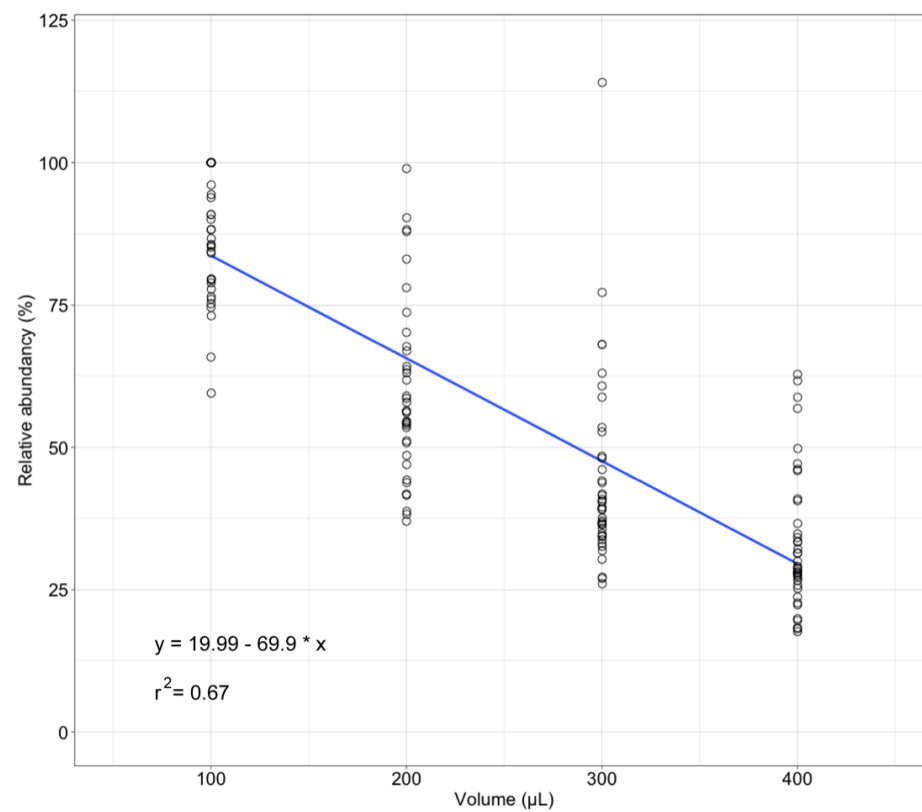


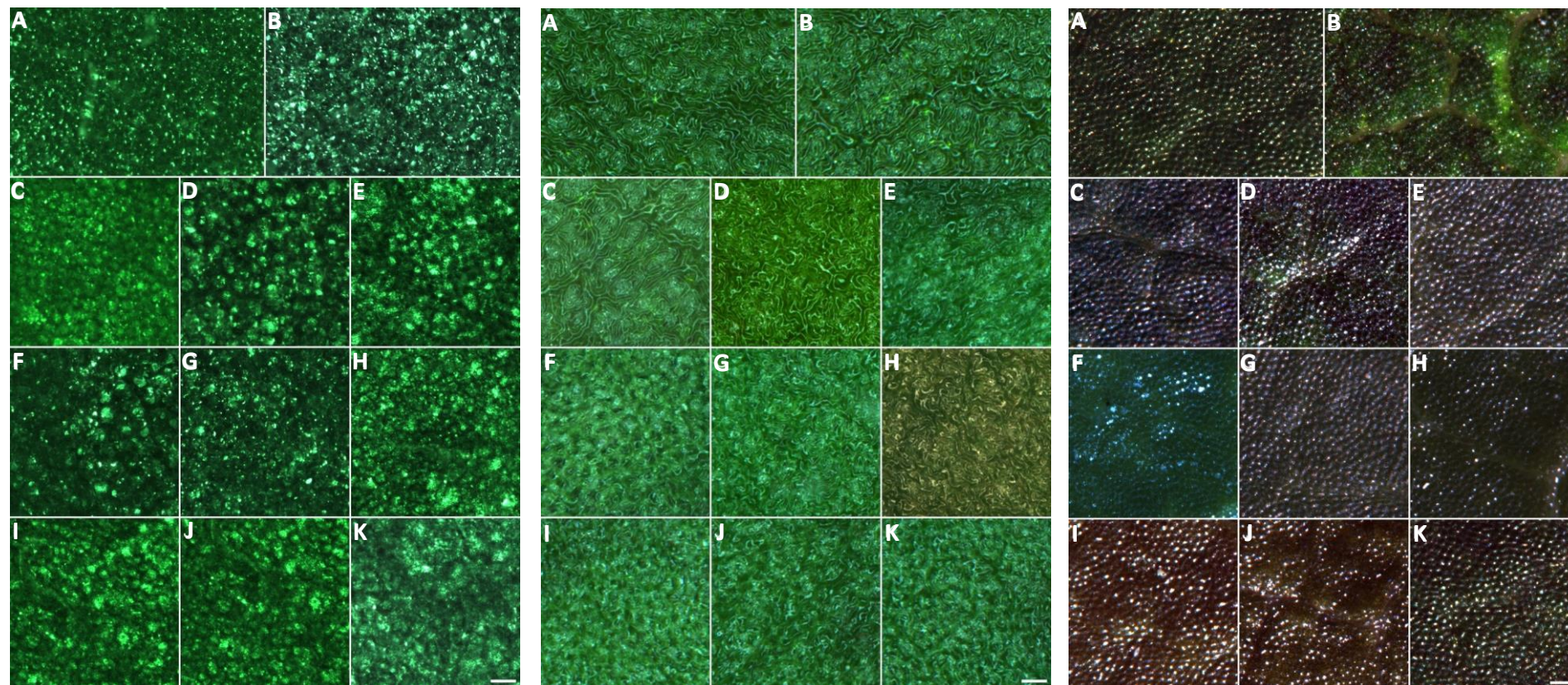
Additional files

	MAE	MAE	MAE	CV%	UAE	UAE	UAE	CV%
Succinic_acid	147664	157416	158278	3.8	20479	21882	22732	5.2
Phenylalanine	57314	63951	63795	6.1	57856	78984	78964	16.9
Histidine	61593	78256	85447	16.3	17945	33569	30095	30.2
Méthionine	4907	7126	6882	19.3	5986	6606	6088	5.3
Tyrosine	11716	12444	10794	7.1	19971	30021	28217	20.6
Sucrose	18711897	18880336	19198038	1.3	1458752	186203	173573	121.8
Thréonine	132490	159597	159328	10.3	438471	382519	364303	9.8
Tryptophan	9159	5606	8346	24.2	0	0	0	0.0
Leucine	175507	210523	225247	12.5	0	0	0	0.0
Tyramine	22242	24856	26525	8.8	0	0	0	0.0
Sérine	243542	280725	290321	9.1	640758	499754	449027	18.7
Glutamine	1940268	2208449	2322827	9.1	5637953	5103064	4872395	7.5
Glutamic_acid	721400	811163	792138	6.1	1966487	1826274	1747117	6.0
Fructose	360984	388245	443273	10.5	37571	58800	64398	26.4
Aspartic_acid	305536	375255	392837	12.9	2634477	3327695	3222498	12.2
Gluconic_acid	1576290	1617060	1733517	5.0	0	0	0	0.0
Proline	1659553	1955824	2101166	11.8	44573	38312	39257	8.3
Ascorbic_acid	58493	83791	75549	17.8	0	0	0	0.0
Asparagine	150281	164069	164245	5.0	0	0	0	0.0
OH-proline	608246	691849	696424	7.5	0	0	0	0.0

Additional file S 1: Analysis of the coefficient of variation of the metabolic changes in *Vitis Vinifera* leaves after MAE and UAE experimentation. Three biological replicate and RSDs were calculated based on area measurements of each compound.



Additional file S2 : Projection of the intensity of all detected compounds in *Vitis vinifera* leaves after dilution.

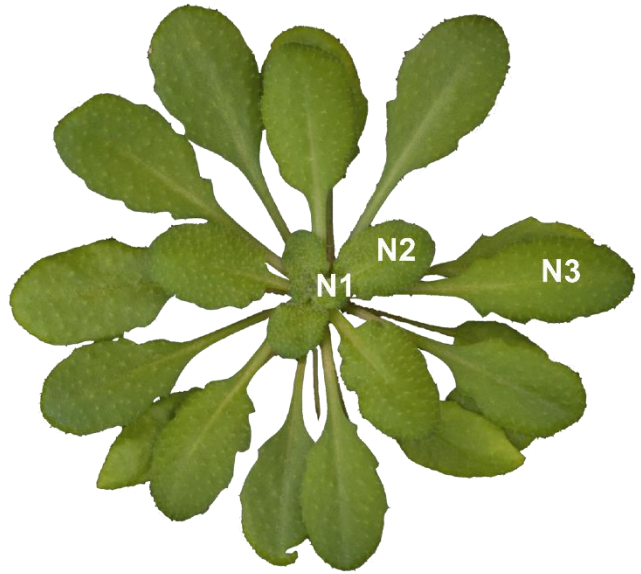


N. benthamiana

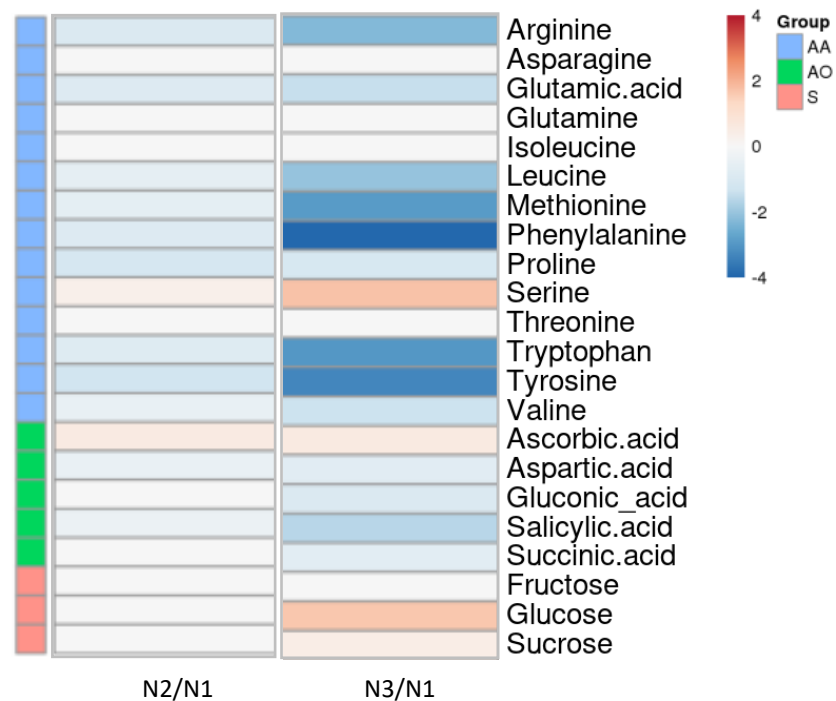
Arabidopsis

Grapevine

Additional file S3: Ultrastructural effects of sonication or microwave treatments on *N. benthamiana*, *Arabidopsis* and *Vitis vinifera* leaves. For each plant, treatment was identical; MAE was performed with 200 μ l of water. A : control; B : sonication 10 mn; From C to K, MAE was performed at the indicated power for various times. C : 300 W, 15 sec; D : 300 W, 20 sec; E : 300 W, 30 sec; F : 450 W, 15 sec; G : 450 W, 20 sec; H : 450 W, 30 sec; I : 600 W, 15 sec; J : 600 W, 20 sec; K : 600 W, 30. Bars represent 100 μ m.



Additional file S4 : Selected developmental stages (N1,N2 and N3) of *Arabidopsis* rosette leaves.



Additional file S5 : Pairwise comparison of changes between distinct spatiotemporal stages (N1, N2 and N3) in Arabidopsis rosette leaves after performing MAE in water. Log2 of significant metabolite fold changes for indicated pairwise comparisons are given by shades of red , white or blue colors according to the scale bar. Data represent mean values of seven to nine biological replicates for each condition and time point. Statistical analysis was performed using Tukey's Honest Significant Difference method followed by a false discovery rate (FDR) correction, with $FDR < 0.05$. For $FDR \geq 0.05$, Log2 fold change was set to 0. The values range from low (blue) to high (red) metabolite-relative content compared to the youngest leaf (N1).