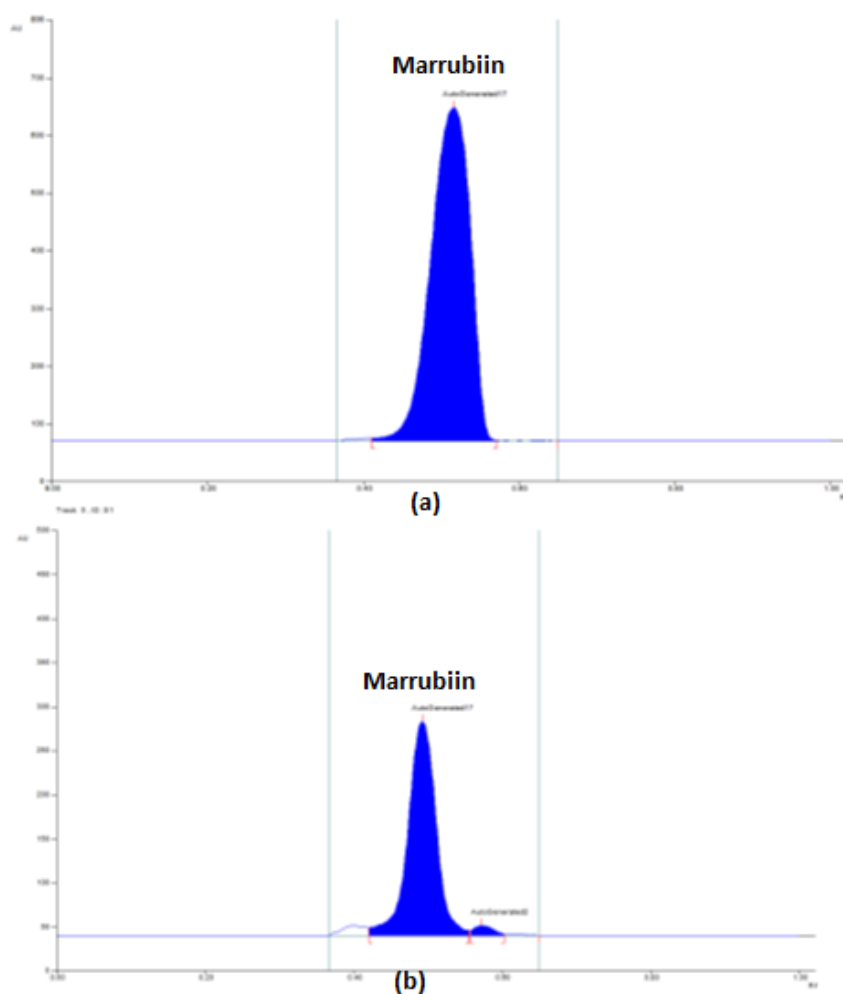


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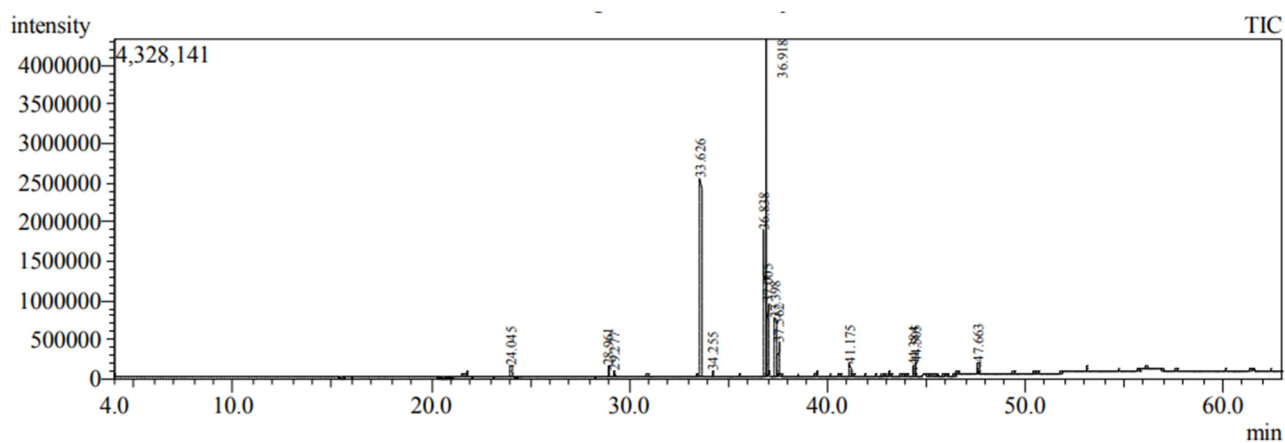
# Analysis of Marrubiin in *Marrubium alysson* L. Extract Using Advanced HPTLC: Chemical Profiling, Acetylcholinesterase Inhibitory Activity and Molecular Docking

## Supplementary Materials

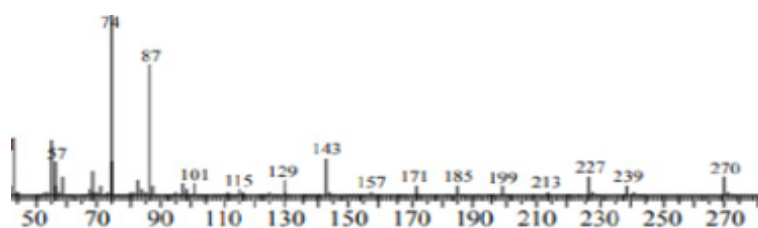
- 1) **Figure S1.** Chromatograms of HPTLC scanned at  $\lambda = 510$  nm (a: standard marrubiin, b: *M. alysson* L. extract)
- 2) **Figure S2.** Chromatogram of GC-MS analysis of fatty acid methyl esters of *M. alysson* L.
- 3) **Figure S3.** Mass spectra of major phytochemicals listed in Table 1.
- 4) **Figure S4.** Chromatogram of GC-MS analysis of unsaponifiable matter of *M. alysson* L.
- 5) **Figure S5.** Mass spectrum of phytol, a major phytochemical listed in Table 2.



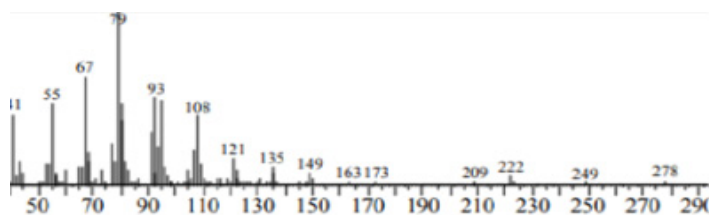
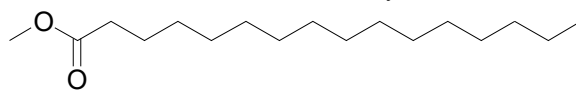
**Figure S1.** Chromatograms of HPTLC scanned at  $\lambda = 510$  nm (a: standard marrubiin, b: *M. alysson* L. extract)



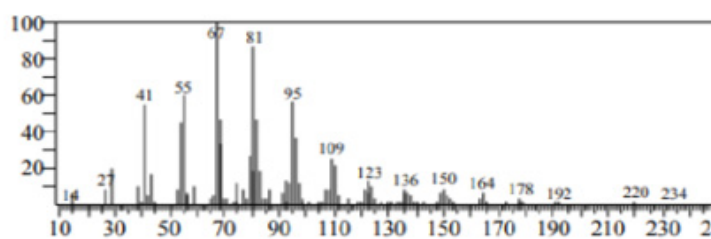
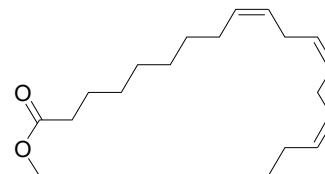
**Figure S2.** Chromatogram of GC-MS analysis of fatty acid methyl esters of *M. alysson* L.



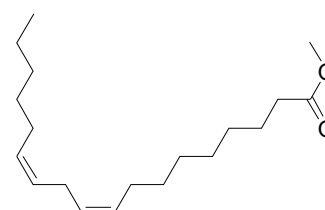
Hexadecanoic acid, methyl ester



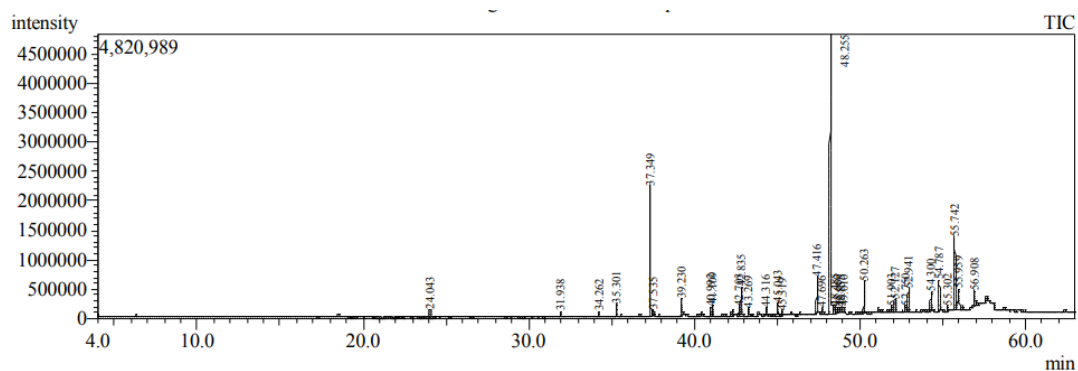
9, 12, 15-Octadecatrienoic acid, methyl ester, (Z,Z,Z)-



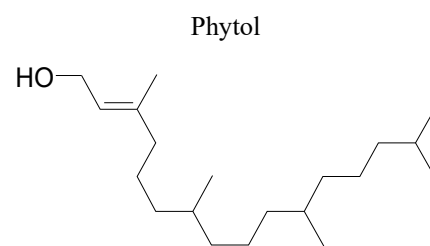
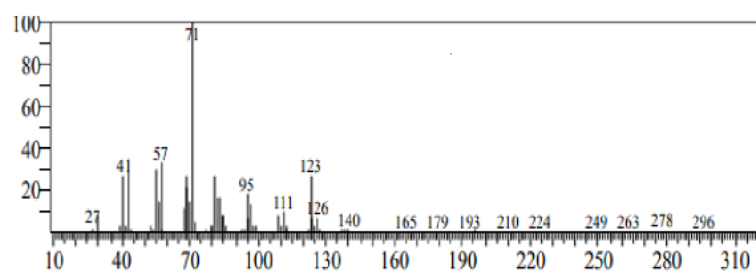
9,12-Octadecadienoic acid (Z,Z)-, methyl ester



**Figure S3.** Mass spectra of major phytochemicals listed in Table 1.



**Figure S4.** Chromatogram of GC-MS analysis of unsaponifiable matter of *M. alysson* L.



**Figure S5.** Mass spectrum of phytol, a major phytochemical listed in Table 2.