Supporting Information

Design, synthesis and investigation of potential anti-inflammatory activity of 7-O-amide hesperetin derivatives

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HRMS, $^1$H NMR and $^{13}$C NMR spectra for the compounds.
**Figure S0.** $^1$H NMR spectra for heperidin:

Hesperidin, C$_{28}$H$_{34}$O$_{15}$, $^1$H NMR (400 MHz, DMSO) δ 12.03 (s, 1H, 5'-OH), 9.10 (s, 1H, 3'-OH), 7.05 – 6.84 (m, 3H, 2'-H, 5'-H, 6'-H), 6.16 – 6.10 (m, 2H, 6-H, 8-H), 5.50 (dd, $J = 12.1, 3.1$ Hz, 1H, 2-H), 5.41 (d, $J = 4.9$ Hz, 1H), 5.19 (t, $J = 5.5$ Hz, 2H), 4.99 (t, $J = 6.7$ Hz, 1H), 4.70 (t, $J = 5.0$ Hz, 1H), 4.63 (dd, $J = 7.4, 4.4$ Hz, 1H), 4.58 – 4.45 (m, 2H), 3.77 (s, 3H, OCH$_3$), 3.64-3.62 (m, 1H), 3.57 – 3.48 (m, 1H), 3.47 – 3.36 (m, 3H), 3.31 – 3.19 (m, 4H), 3.19 – 3.07 (m, 2H), 2.77 (dd, $J = 17.2, 2.9$ Hz, 1H, 3-H), 1.08 (d, $J = 5.9$ Hz, 3H, CH$_3$).
**Figure S1.** HRMS, $^1$H NMR and $^{13}$C NMR spectra for the compound 1:
Figure S2. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 2
Figure S3. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 3:
Figure S4. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4a:
**Figure S5.** HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4b:
Figure S6. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4c:
Figure S7. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4d:
Figure S8. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4e:
Figure S9. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4f:
Figure S10. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound $4g$:
Figure S11. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4h:
Figure S12. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4i:
Figure S13. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4j:
Figure S14. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4k:
Figure S15. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 4l:
Figure S16. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 5a:
Figure S17. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 5b:
Figure S18. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 6a:
Figure S19. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 6b:
Figure S20. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 6c:
Figure S21. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 6d:
Figure S22. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 6e:
Figure S23. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 6f:
Figure S24. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 7a:
Figure S25. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 7b:
Figure S26. HRMS, $^1$H NMR and $^{13}$C NMR spectra for the target compound 7c: