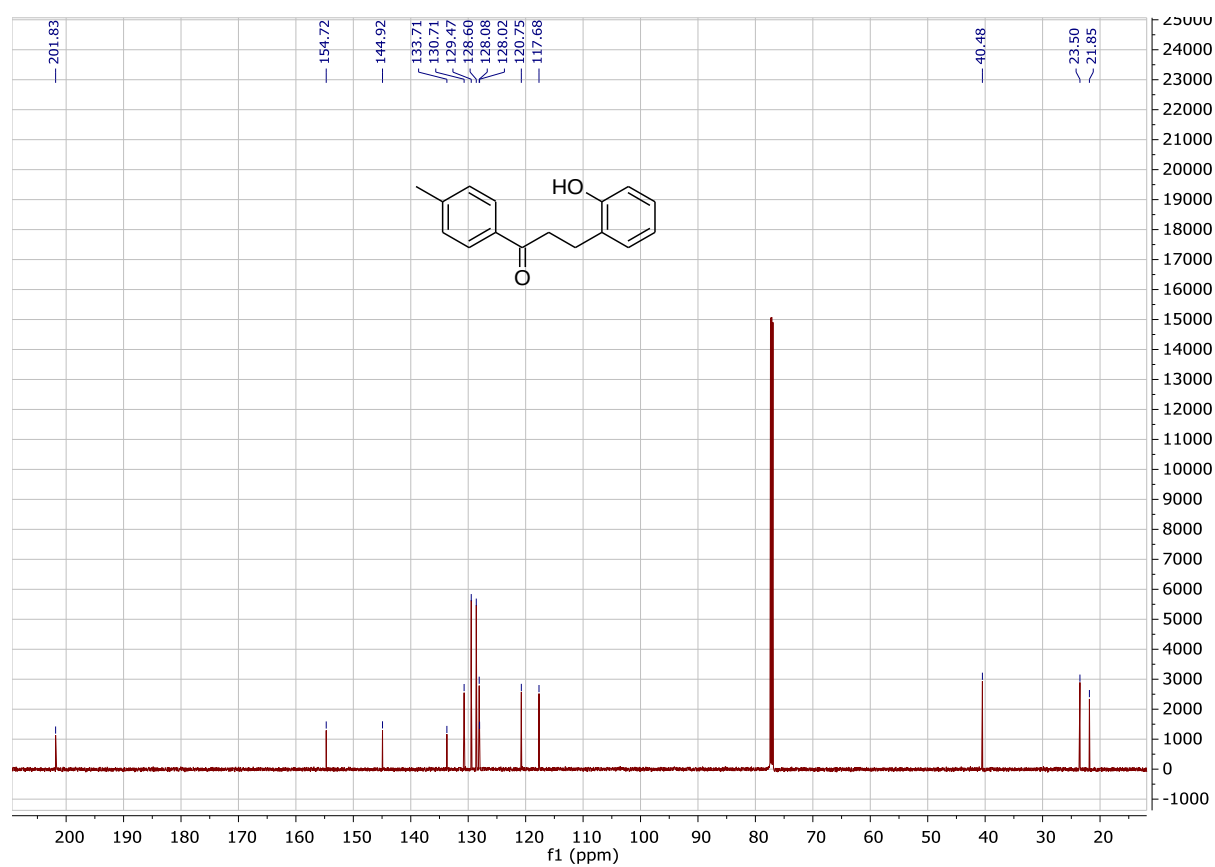


Figure S4. ^{13}C -NMR (150 MHz, Chloroform- d) spectrum of 2-hydroxy-4'-methyldihydrochalcone (**2**)

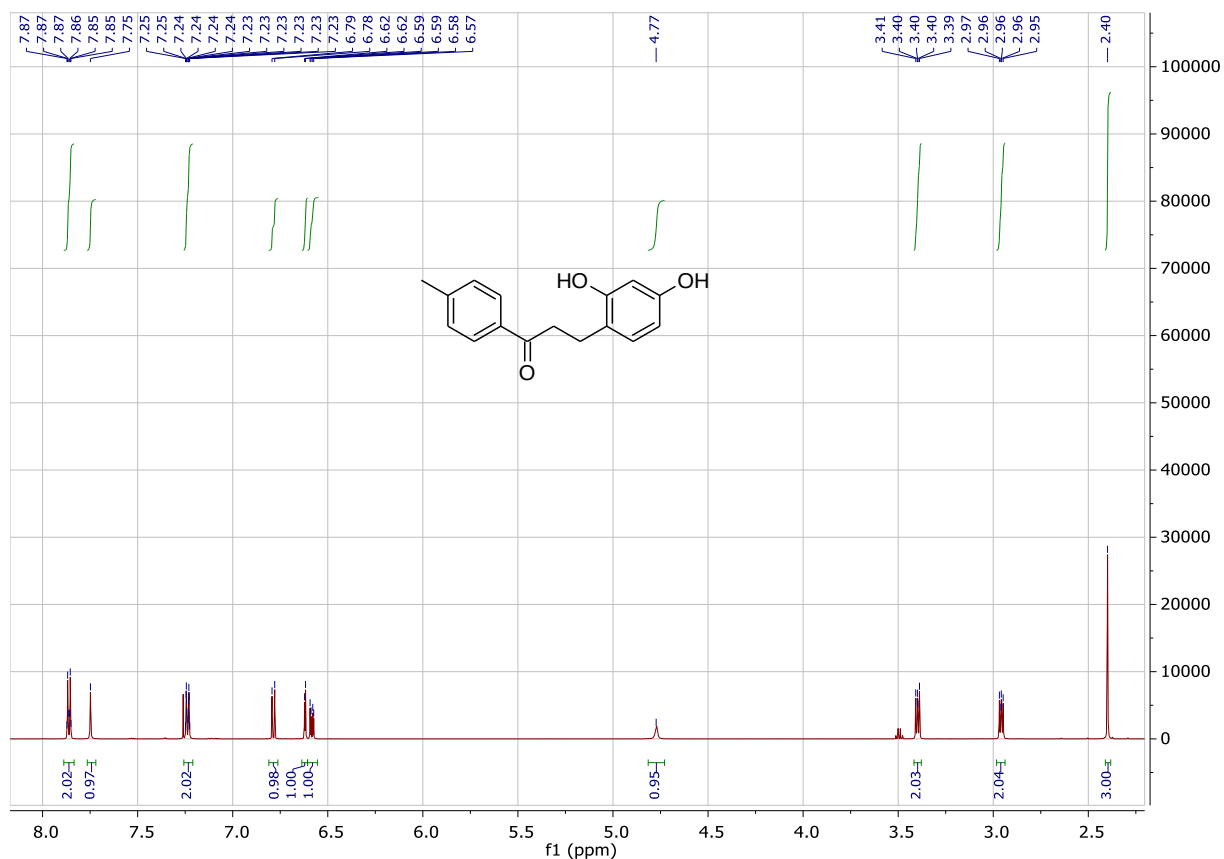


Figure S5. ^1H -NMR (600 MHz, Chloroform- d) spectrum of 2,4-dihydroxy-4'-methyldihydrochalcone (3)

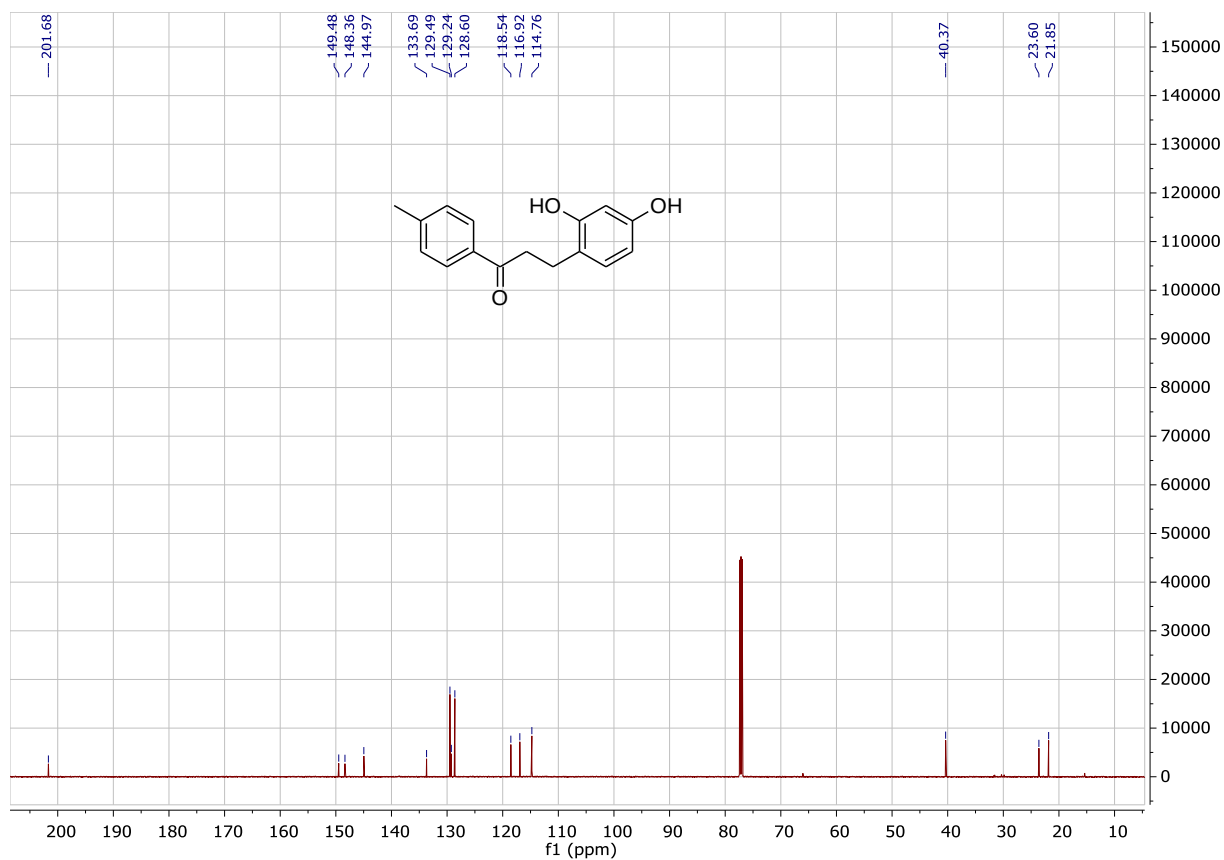


Figure S6. ^{13}C -NMR (150 MHz, Chloroform- d) spectrum of 2,4-dihydroxy-4'-methyldihydrochalcone (3)

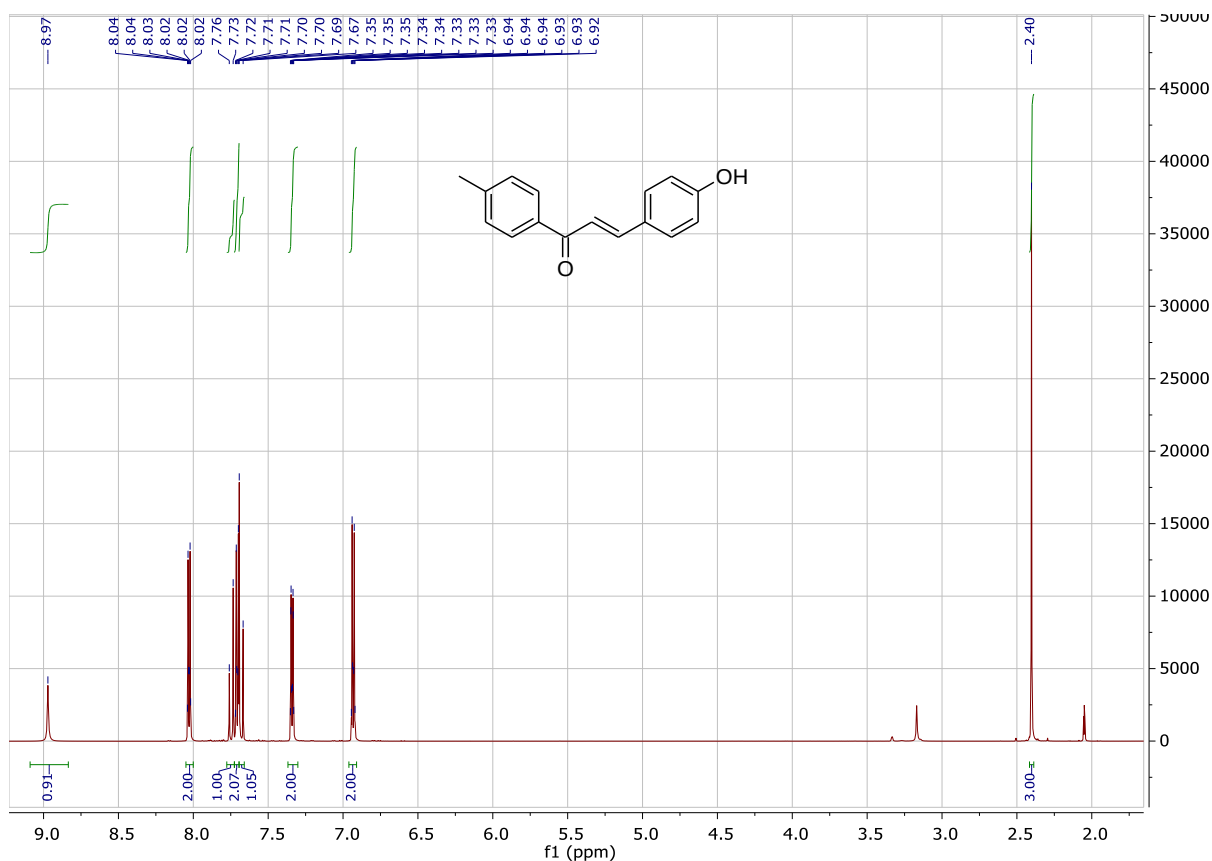


Figure S7. ¹H-NMR (600 MHz, Acetone-*d*₆) spectrum of 4-hydroxy-4'-methylchalcone (4)

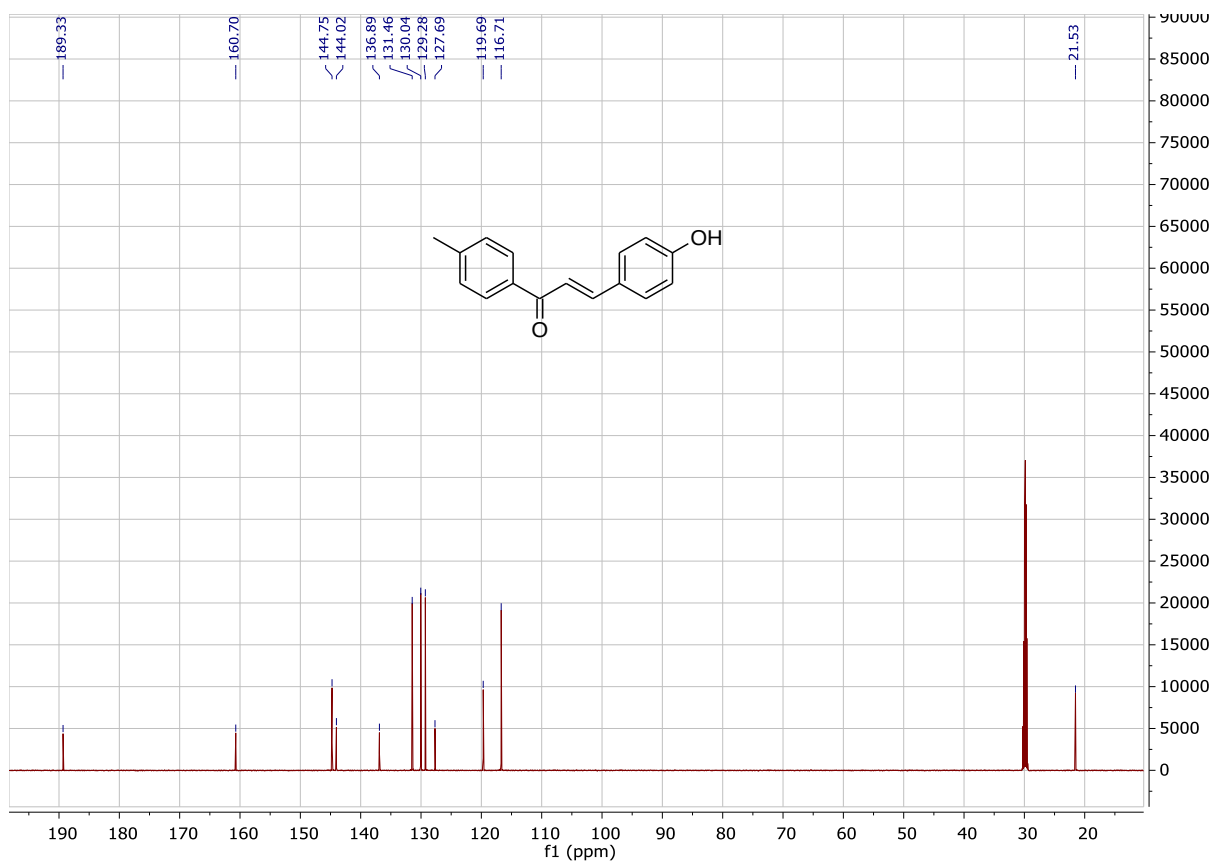


Figure S8. ¹³C-NMR (150 MHz, Acetone-*d*₆) spectrum of 4-hydroxy-4'-methylchalcone (4)

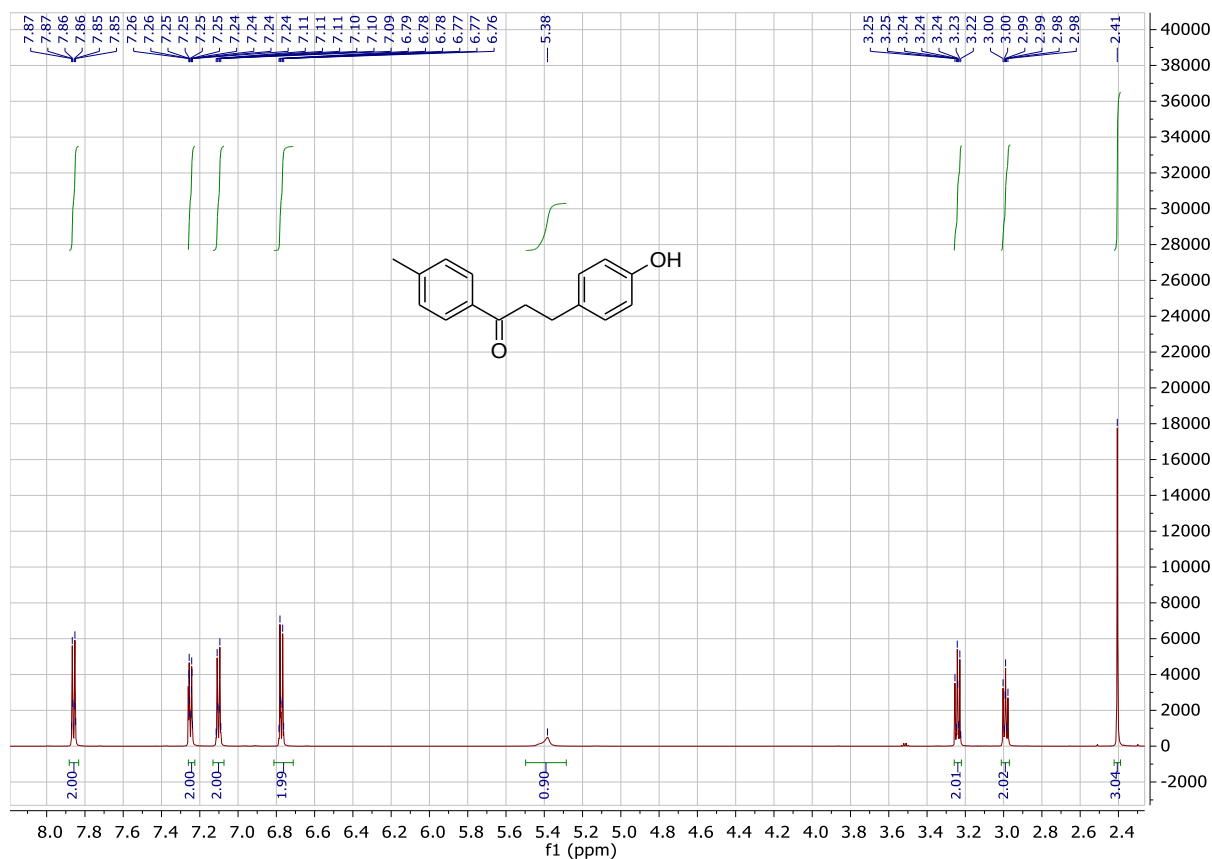


Figure S9. ¹H-NMR (600 MHz, Chloroform-*d*) spectrum of 4-hydroxy-4'-methyldihydrochalcone (5)

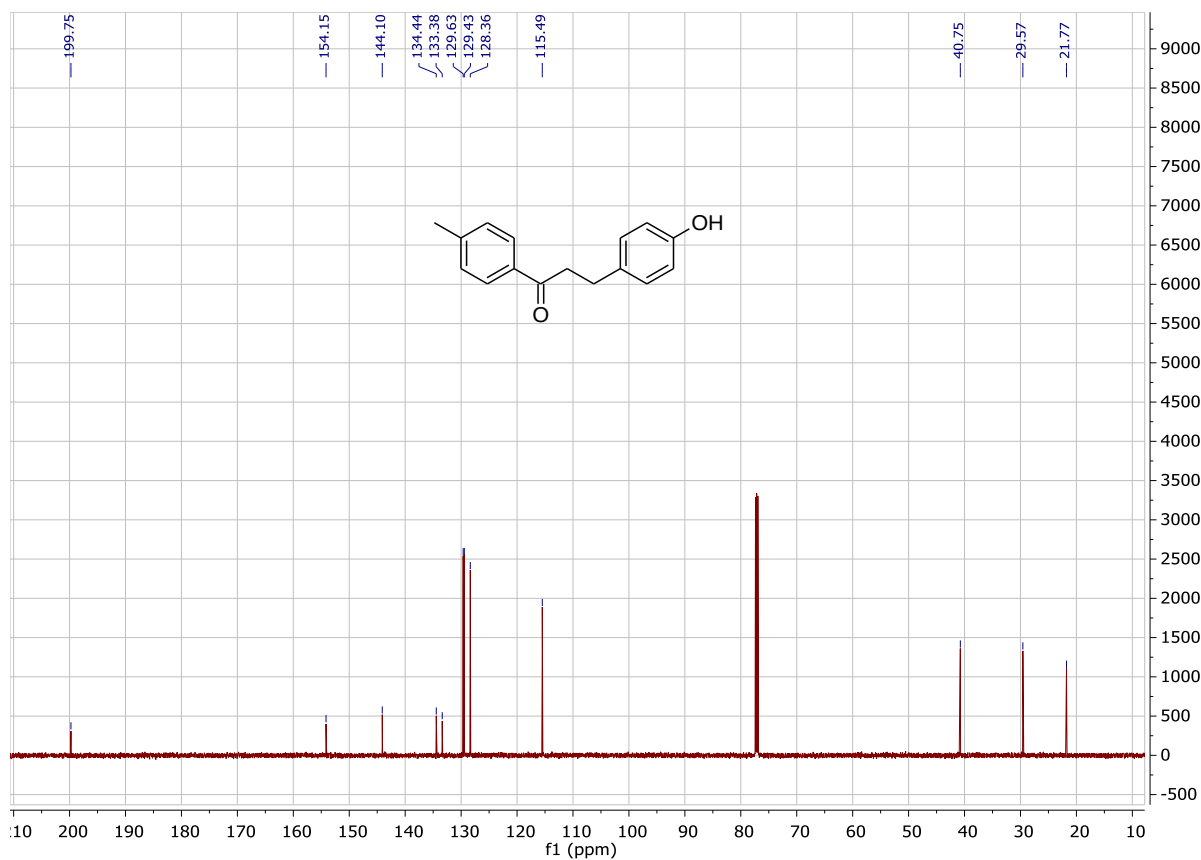


Figure S10. ¹³C-NMR (150 MHz, Chloroform-*d*) spectrum of 4-hydroxy-4'-methyldihydrochalcone (5)

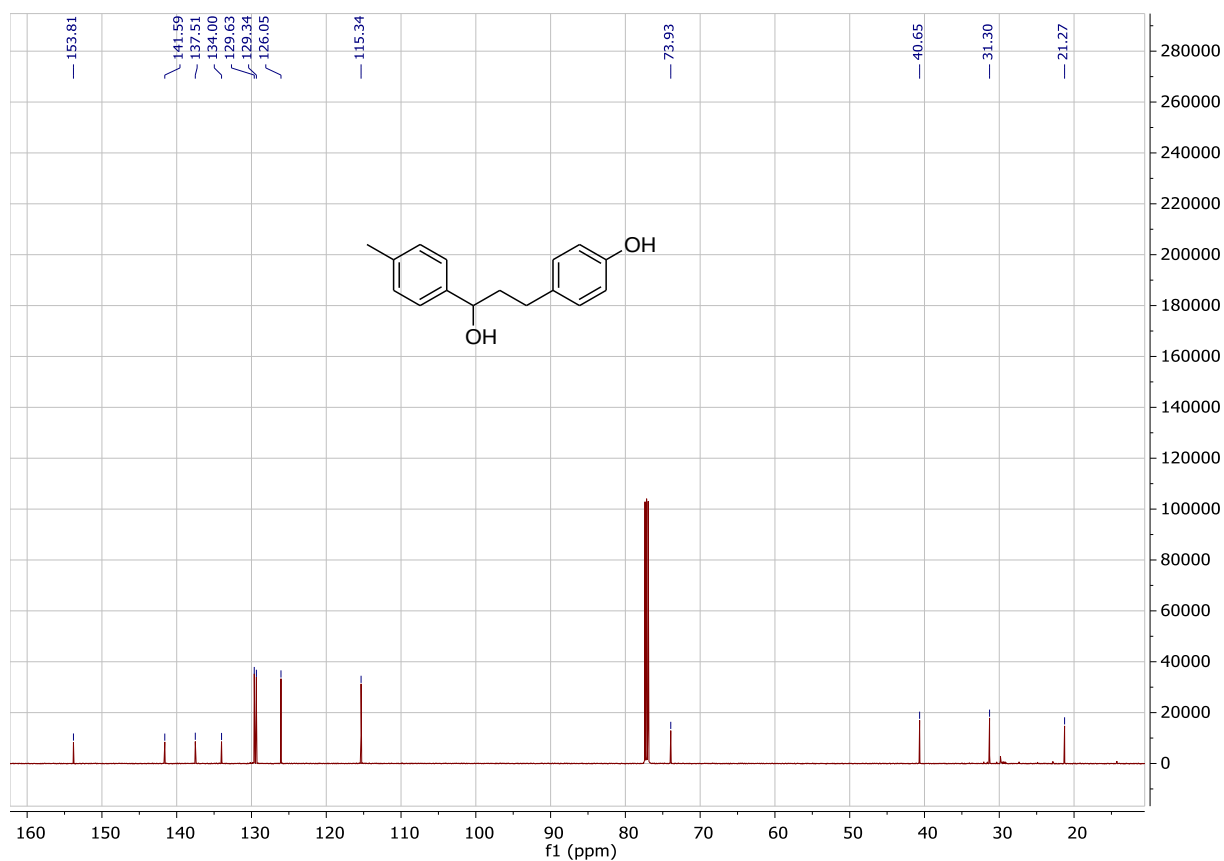
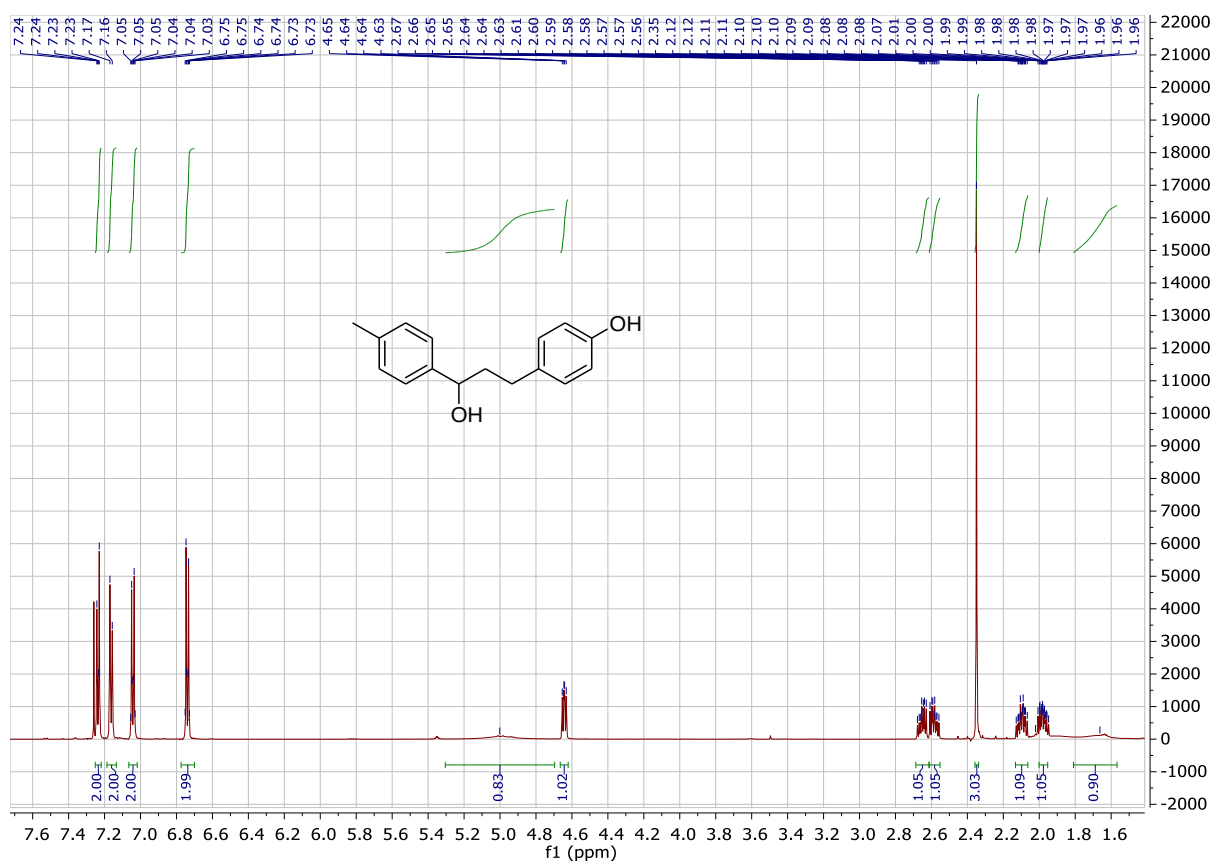


Figure S12. ^{13}C -NMR (150 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol (6)

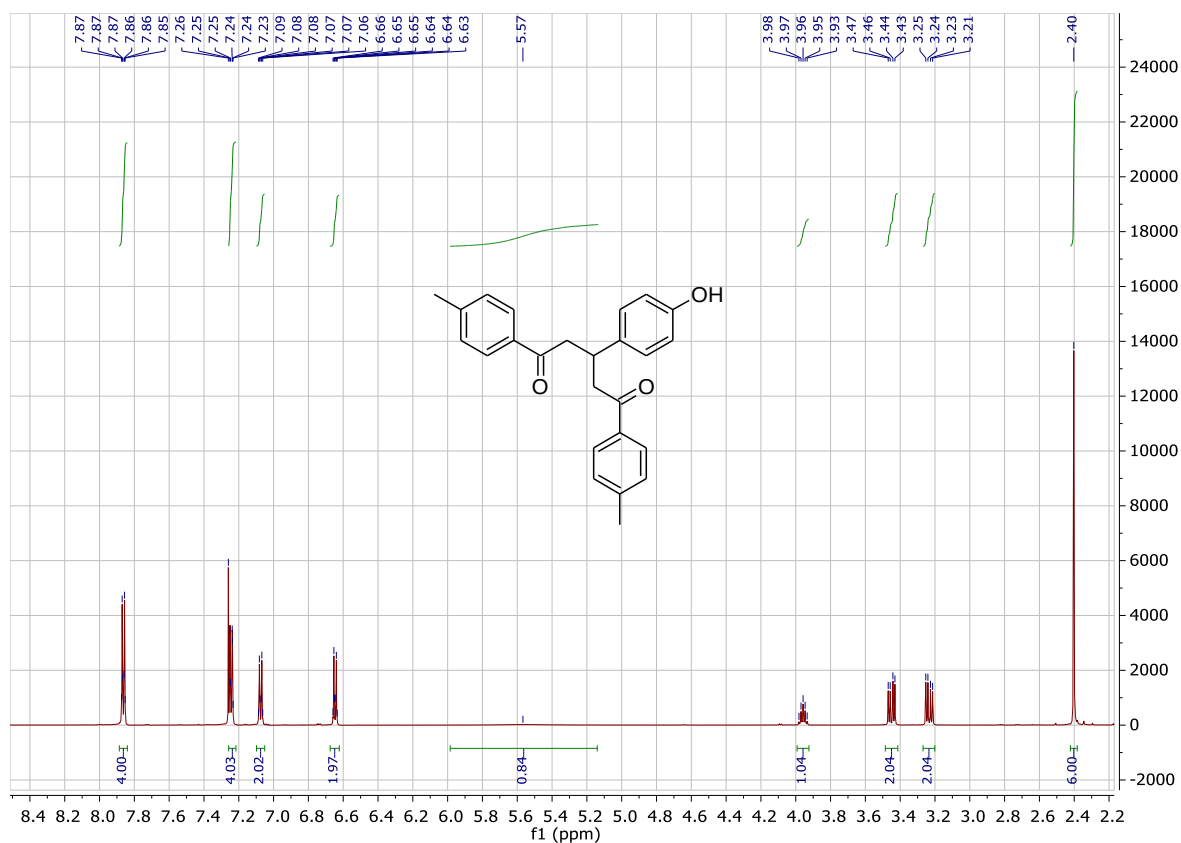


Figure S13. ^1H -NMR (600 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1,5-di-(4-methylphenyl)pentane-1,5-dione (7)

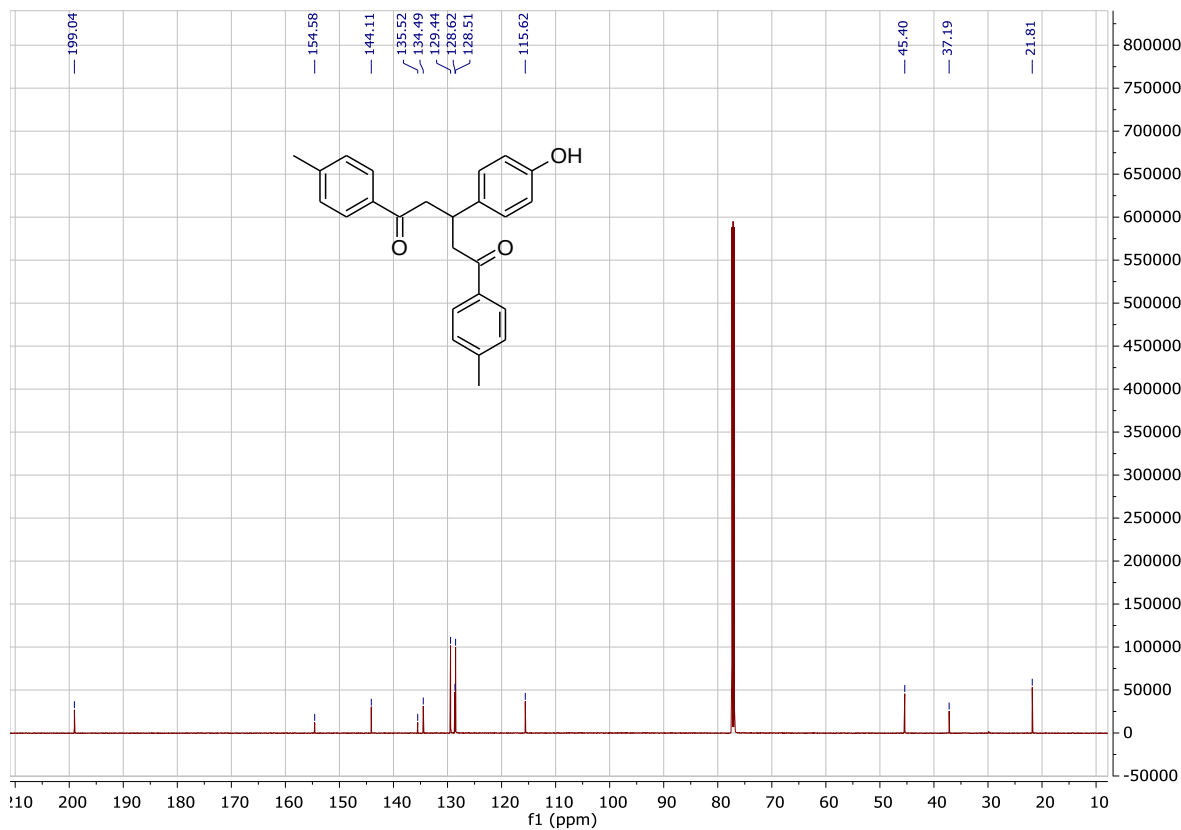


Figure S14. ^{13}C -NMR (150 MHz, Chloroform-*d*) spectrum of 3-(4-hydroxyphenyl)-1,5-di-(4-methylphenyl)pentane-1,5-dione (7)

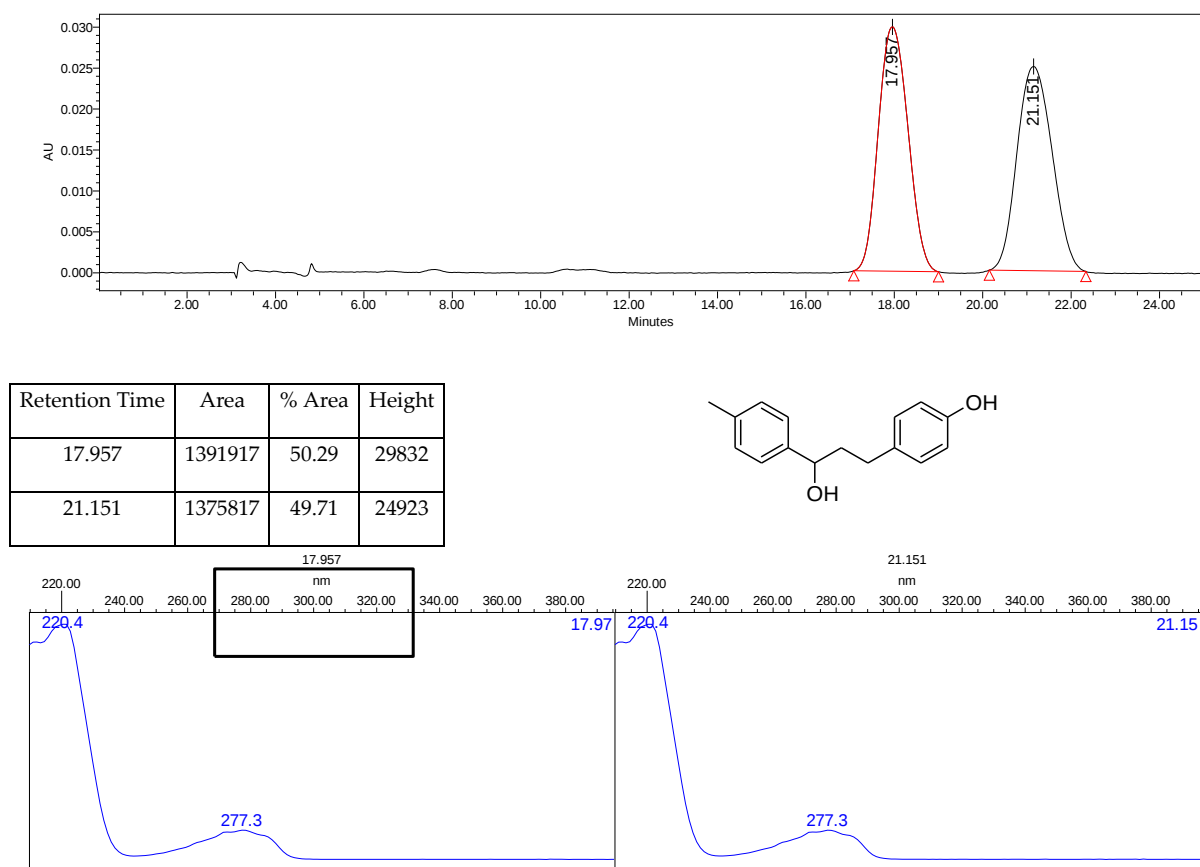


Figure S15. Chiral HPLC analysis and UV ($\lambda = 270$ nm) profile of *(rac)*-3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol.

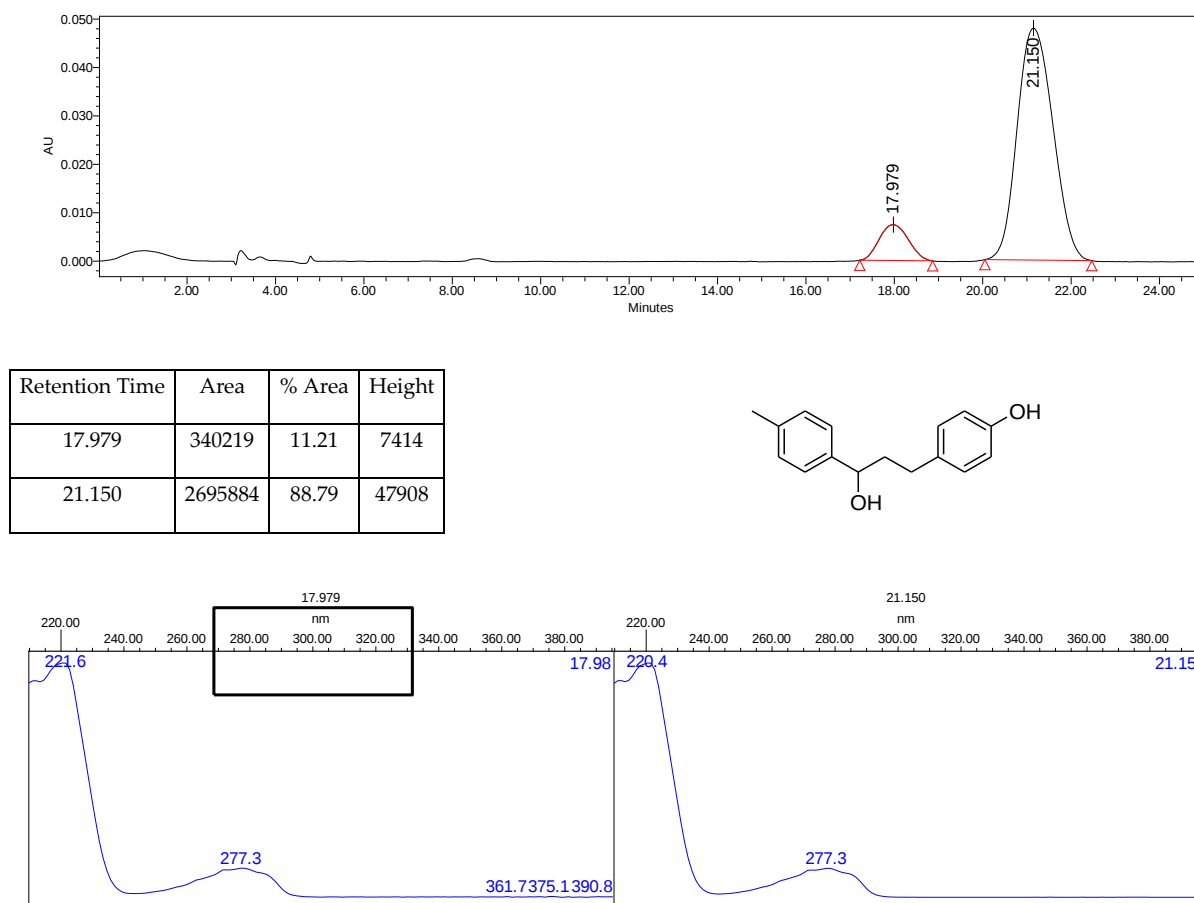


Figure S16. Chiral HPLC analysis and UV ($\lambda = 270$ nm) profile of 3-(4-hydroxyphenyl)-1-(4-methylphenyl)propan-1-ol (6)