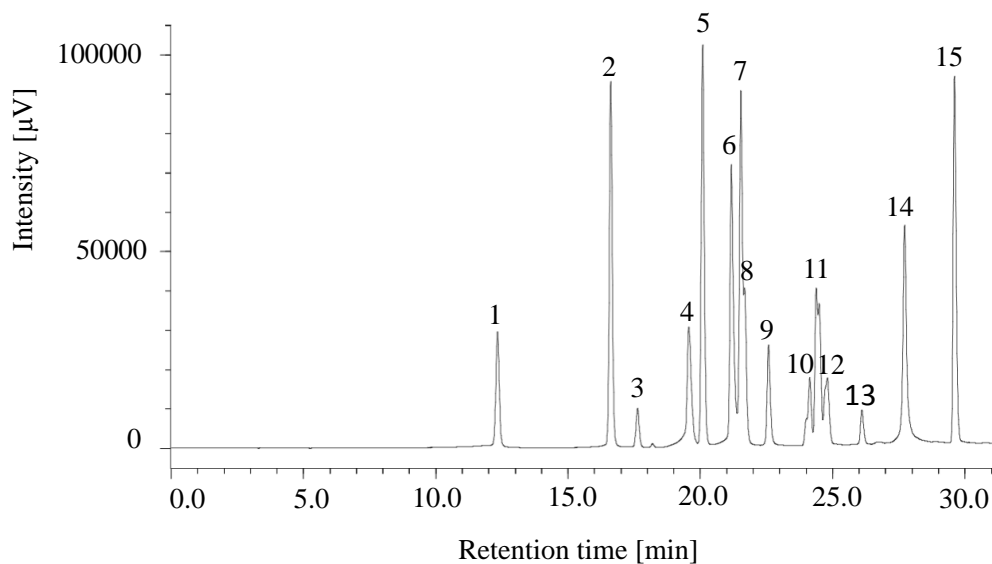
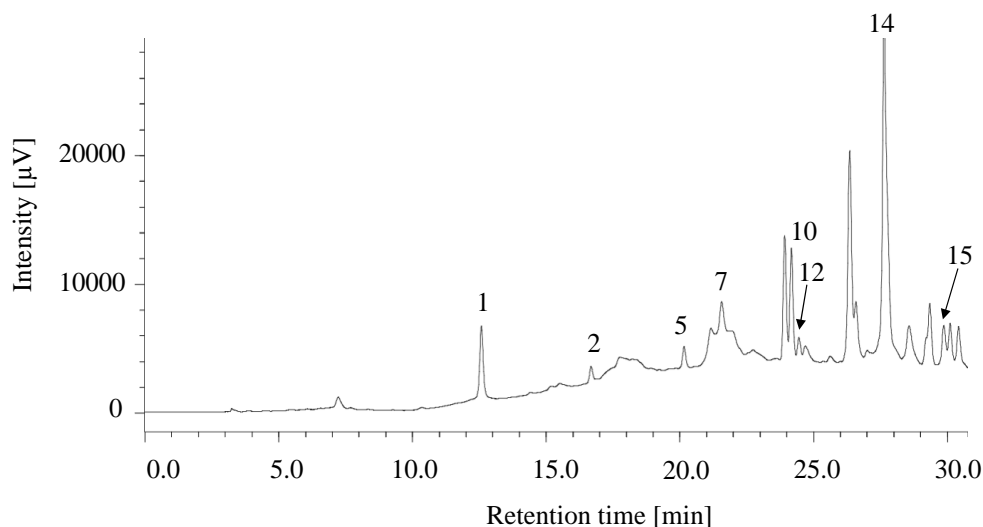


# Weed Suppressing Potential and Isolation of Potent Plant Growth Inhibitors from *Castanea crenata* Sieb. et Zucc

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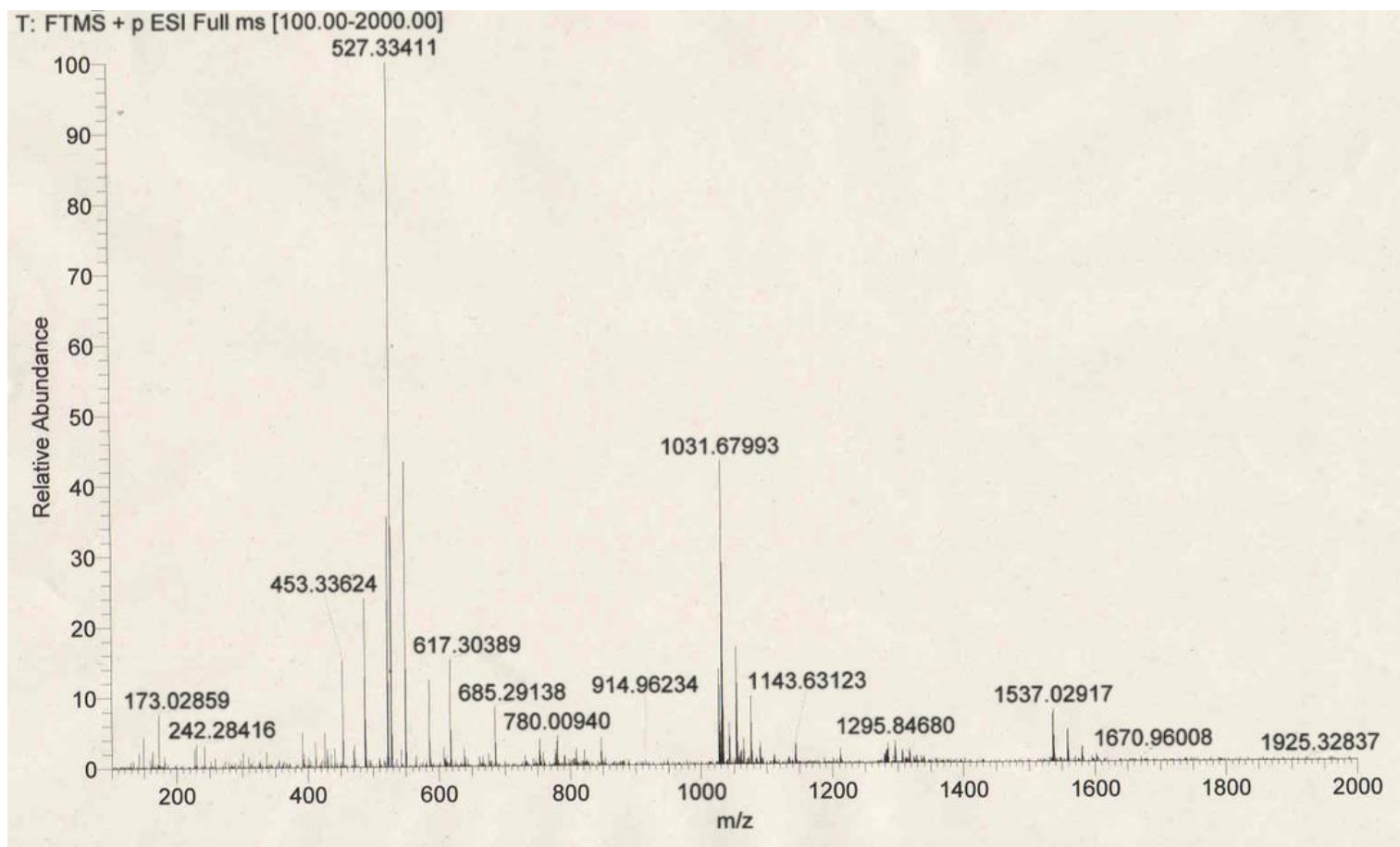
(a)



(b)

**Supplement Material, Figure S1.** Chromatograms of phenolic standard mixture (a) and ethyl acetate extract (b). Peaks 1: gallic acid; 2: protocatechuic acid; 3: catechol; 4: chlorogenic acid; 5: *p*-hydroxybenzoic acid; 6: vanillic acid; 7: caffeic acid; 8: syringic acid; 9: vanillin; 10: ferulic acid; 11: sinapic acid; 12: *p*-coumaric acid; 13: benzoic acid; 14: ellagic acid; 15: cinnamic acid.





Supplement Material, Figure S2. LC-MS spectrum of 2a,3b,7b,23-tetrahydroxurs-12-ene-28-oic acid (compound 1) in positive mode

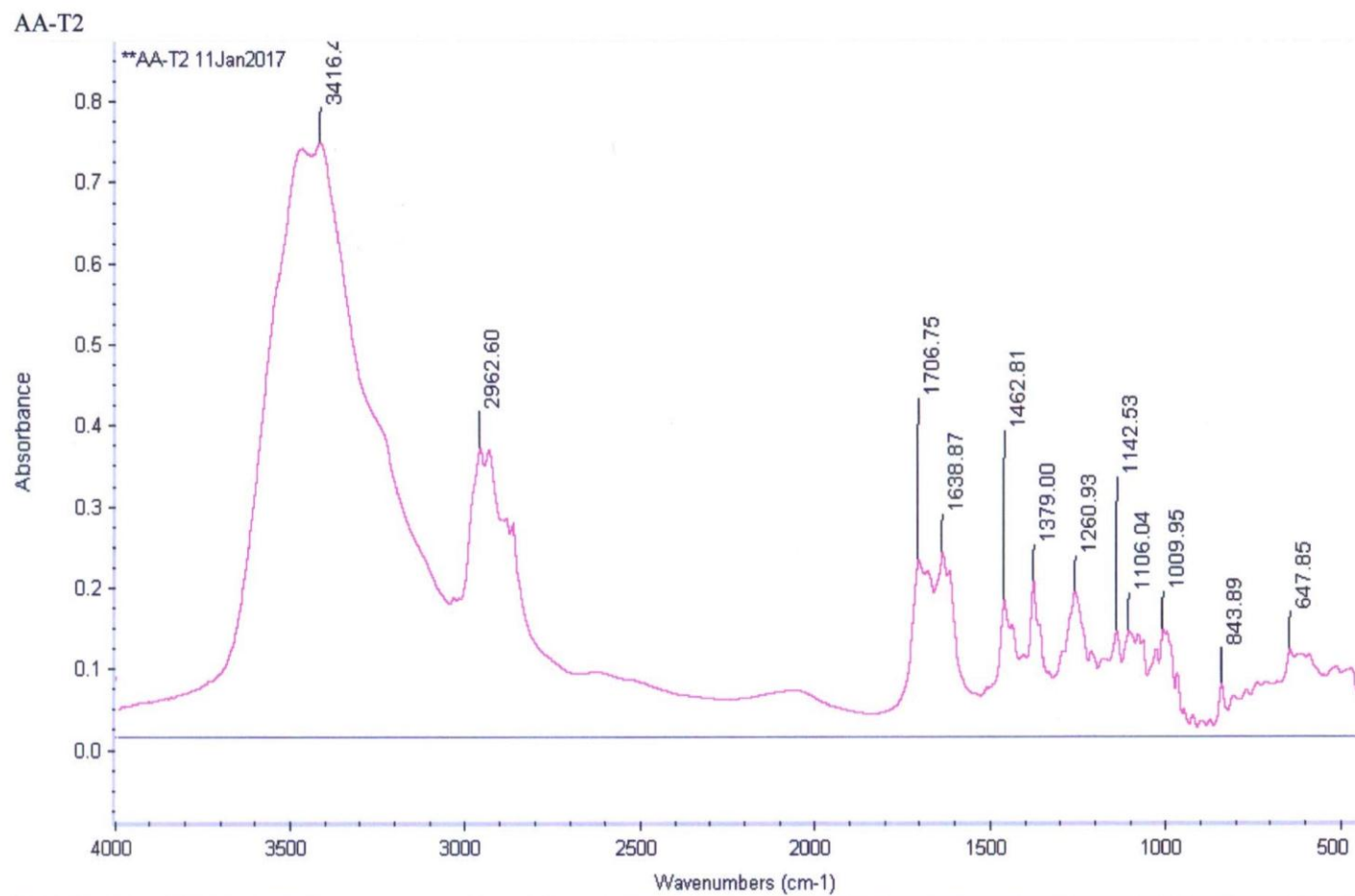
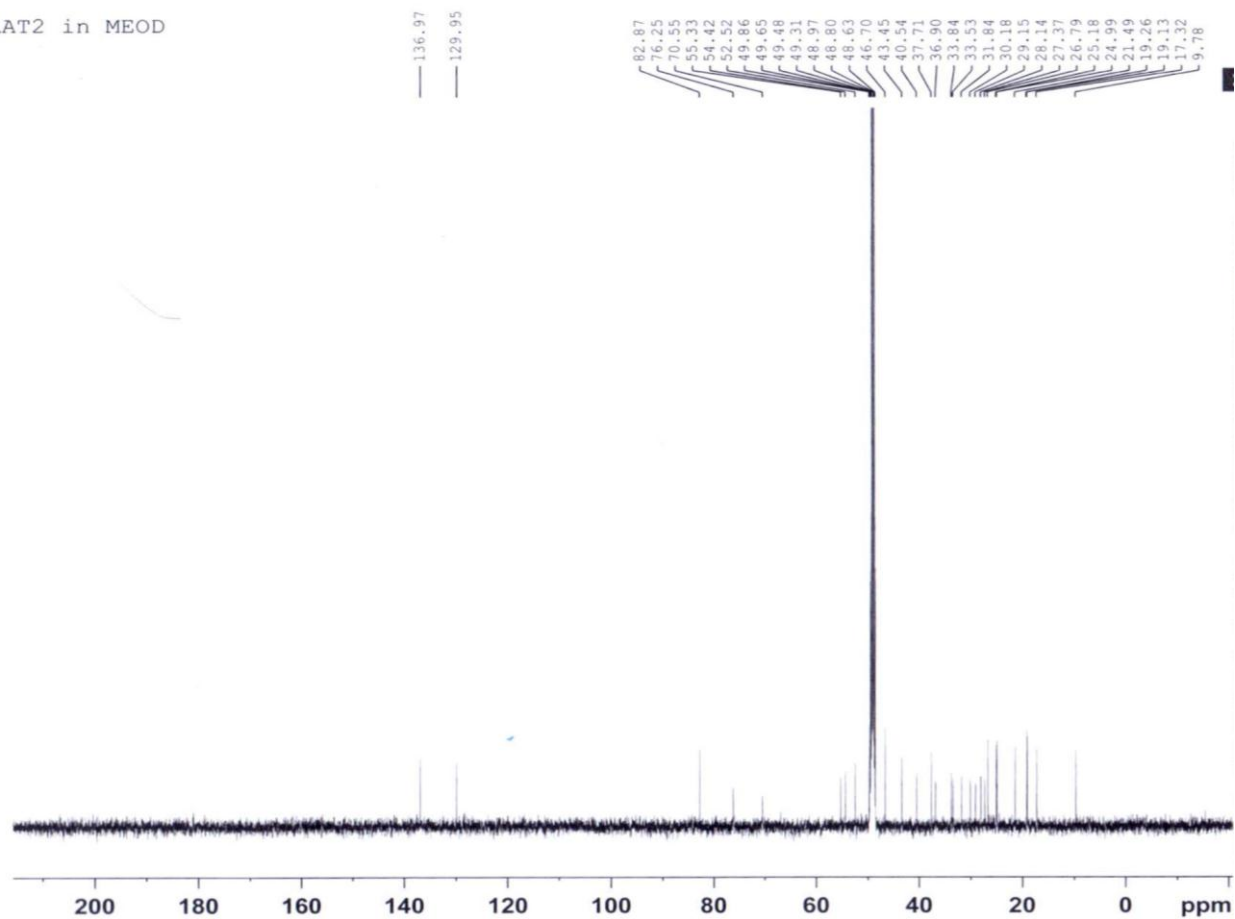


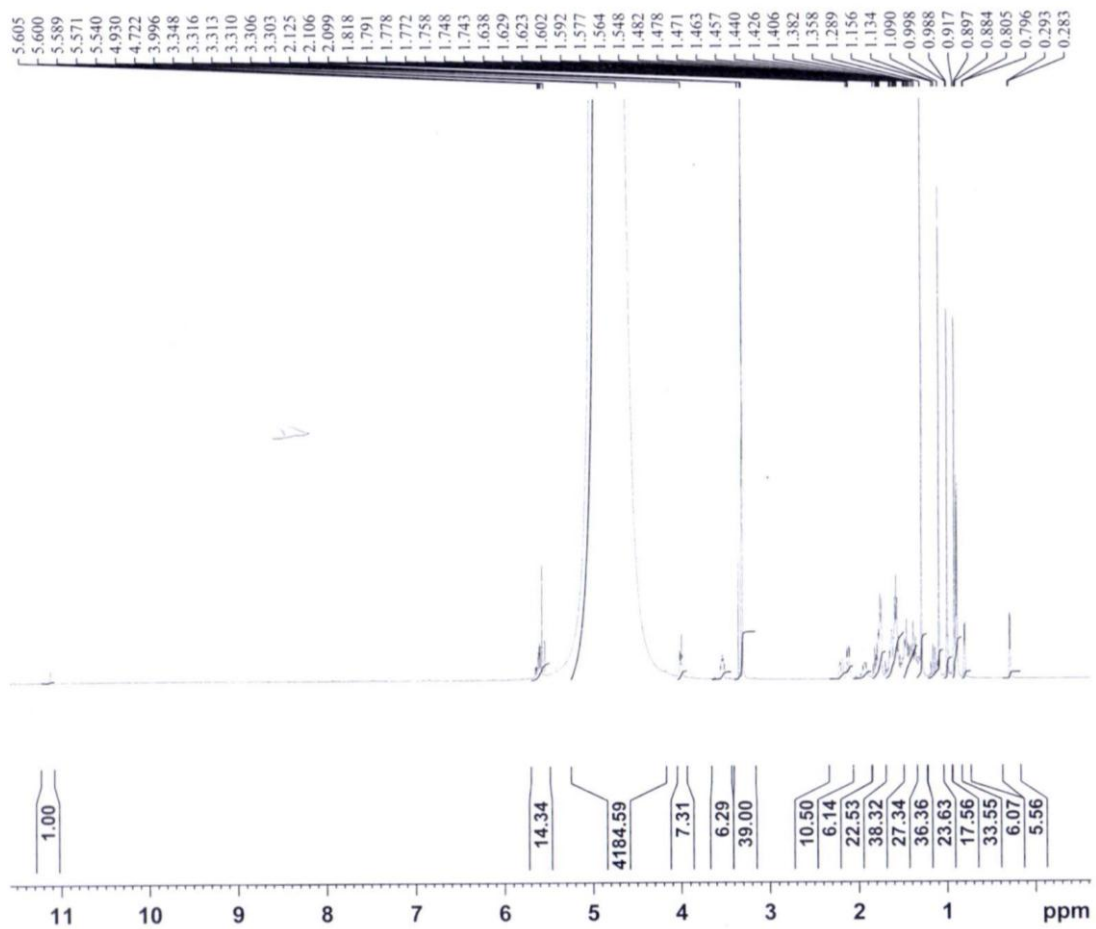
Figure AP2.

**Supplement Material, Figure S3.** Infrared spectrum (IR) of 2a,3b,7b,23-tetrahydroxyurs-12-ene-28-oic acid (compound 1).

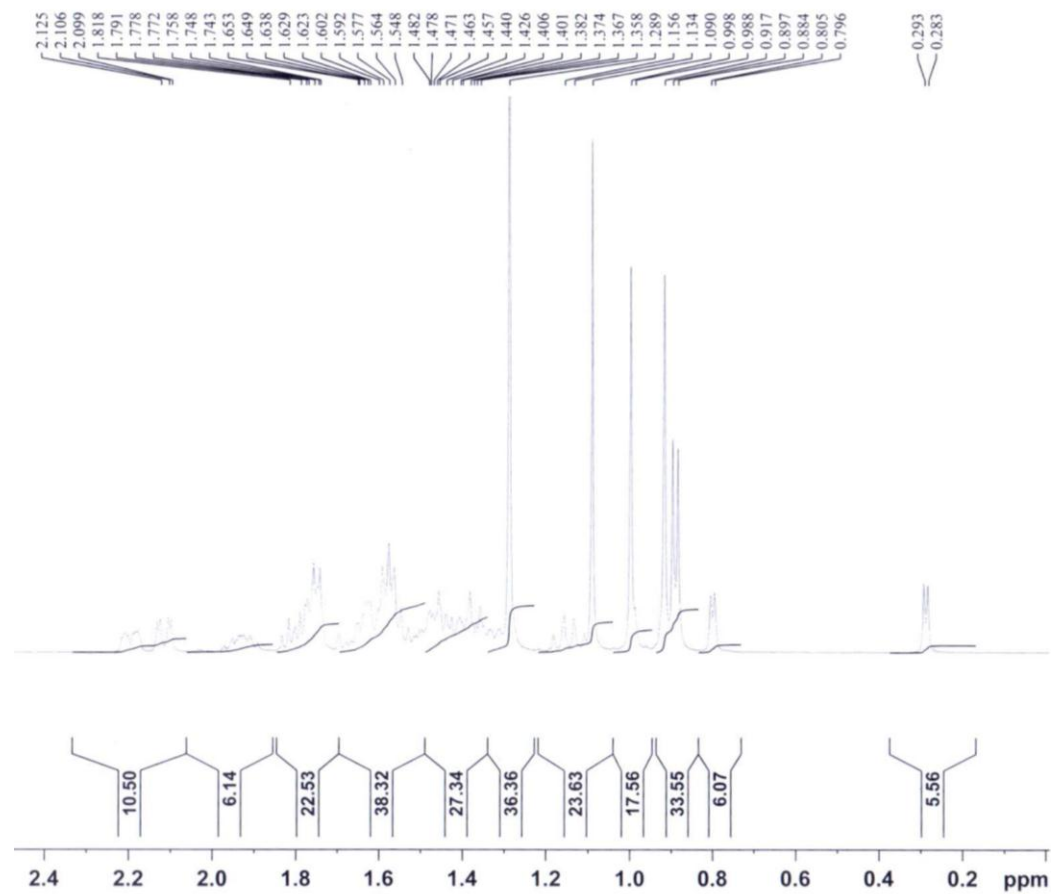
AAT2 in MEOD



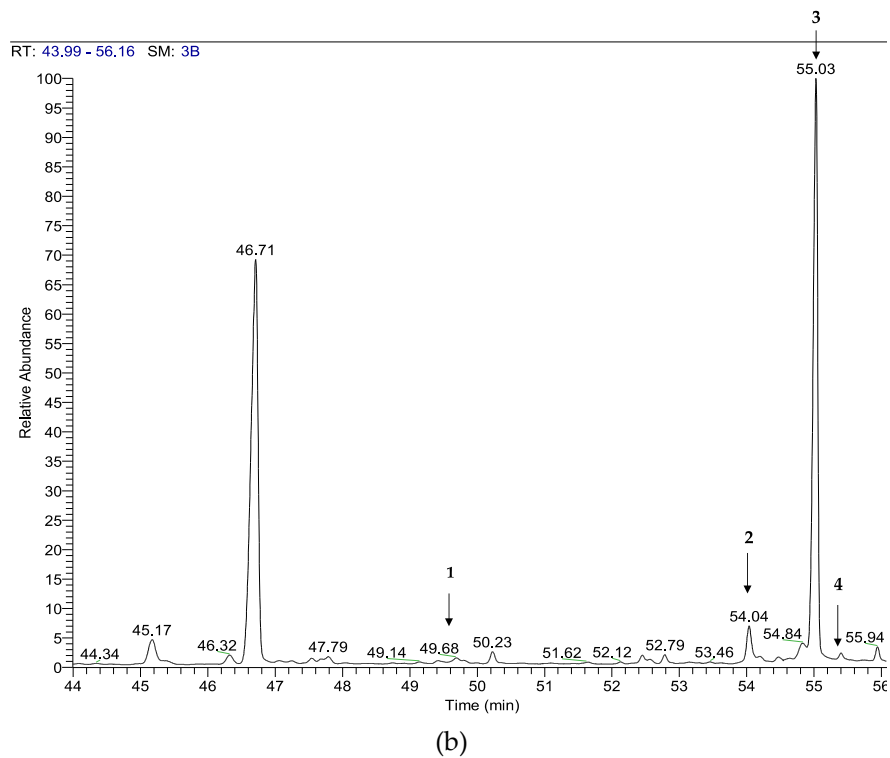
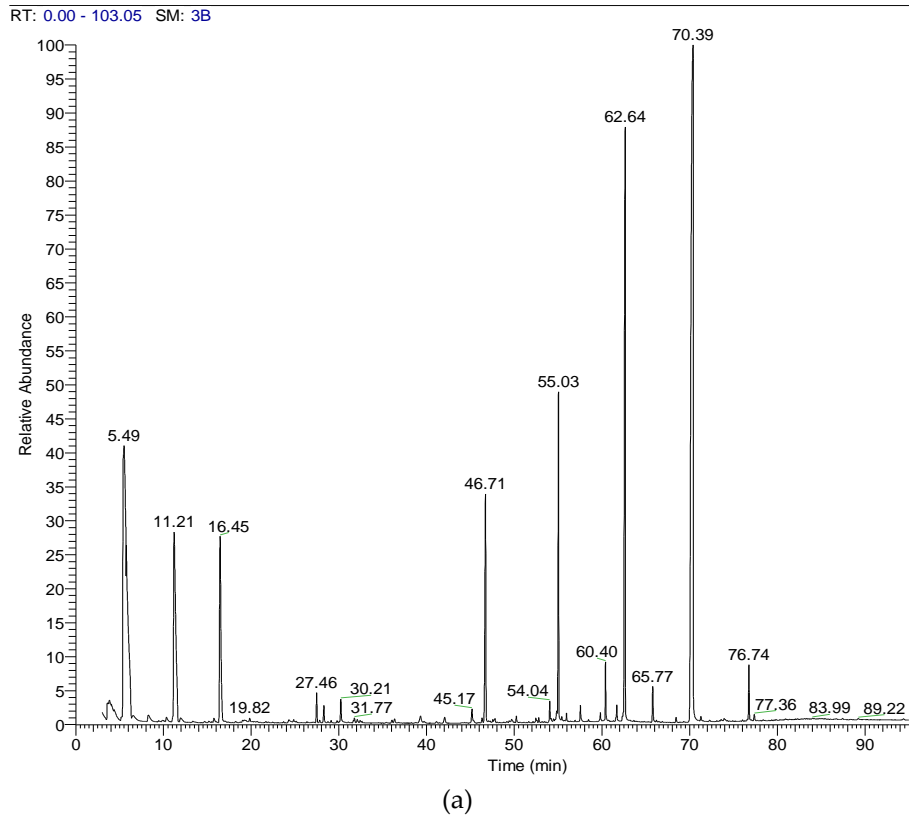
Supplement Material, Figure S4.  $^{13}\text{C}$  NMR spectrum of 2a,3b,7b,23-tetrahydroxyurs-12-ene-28-oic acid (compound 1) in  $\text{CD}_3\text{OD}$



Supplement Material, Figure S5. <sup>1</sup>H NMR spectrum of 2a,3b,7b,23-tetrahydroxyurs-12-ene-28-oic acid (compound 1) from 1–10 ppm



**Supplement Material, Figure S6.** <sup>1</sup>H NMR spectrum of (2a,3b,7b,23-tetrahydroxyurs-12-ene-28-oic acid (compound 1) expansion of the signal from 0.2-2.4 ppm in CD<sub>3</sub>OD



**Supplement Material, Figure S7.** GC-MS Chromatogram of *C. crenata* ethyl acetate leaf extract (a) from 0 to 90 (min), and (b) from 44 to 56 (min). Peak 1: Protocatechuic acid; 2: *p*-hydrobenzoic acid; 3: Gallic acid; 4: Caffeic acid.