Supplementary data

Species assignments according to the DNA analyses

Qro: *Quercus robur* (pedunculate oak), Qpe: *Quercus petraea* (sessile oak), Qpy: *Quercus pyrenaica* (tauzin oak), Qpub: *Quercus pubescens* (pubescent oak)

- *Table S1: Composition of sessile pooled extract*

Location	Pedunculate Qro	Tauzin Qpy	Pubescent Qpub	Sessile Qpe	Species
Aboncourt	0.004	0.002	0.006	0.987	Qpe
Amboise	0.009	0.010	0.004	0.978	Qpe
Polisy	0.005	0.004	0.007	0.985	Qpe
Sully la chapelle	0.003	0.003	0.007	0.988	Qpe
Aboncourt	0.146	0.010	0.011	0.834	Qpe
Fontainebleau	0.004	0.005	0.139	0.852	Qpe
Dainville-Bertheléville	0.051	0.005	0.010	0.933	Qpe
Saint Désiré and Saint Eloy d'Allier	0.004	0.002	0.018	0.976	Qpe
Igé	0.095	0.002	0.042	0.862	Qpe
Azé	0.008	0.007	0.005	0.979	Qpe
Blois	0.004	0.003	0.003	0.989	Qpe
Compiègne	0.004	0.020	0.006	0.971	Qpe
Asnières sous bois	0.005	0.003	0.005	0.988	Qpe
Villedieu sur Indre	0.003	0.024	0.012	0.960	Qpe
Etréchy	0.003	0.002	0.003	0.992	Qpe
Cellettes	0.004	0.006	0.006	0.983	Qpe
Le Moulinet sur solin	0.004	0.008	0.004	0.984	Qpe
Ingrannes	0.002	0.002	0.005	0.990	Qpe
Chalette sur loing	0.092	0.016	0.036	0.856	Qpe
Chevillon sur Huillard	0.012	0.012	0.011	0.965	Qpe
Poinçonnet	0.004	0.003	0.003	0.99	Qpe

- *Table S2: Composition of pedunculate pooled extract*

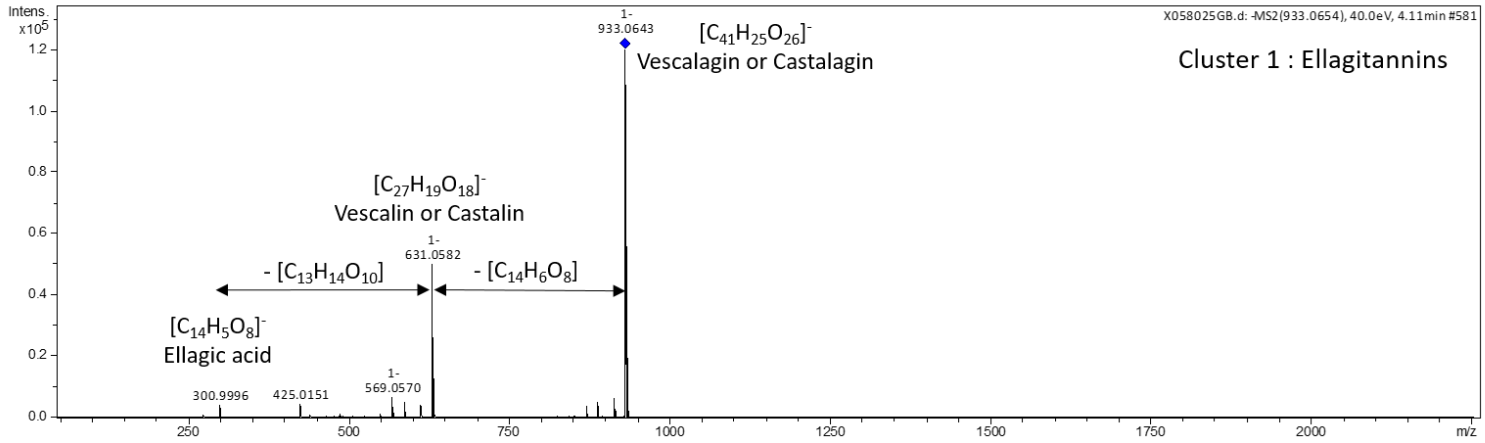
Location	Pedunculate Qro	Tauzin Qpy	Pubescent Qpub	Sessile Qpe	Species
Sully la chapelle	0.987	0.007	0.005	0.978	Qro
Bride	0.992	0.003	0.003	0.003	Qro
Bride	0.973	0.019	0.003	0.005	Qro
Dainville-Bertheléville	0.983	0.003	0.007	0.006	Qro
Igé	0.988	0.006	0.003	0.003	Qro
Azé	0.889	0.063	0.028	0.019	Qro
Compiègne	0.984	0.005	0.005	0.006	Qro
Villedieu sur Indre	0.989	0.004	0.004	0.002	Qro
Azé	0.989	0.005	0.003	0.003	Qro
Sully la chapelle	0.986	0.003	0.006	0.005	Qro
Polisy	0.866	0.056	0.046	0.031	Qro
Compiègne	0.933	0.015	0.029	0.023	Qro
Villedieu sur Indre	0.990	0.003	0.004	0.003	Qro
Azé	0.980	0.008	0.007	0.005	Qro
Etréchy	0.971	0.005	0.010	0.014	Qro
Arthon	0.942	0.041	0.011	0.005	Qro
Chevillon sur Huillard	0.958	0.008	0.021	0.013	Qro
Chevillon sur Huillard	0.989	0.005	0.004	0.003	Qro
Arthon	0.896	0.011	0.007	0.086	Qro
Chevillon sur Huillard	0.993	0.003	0.002	0.002	Qro
Poinçonnet	0.95	0.024	0.018	0.008	Qro

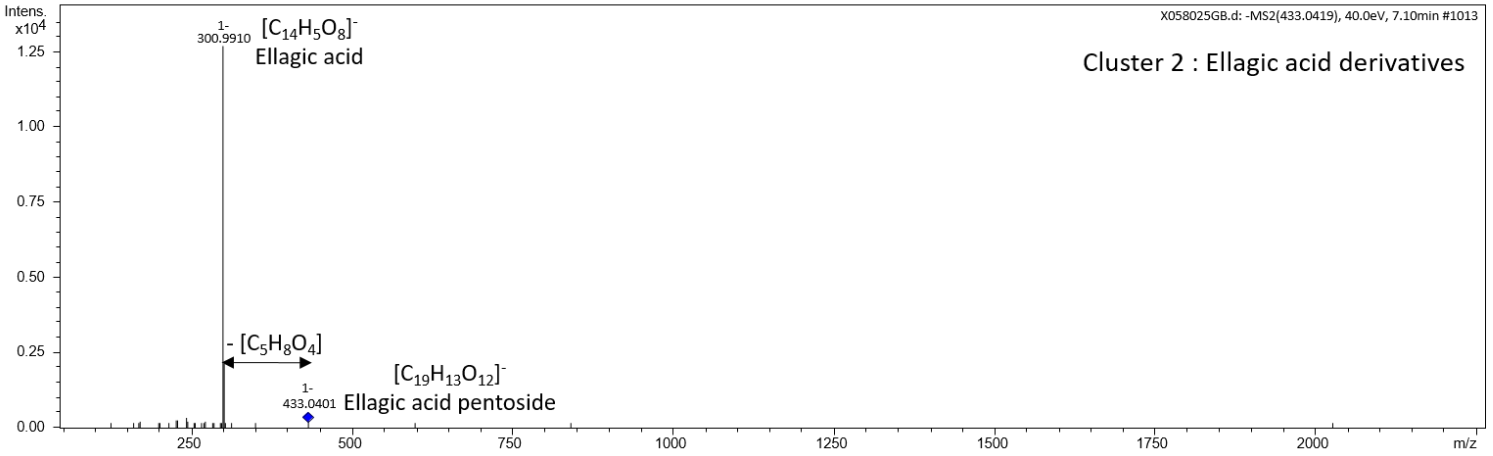
- *Table S3: Listing of individual samples*

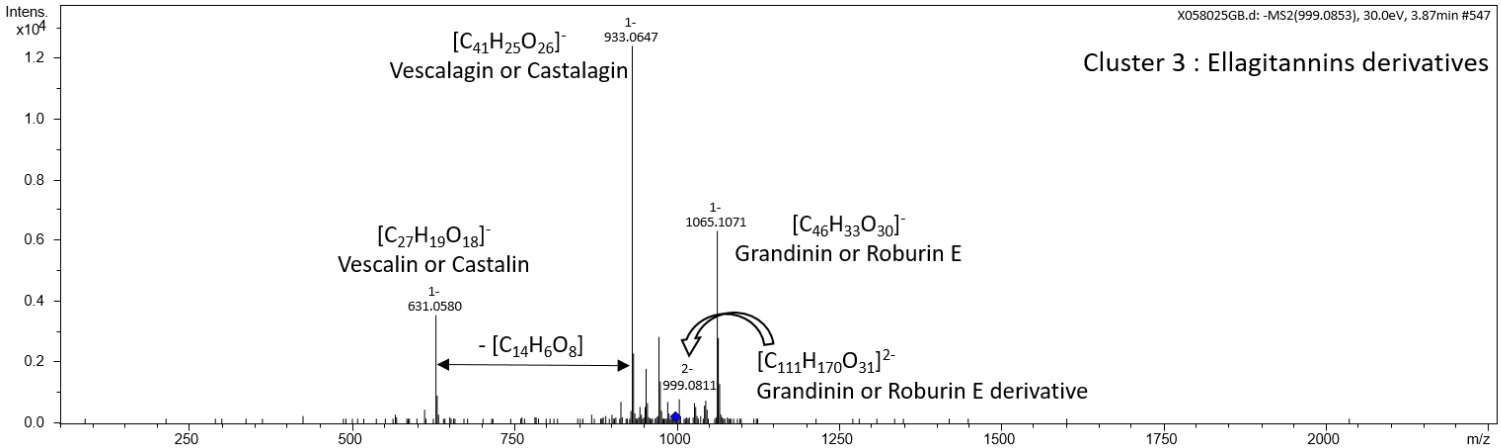
Location	Pedunculate Qro	Tauzin Qpy	Pubescent Qpub	Sessile Qpe	Species
Aboncourt	0.003	0.003	0.004	0.991	Qpe
Orléans -Massif ingrannes	0.002	0.002	0.005	0.990	Qpe
Forêt des abbayes	0.003	0.002	0.003	0.992	Qpe
Forêt d'Orléans	0.004	0.008	0.004	0.984	Qpe
Rusy	0.003	0.004	0.004	0.989	Qpe
Chateauroux	0.981	0.004	0.006	0.010	Qro
Forêt des abbayes	0.970	0.005	0.010	0.014	Qro
Sully la chapelle	0.988	0.004	0.004	0.004	Qro
Chateauroux	0.988	0.003	0.005	0.004	Qro
Lisledon	0.993	0.003	0.002	0.002	Qro

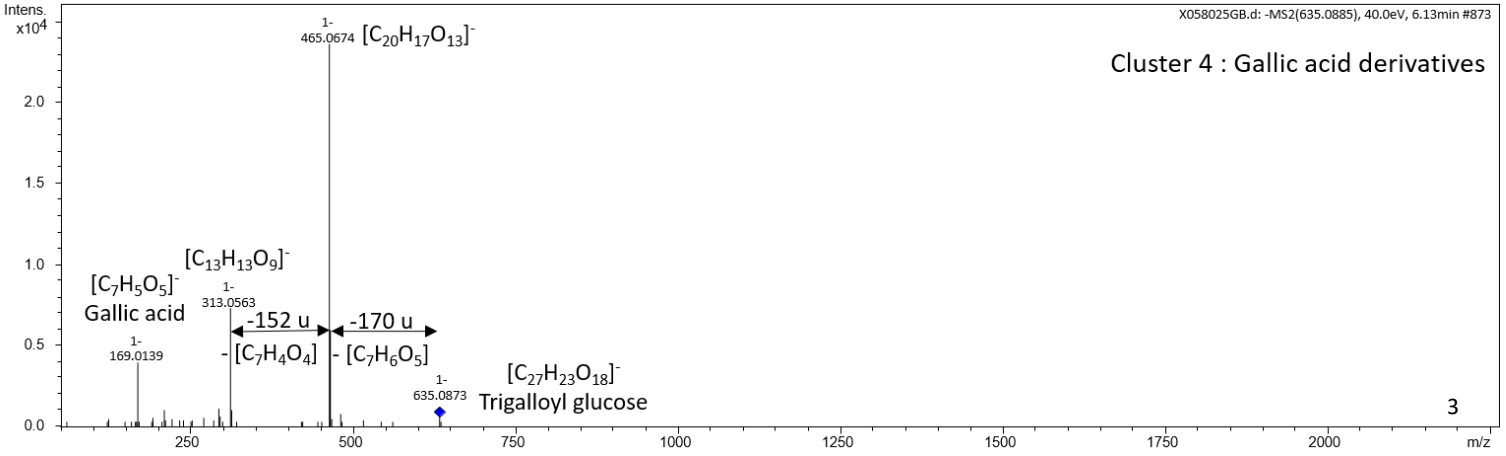
Description of the characteristic fragments used to annotate the molecular network

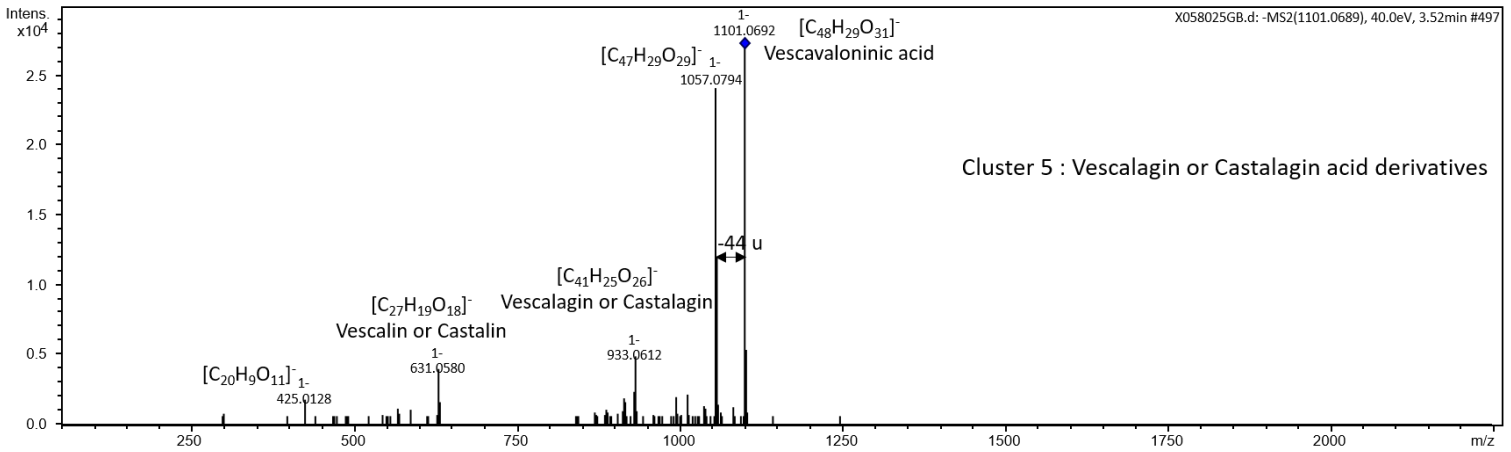
- *Figure S1: Representative MS/MS spectrum of each cluster*

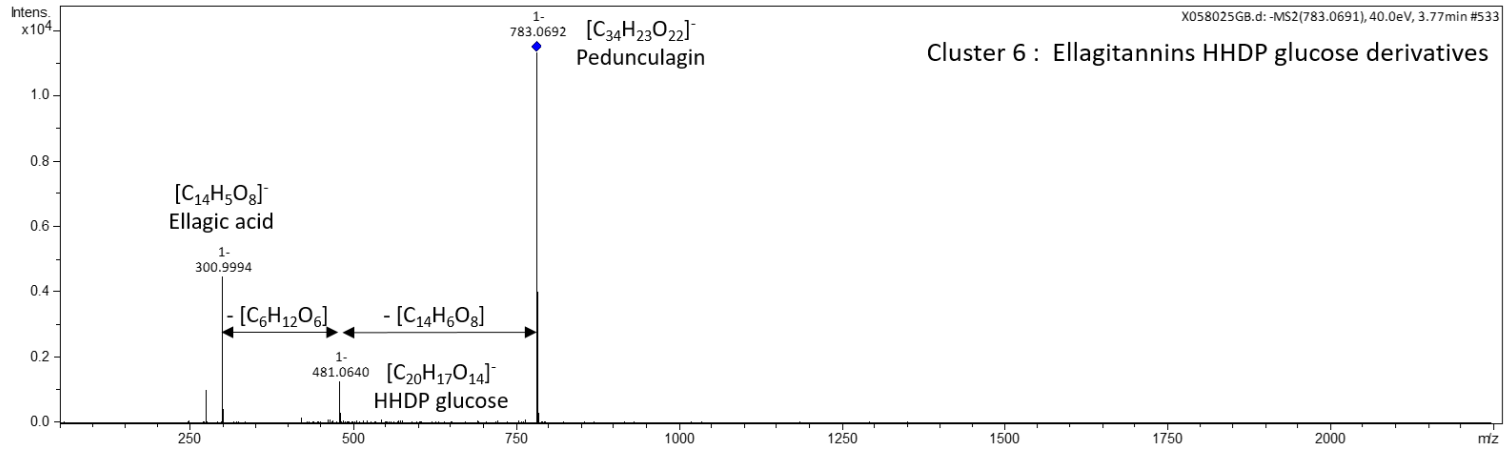


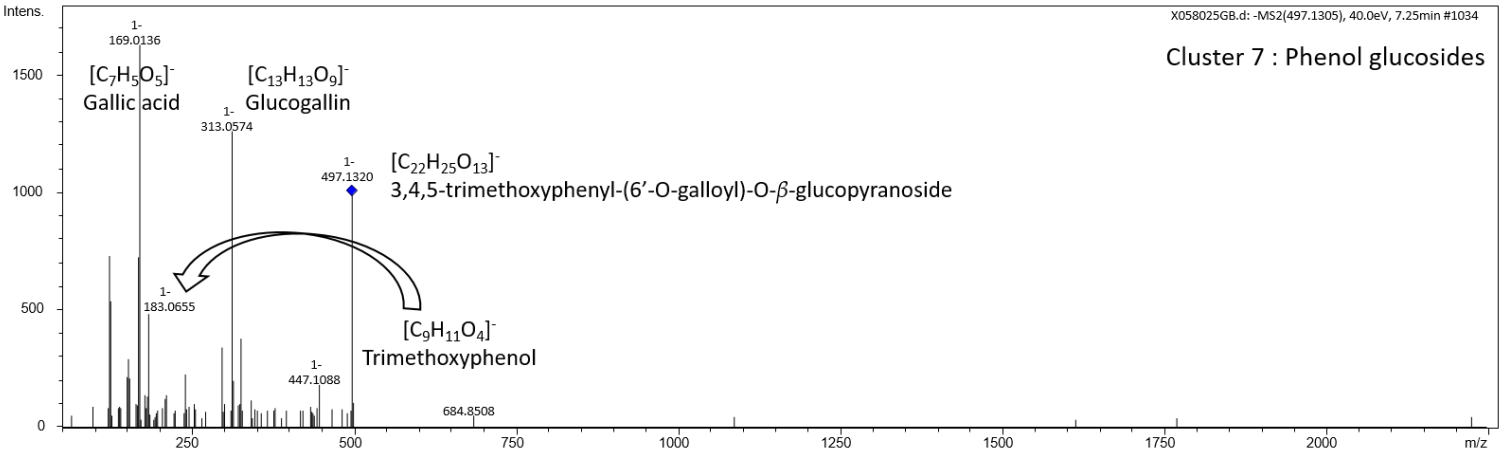


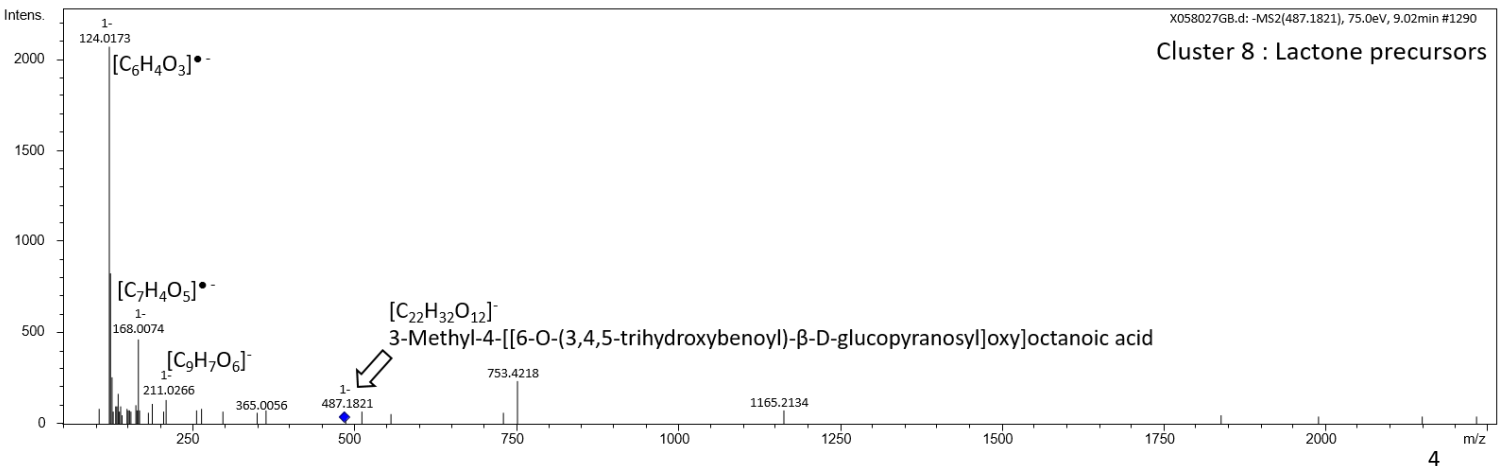


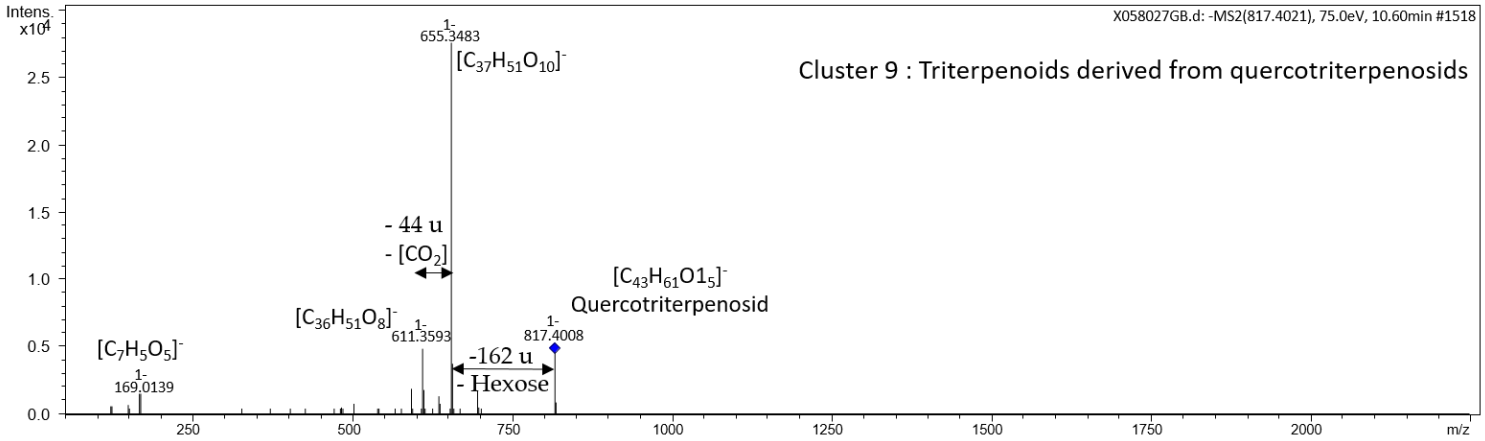


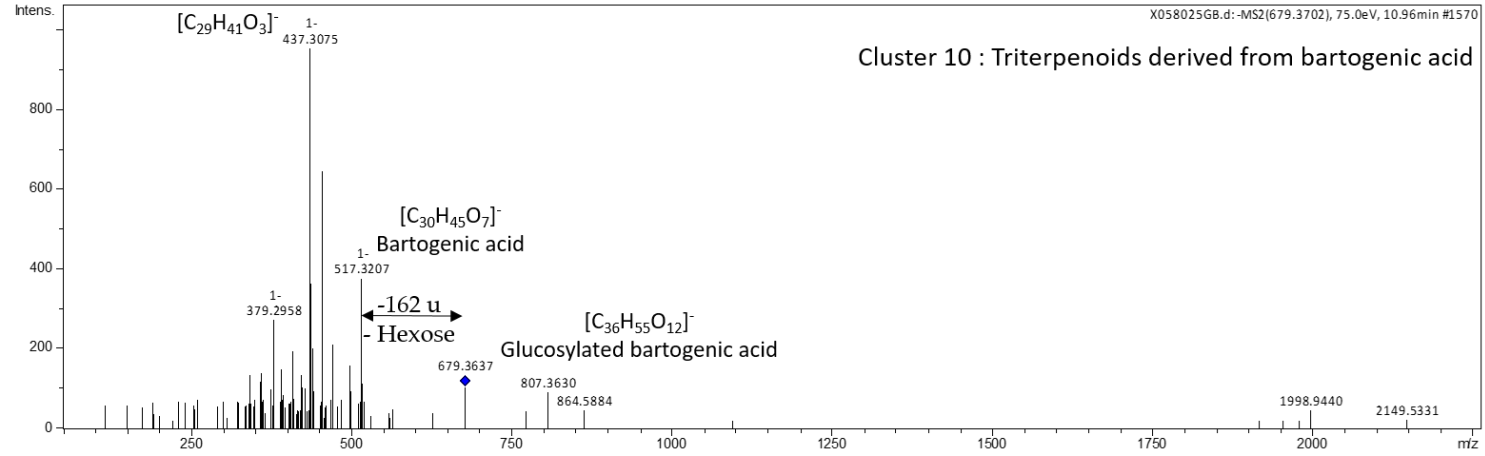

X058025GB.d: -MS2(1101.0689), 40.0eV, 3.52min #497
Intens.
x10^4
1-
1101.0692
[C48H29O31]-
Vescavaloninic acid
[C47H29O29]-
1-
1057.0794
Cluster 5 : Vescalagin or Castalagin acid derivatives
-44 u
[C41H25O26]-
Vescalagin or Castalagin
[C27H19O18]-
Vescalin or Castalin
1-
933.0612
1-
631.0580
[C20H9O11]-
1-
425.0128
m/z

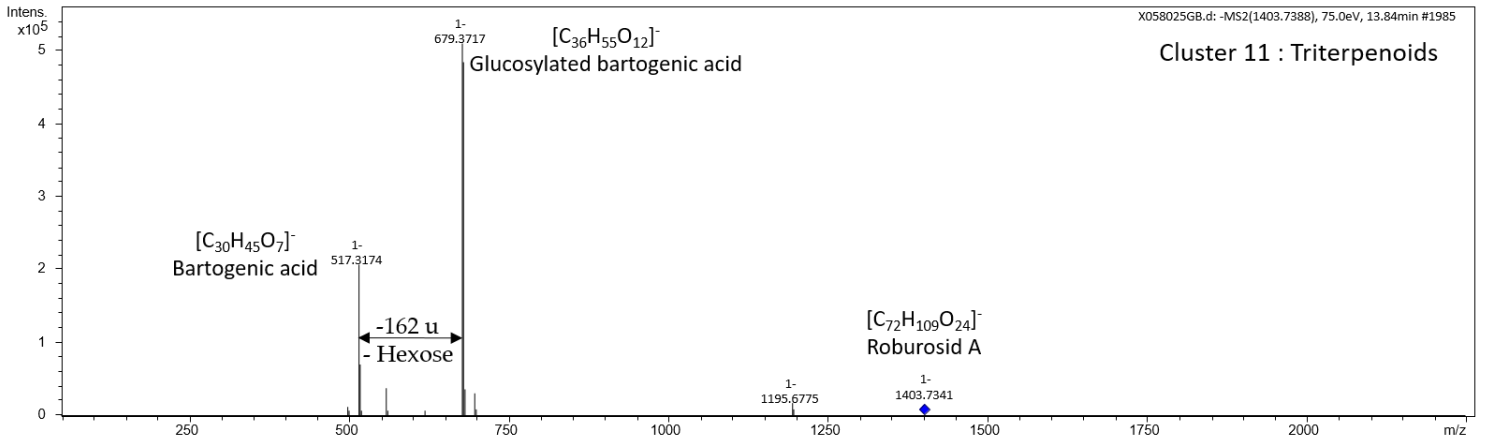

X058025GB.d: -MS2(783.0691), 40.0eV, 3.77min #533
Intens.
x10^4
1-
783.0692
[C34H23O22]-
Pedunculagin
Cluster 6 : Ellagitannins HHDP glucose derivatives
[C14H5O8]-
Ellagic acid
1-
300.9994
- [C6H12O6]
- [C14H6O8]
1-
481.0640
[C20H17O14]-
HHDP glucose
m/z


X058025GB.d: -MS2(497.1305), 40.0eV, 7.25min #1034
Intens.
1-
169.0136
[C7H5O5]-
Gallic acid
[C13H13O9]-
Glucogallin
1-
313.0574
1-
497.1320
[C22H25O13]-
3,4,5-trimethoxyphenyl-(6'-O-galloyl)-O-β-glucopyranoside
Cluster 7 : Phenol glucosides
1-
183.0655
[C9H11O4]-
Trimethoxyphenol
1-
447.1088
684.8508
m/z


X058027GB.d: -MS2(487.1821), 75.0eV, 9.02min #1290
Intens.
1-
124.0173
[C6H4O3]•-
Cluster 8 : Lactone precursors
[C7H4O5]•-
1-
168.0074
[C9H7O6]-
1-
211.0266
365.0056
[C22H32O12]-
3-Methyl-4-[[6-O-(3,4,5-trihydroxybenoyl)-β-D-glucopyranosyl]oxy]octanoic acid
753.4218
1-
487.1821
1165.2134
m/z


X058027GB.d: -MS2(817.4021), 75.0eV, 10.60min #1518
Intens.
x10^4
Cluster 9 : Triterpenoids derived from quercotriterpenosids
1-
655.3483
[C37H51O10]-
- 44 u
- [CO2]
[C43H61O15]-
Quercotriterpenosid
[C36H51O8]-
1-
611.3593
1-
817.4008
[C7H5O5]-
1-
169.0139
-162 u
- Hexose
m/z


X058025GB.d: -MS2(679.3702), 75.0eV, 10.96min #1570
Intens.
Cluster 10 : Triterpenoids derived from bartogenic acid
[C29H41O3]-
1-
437.3075
[C30H45O7]-
Bartogenic acid
1-
517.3207
1-
379.2958
-162 u
- Hexose
[C36H55O12]-
Glucosylated bartogenic acid
679.3637
807.3630
864.5884
1998.9440
2149.5331
m/z


X058025GB.d: -MS2(1403.7388), 75.0eV, 13.84min #1985
Intens.
x10^5
Cluster 11 : Triterpenoids
1-
679.3717
[C36H55O12]-
Glucosylated bartogenic acid
[C30H45O7]-
Bartogenic acid
1-
517.3174
-162 u
- Hexose
[C72H109O24]-
Roburosid A
1-
1195.6775
1-
1403.7341
m/z