SUPPLEMENTARY MATERIAL

Markhasphingolipid A, new phytosphingolipid from the leaves of *Markhamia stipulata* var. *canaense* V.S. Dang

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Markhasphingolipid A, new phytosphingolipid from the leaves of *Markhamia stipulata* var. *canaense* V.S. Dang

From the leaves of *Markhamia stipulata* var. *canaense* V.S. Dang, one new phytosphingolipid, named markhasphingolipid A (**6**), together with five known compounds, 4',7-*O*-dimethylapigenin (**1**), narigenin (**2**), tectoquinone (**3**), mollic acid (**4**), 1-hexadecanoyl-*sn*-glycerol **(5)** were classified by various chromatographic methods. Their structures were designated by IR, UV, HR-ESI-MS, HR-ESI-MS/MS and NMR experiments. All compounds were recognized for the first time from this species. The cytotoxicity of all *n*-hexane fractions and isolated compounds (**5** & **6)** against three human cancer cell lines (HeLa, HepG2, and MCF-7) were evaluated by SRB assay. All *n*-hexane fractions expressed cytotoxic effect on three tested cancer cell lines (at the concentration of 100 μg/mL, percent of cytotoxicity ranged from 55.81 to 95.83%) as well as compound **5** (IC_{50} ranged from 48.51 to 63.30 μM) whereas fraction H.I and compound **6** did not show activity.

Keywords: *Markhamia stipulata*; Bignoniaceae; Markhasphingolipid A; cytotoxic activity.

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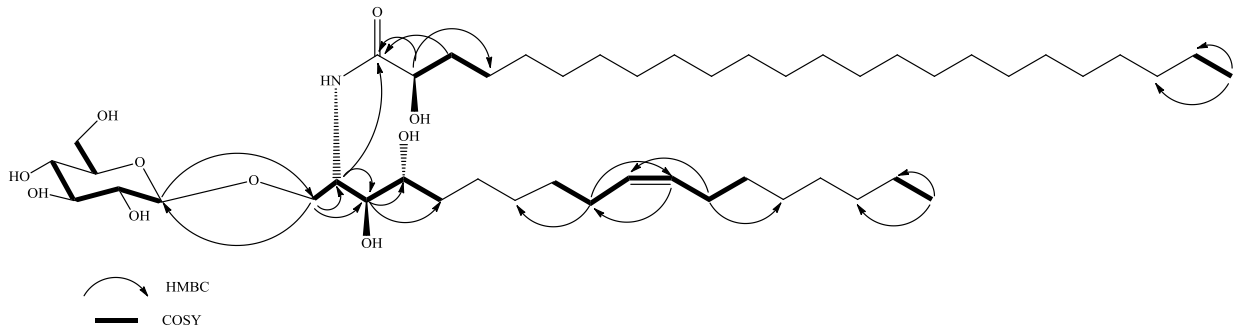

Figure S1. Chemical structures and selected COSY and HMBC correlations of **1**.

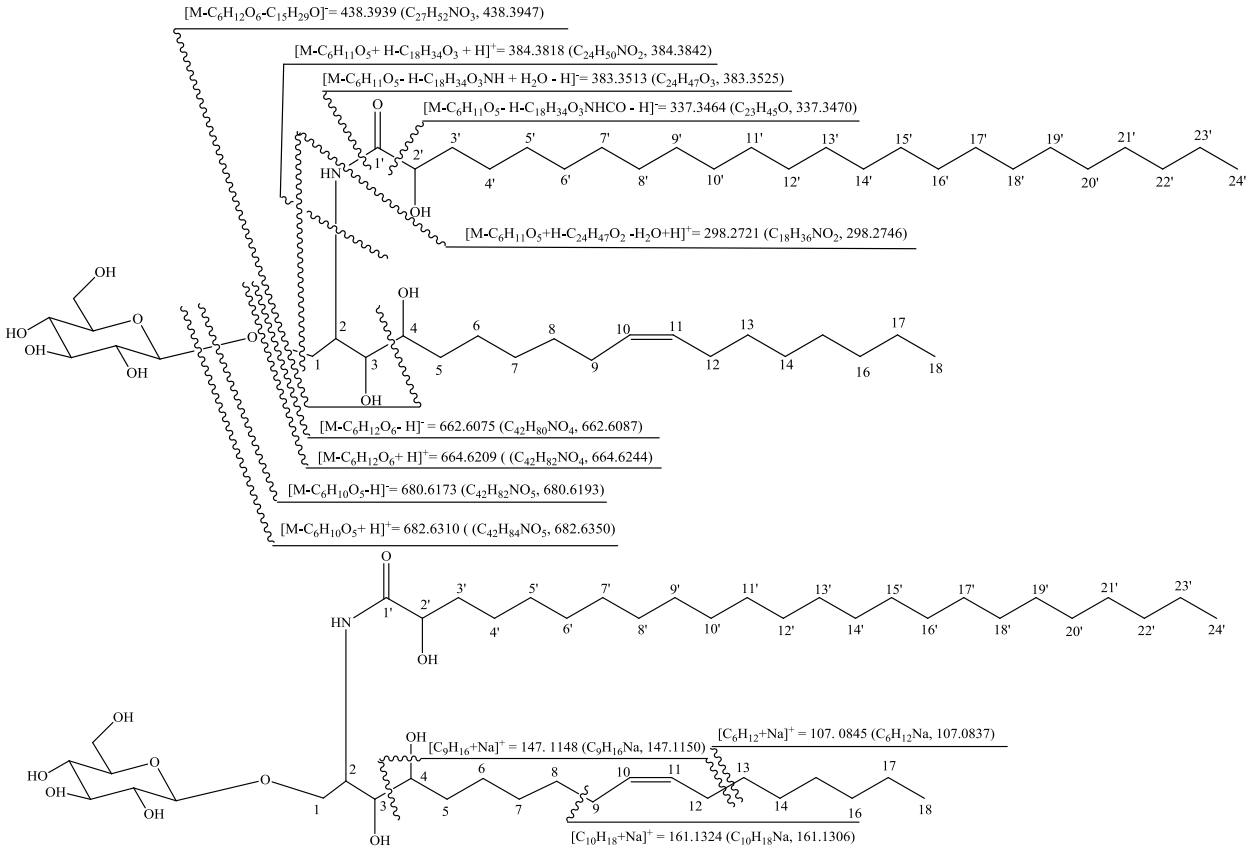

Figure S2. Important fragmentation of compound **1**.

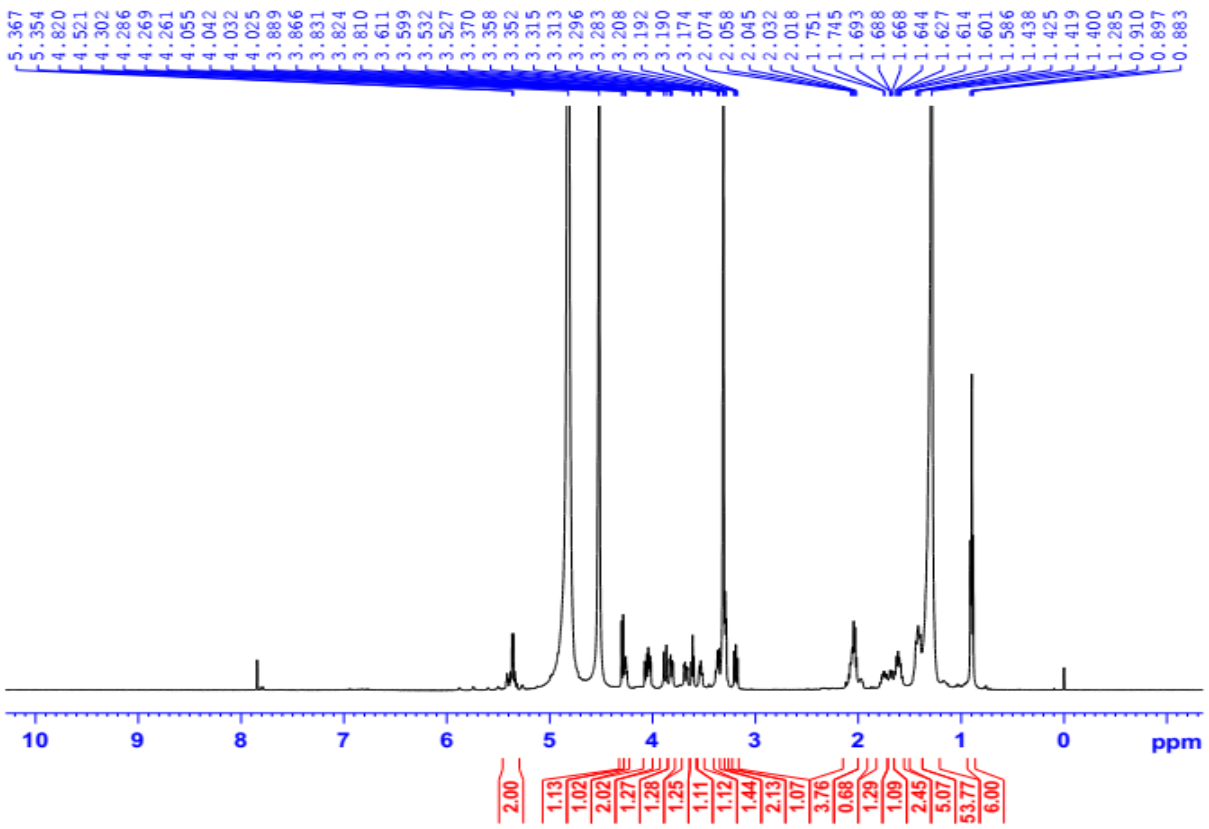

Figure S3. ^{1}H-NMR spectrum (500 MHz) of compound **1** in Methanol-d_4.

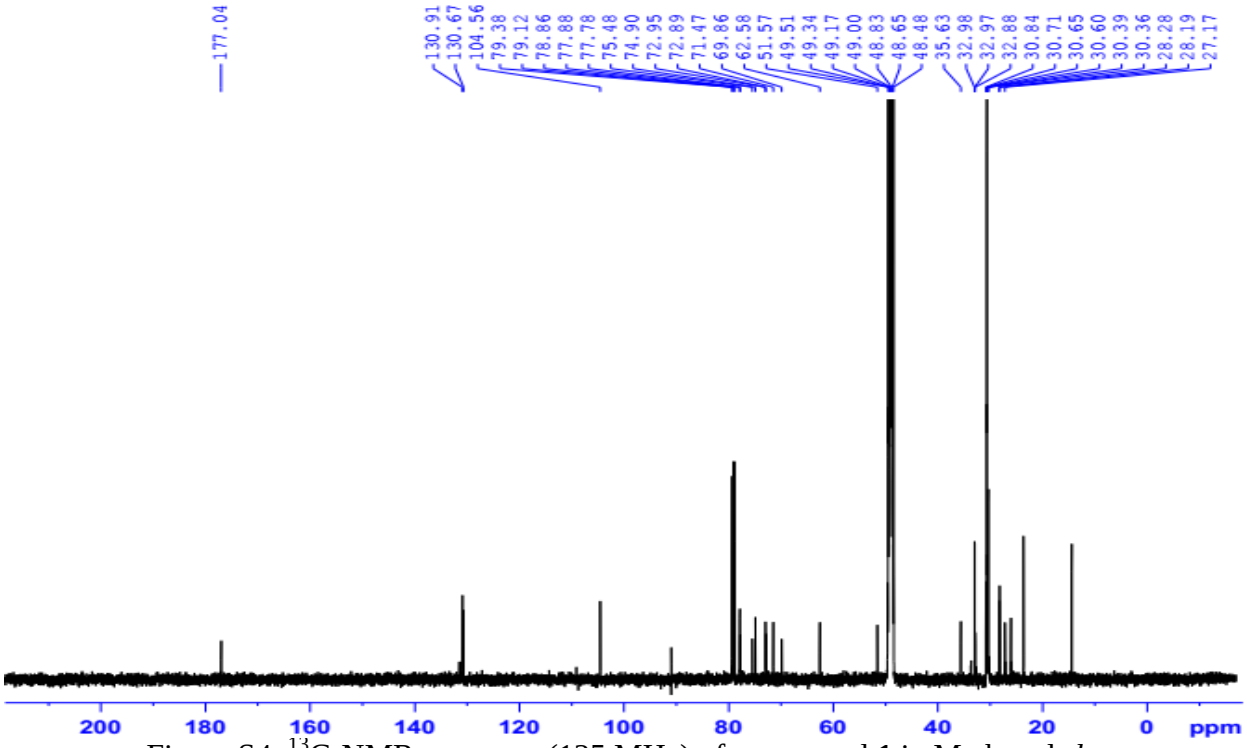

Figure S4. ^{13}C-NMR spectrum (125 MHz) of compound **1** in Methanol-d_4.

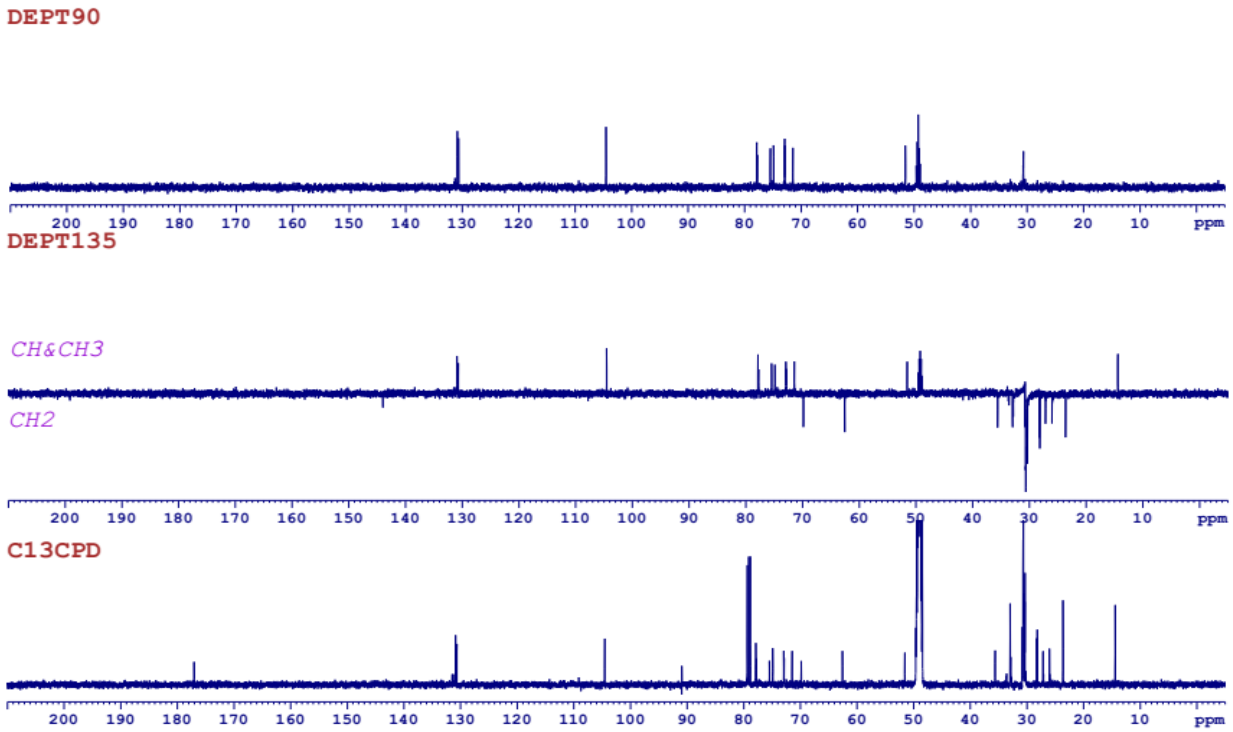

Figure S5. DEPT spectrum of compound **1** in Methanol-d_4.

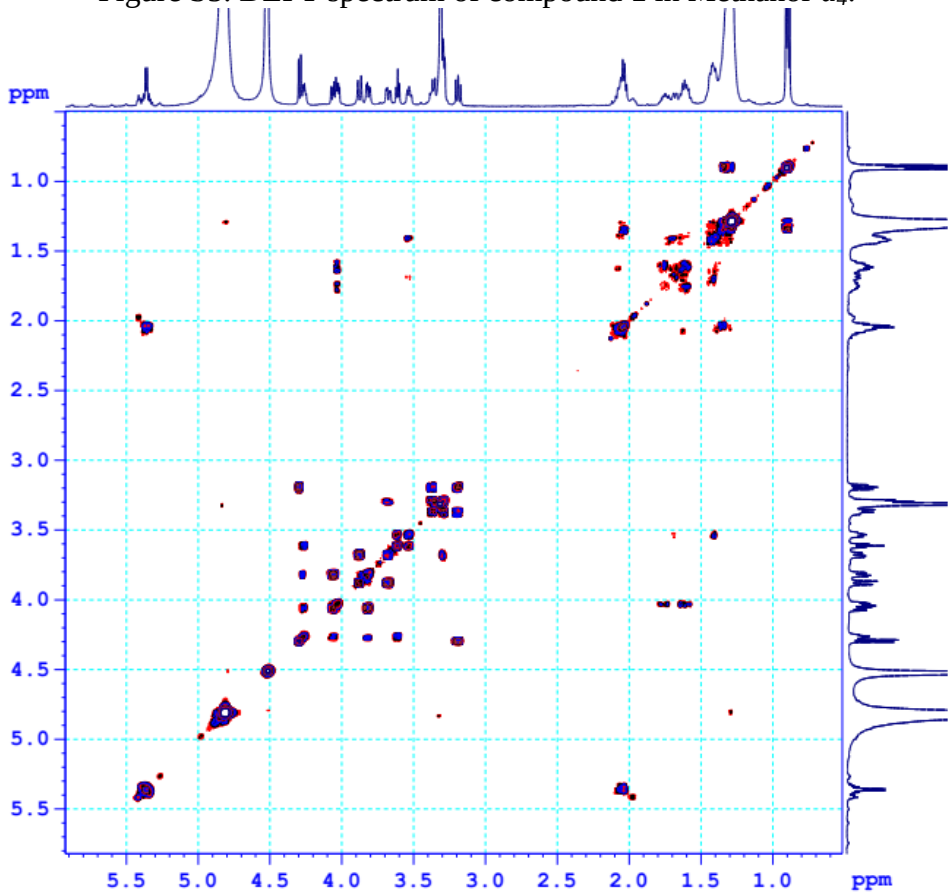

Figure S6. COSY spectrum of compound **1** in Methanol-d_4.

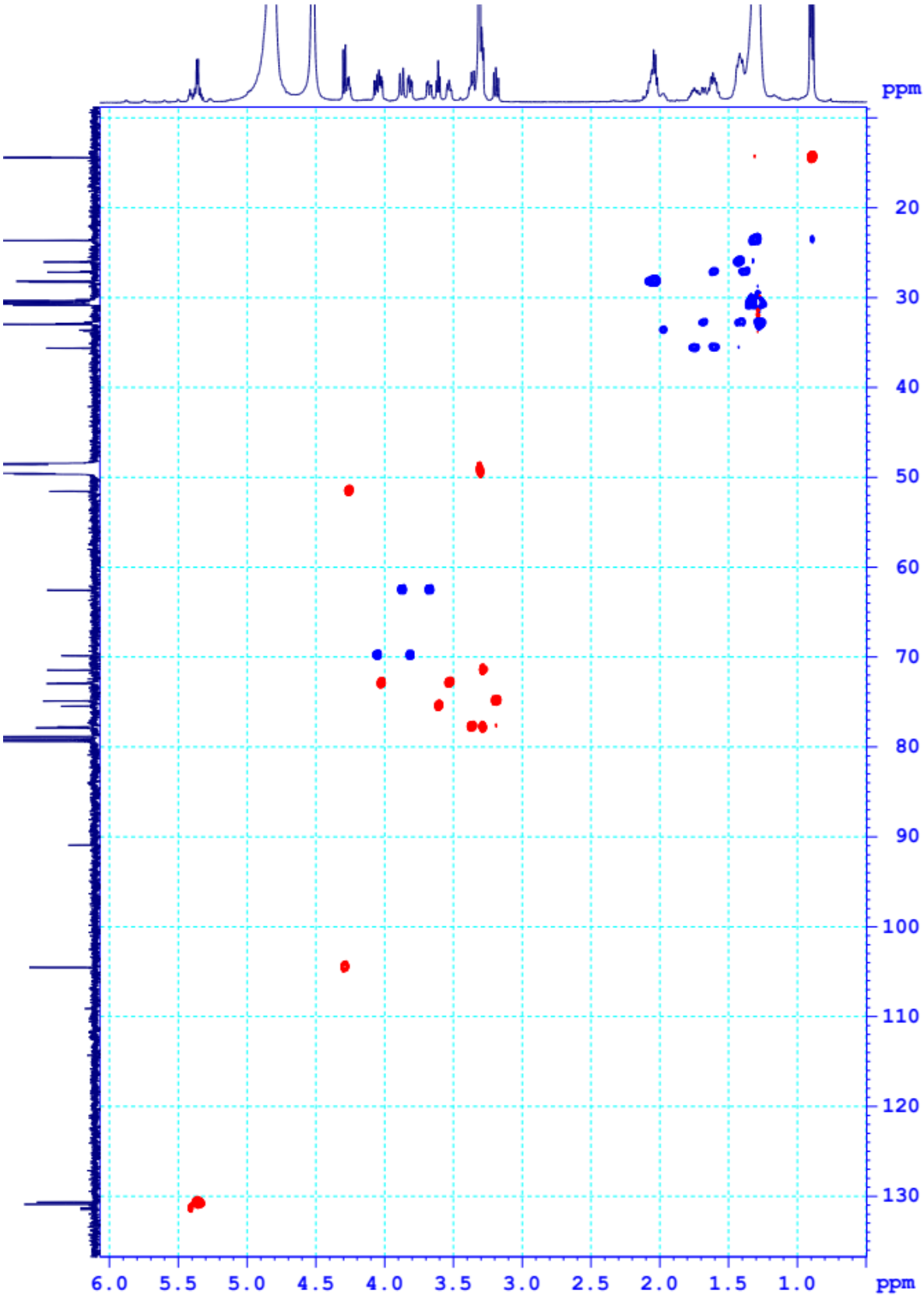

Figure S7. HSQC spectrum of compound **1** in Methanol-d_4.

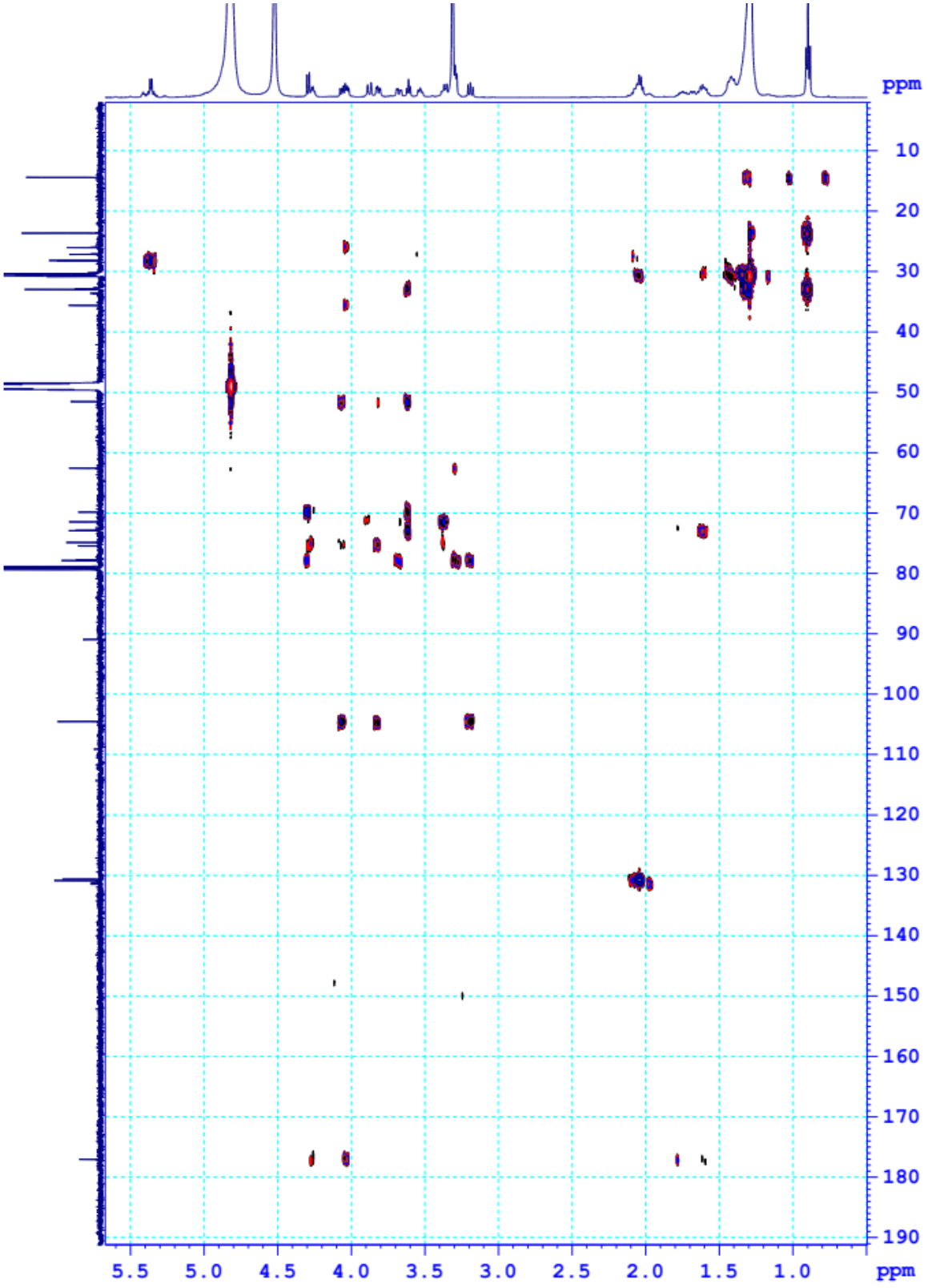

Figure S8. HMBC spectrum of compound **1** in Methanol-d_4.

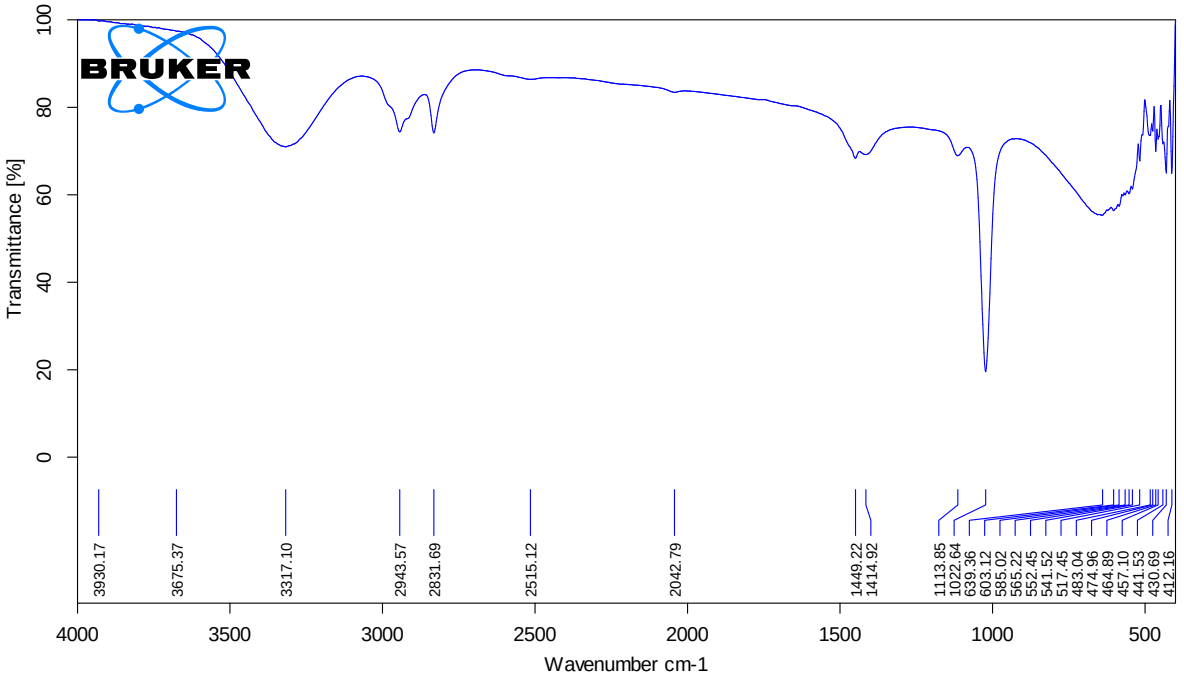

Figure S9. IR spectrum of compound **1**.

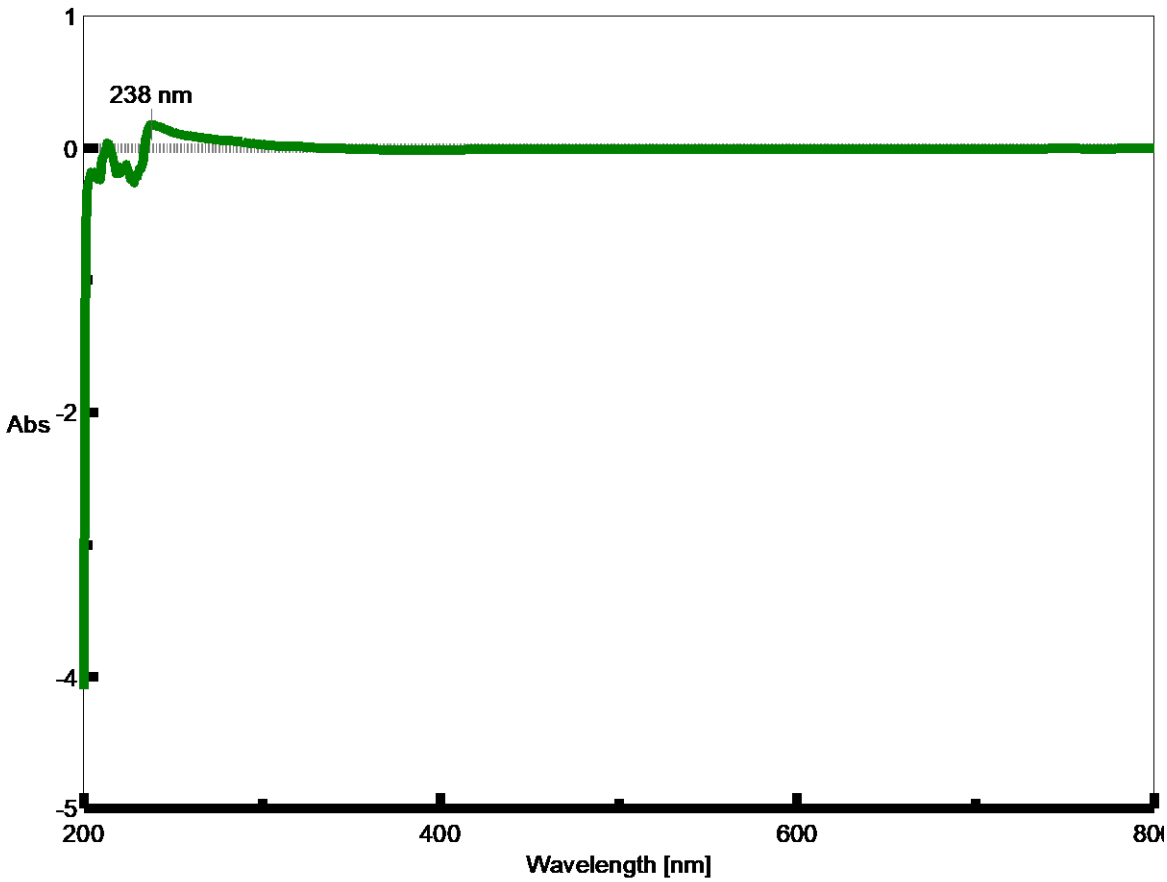

Figure S10. UV-VIS spectrum of compound **1**.

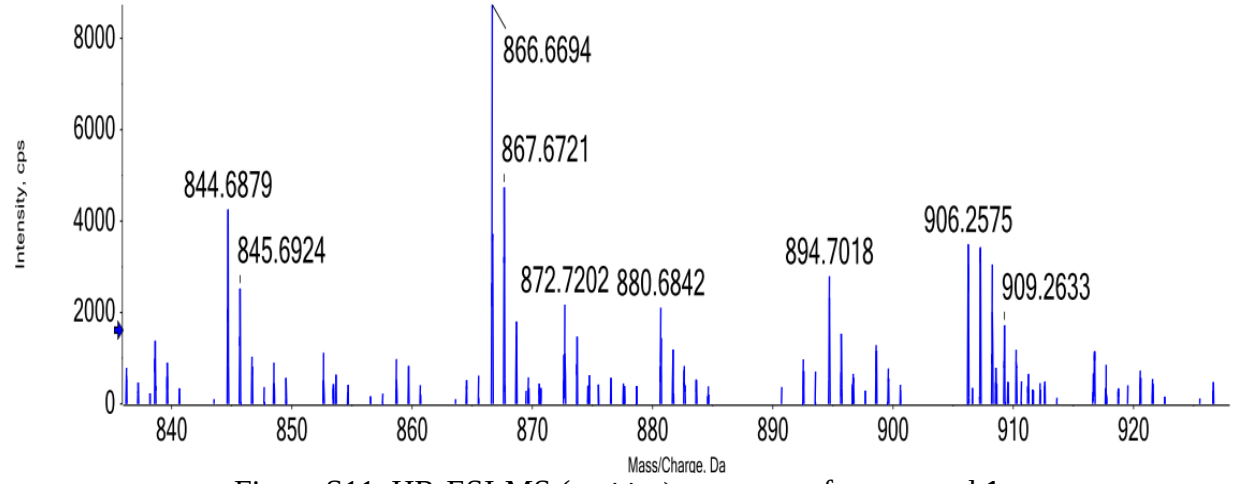

Figure S11. HR-ESI-MS (positive) spectrum of compound **1**.

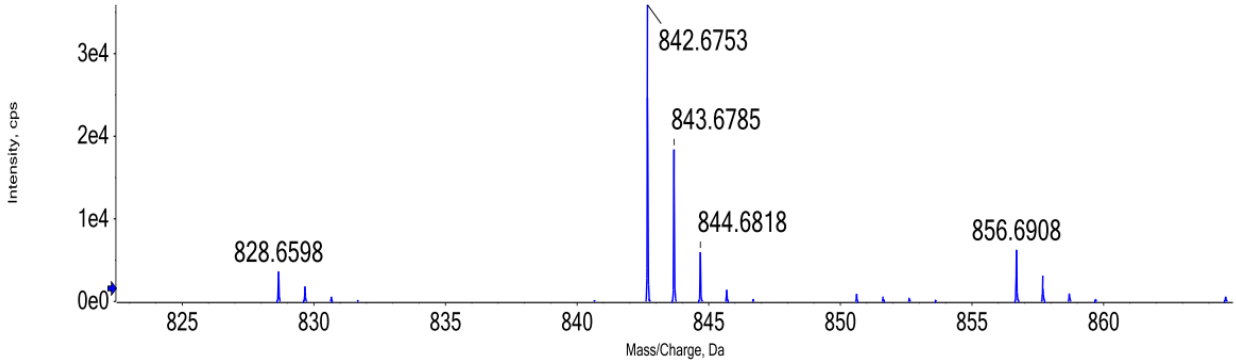

Figure S12. HR-ESI-MS (nagative) spectrum of compound **1**.

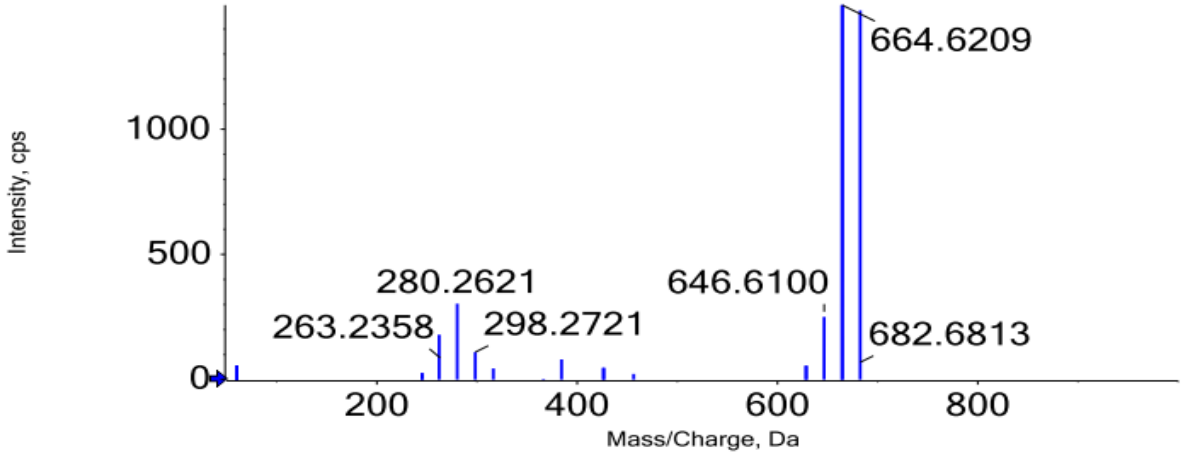

Figure S13. HR-ESI-MS/MS (positive) spectrum of compound **1**.

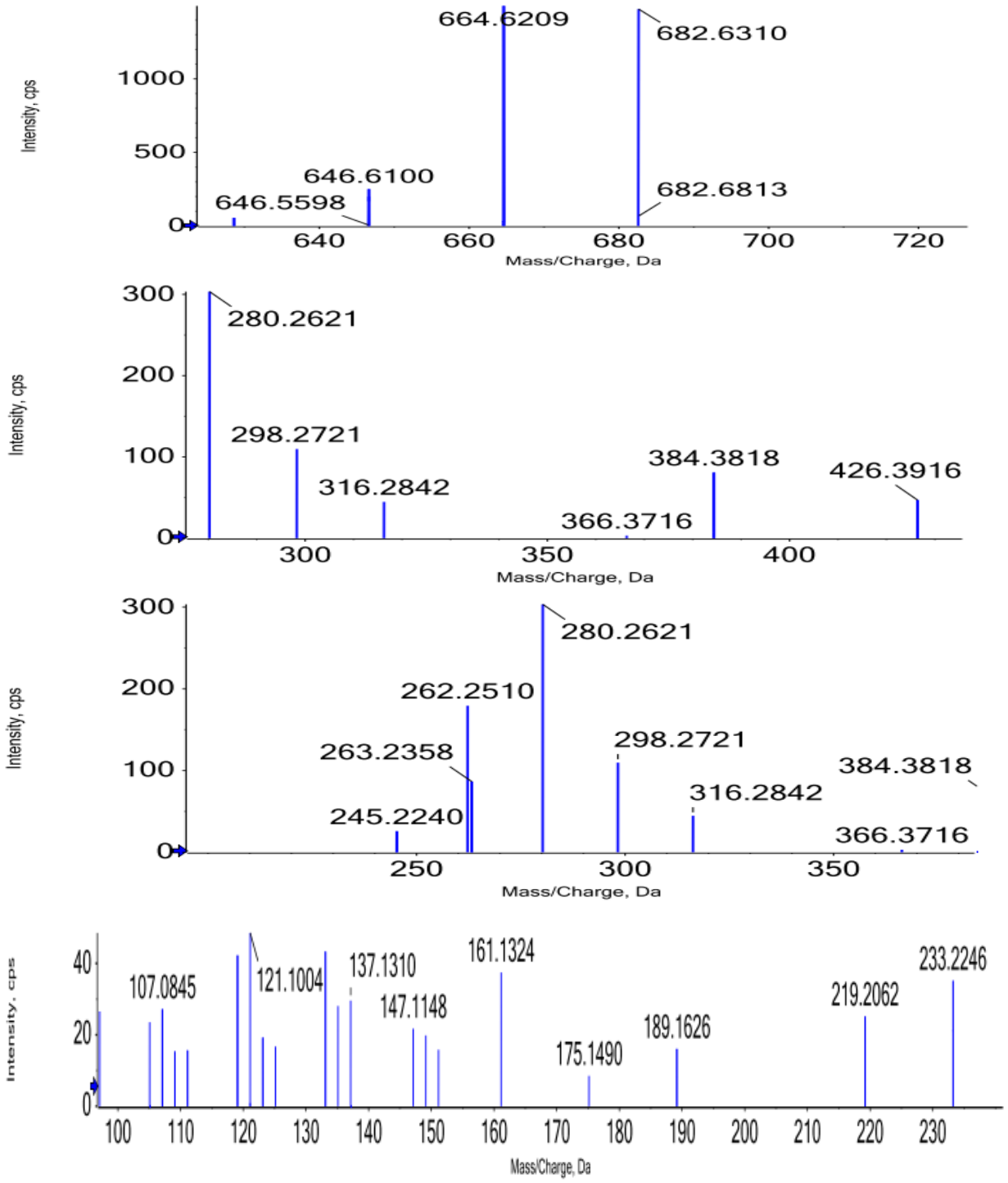

Figure S14. HR-ESI-MS/MS (positive, extended) spectrum of compound **1**.

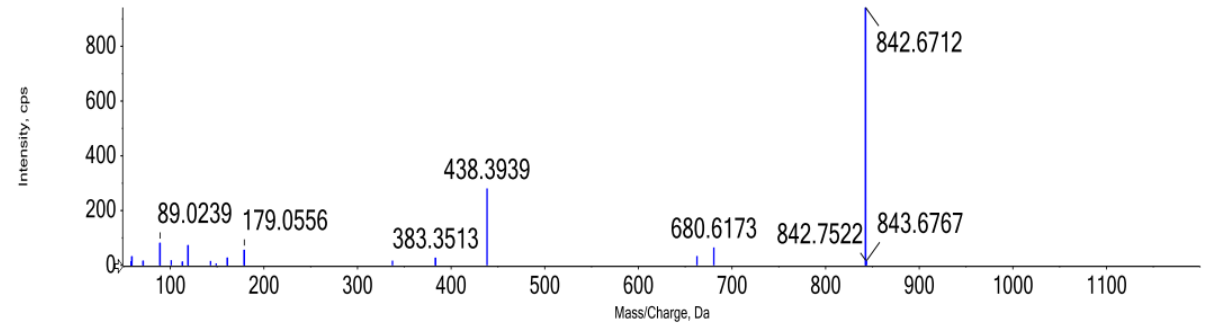

Figure S15. HR-ESI-MS/MS (nagative) spectrum of compound **1**.

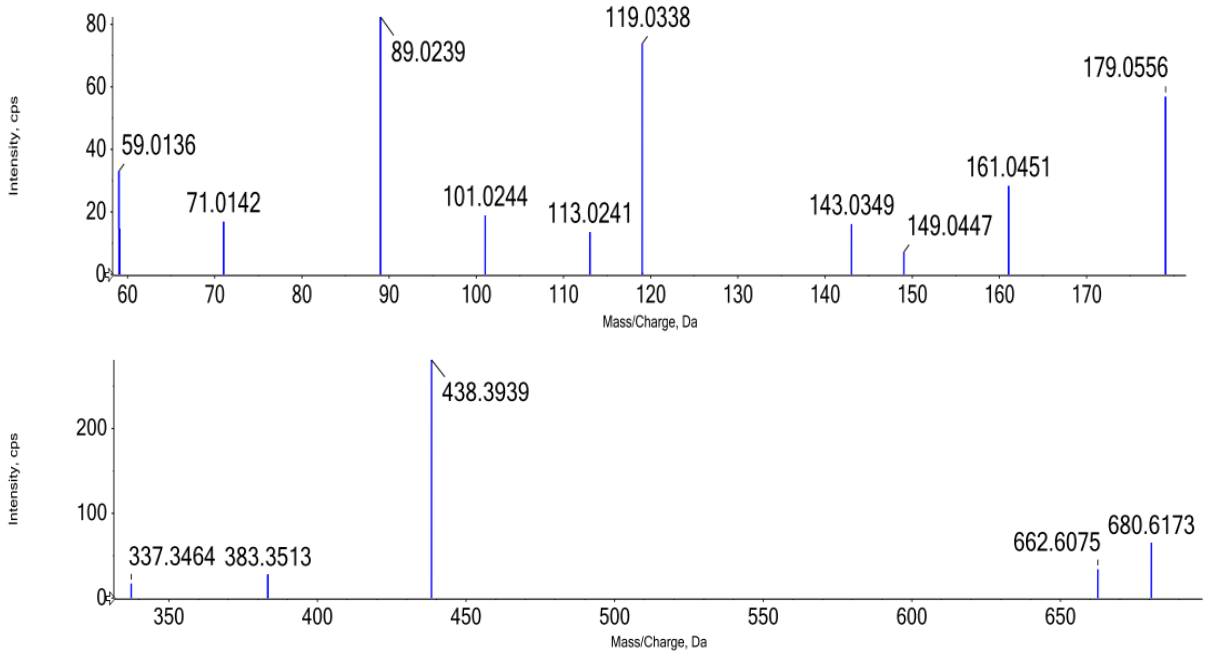

Figure S16. HR-ESI-MS/MS (nagative, extended) spectrum of compound **1**.