

SUPPLEMENTARY MATERIALS

S1. NMR spectra of extracted metabolites

Here below the ^1H -NMR spectra of fumarprotocetraric acid and atranorin are reported. Results are in accordance with those reported in literature (Figure S1 and 2).

Fumarprotocetraric acid: ^1H -NMR in DMSO-d_6 , δ (ppm): 10.57 (s, 1H, COH), 6.82 (s, 1H, CH), 6.62 (s, 1H, CHCH), 6.62 (s, 1H, CHCH), 5.28 (s, 2H, CH₂), 2.46 (s, 3H, CH₃), 2.42 (s, 3H, CH₃).

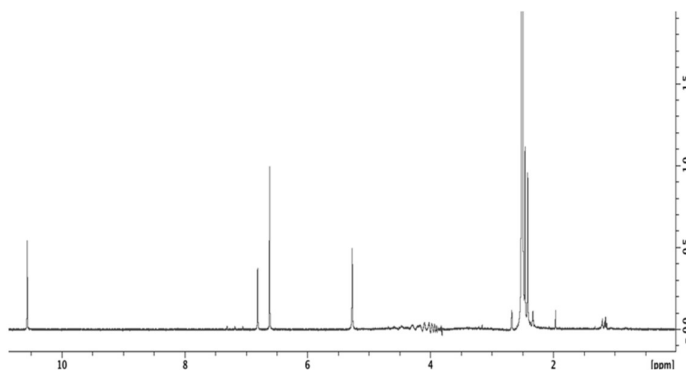


Figure S1: Fumarprotocetraric acid ^1H -NMR spectrum

Atranorin: ^1H -NMR in CDCl_3 , δ (ppm): 12.59 (s, 1H, OH), 12.53 (s, 1H, OH), 11.98 (s, 1H, OH), 10.40 (s, 1H, COH), 6.55 (s, 1H, CH), 6.44 (s, 1H, CH), 4.02 (s, 3H, OCH₃), 2.72 (s, 3H, CH₃), 2.58 (s, 3H, CH₃), 2.13 (s, 3H, CH₃).

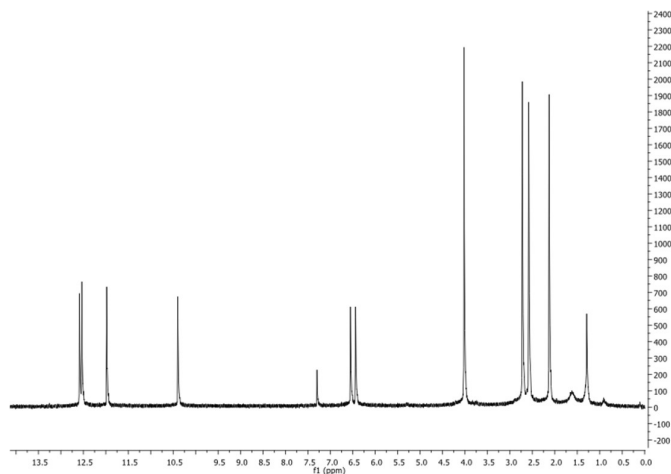


Figure S2: Atranorin ^1H -NMR spectrum

A full characterization of extracted (-)-(S)-usnic acid was performed via mono- and bi-dimensional NMR analysis. Results are coherent with those reported in literature (Figure S3).

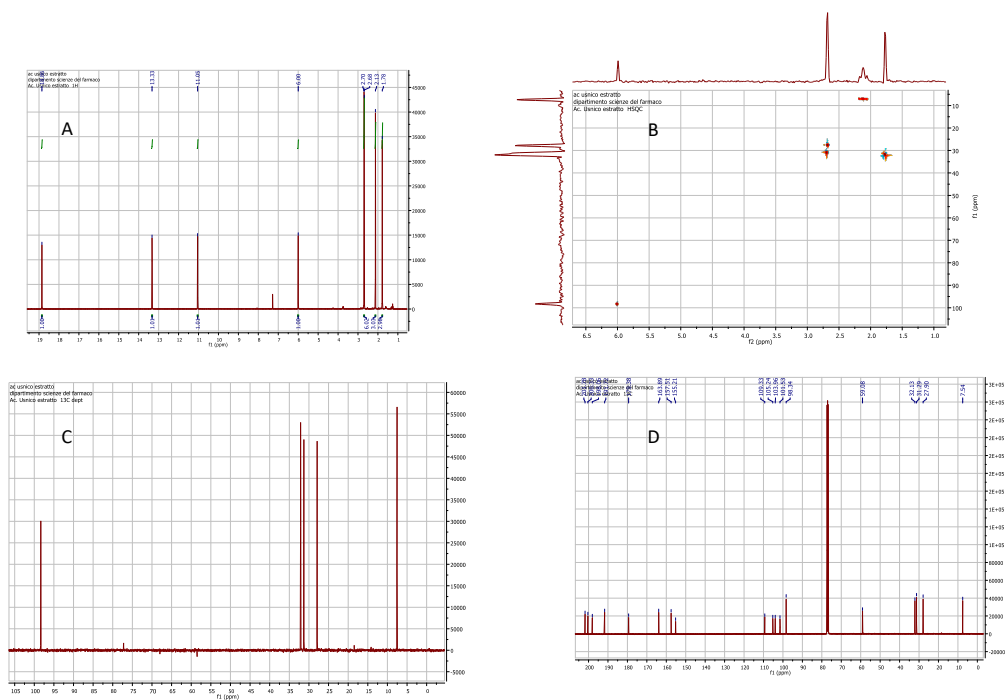


Figure S3: ^1H -NMR (A), HSQC (B), ^{13}C -DEPT (C) and ^{13}C -NMR (D) of (-)-usnic acid after MAE procedure