Supporting information

Advanced lipidomic techniques for high-throughput profiling of complex sphingolipids in plant tissues

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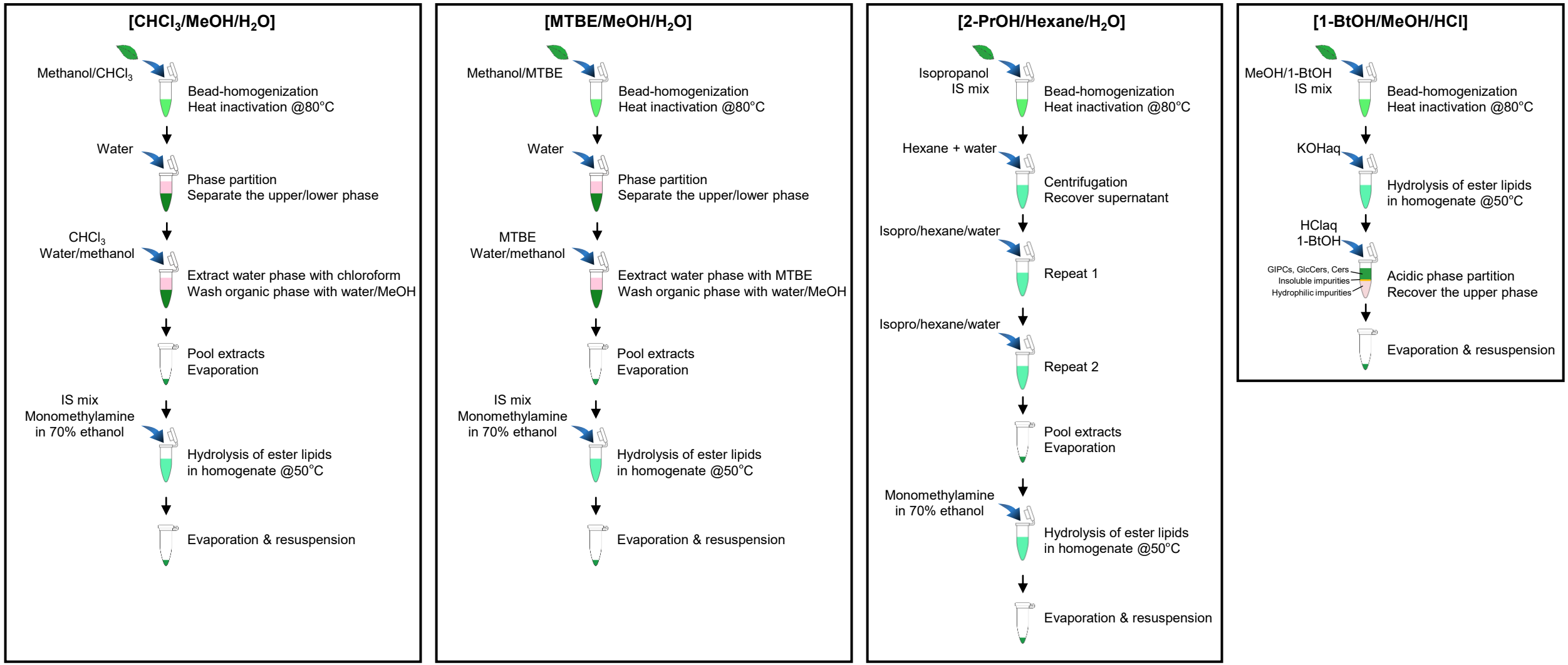

Fig. S1. Schematic comparison of the extraction procedures tested in this study.
The flowchart of the extraction methods shown in Fig. 3 is illustrated. All methods included an alkaline hydrolysis step using either KOH or monomethylamine to remove glycerolipids, which can sometimes interfere with the detection of sphingolipid species. In the 1-BtOH/MeOH/H_2O extraction, the KOH and HCl addition steps were omitted, and monomethylamine treatment was performed as in the other methods. GM1 ganglioside, an internal standard for GIPC quantification, was scarcely recovered during phase separation with $CHCl_3$ or MTBE. Therefore, the internal standard mixture (IS mix) was added after recovery of the organic phase to enable accurate quantification of sphingolipids.

Table S1. Plants used for sphingolipidomic study.

Number[a]	Group			Order	Family	Scientific name	Common name
1	Eudicot	Rosid	Malvids	Brasicales	Brassicaceae	*Arabidopsis thaliana*	Arabidopsis
2						*Camelina sativa*	Camelina
3						*Nasturtium officinale*	Watercress
4						*Erysimum perofskianum*	Wallflower
5						*Brassica napus*	Rapeseed
6						*Brassica rapa*	Turnip
7						*Brassica oleracea*	Cabbage
8						*Brassica juncea*	Brown mustard
9						*Raphanus sativus*	Radish
10						*Eruca sativa*	Rocket
11						*Isatis tinctoria*	Woad
12						*Crambe maritima*	Sea kale
13						*Matthiola incana*	Stock
14						*Orychophragmus violaceus*	Chinese violet cress
15						*Lobularia maritima*	Sweet alyssum
16					Tropaeolaceae	*Tropaeolum majus*	Nasturtium
17					Capparaceae	*Cleome spinosa*	Spider flower
18					Limnanthaceae	*Limnanthes douglasii*	Poached egg plant
19						*Lunaria annua*	Honesty
20				Malvales	Malvaceae	*Althaea rosea*	Hollyhock
21				Geraniales	Balsaminaceae	*Impatiens balsamina*	Garden balsam
22				Myrtales	Onagraceae	*Godetia hybrida*	Clarkia
23				Sapindales	Sapindaceae	*Cardiospermum halicacabum*	Balloon vine
24					Rutaceae	*Ruta graveolens*	Rue
25			Fabids	Malpighiales	Violacea	*Viola × williamisii*	Hybrid violet
26				Rosales	Rosaceae	*Fragaria vesca*	Wild strawberry
27				Cucurbitales	Begoniaceae	*Begonia semperflorens*	Wax begonia
28					Cucurbitaceae	*Luffa cylindrica*	Luffa
29				Fabales	Fabaceae	*Mimosa pudica*	Sensitive plant
30						*Glycine max*	Soybean

				Lotus japonicus	Lotus japonicus
Asterids	Ericales	Polemoniaceae	*Phlox drummondii*	Drummond's phlox	
		Primulaceae	*Primula malacoides*	Fairy primrose	
	Asterales	Campanulaceae	*Platycodon grandiflorus*	Balloon flower	
		Asteraceae	*Helianthus annuus*	Sunflower	
	Apiales	Apiaceae	*Daucus carota subsp. sativus*	Carrot	
	Dipsacales	Dipsaceae	*Scabiosa atropurpurea*	Pincushion flower	
	Boraginales	Boraginaceae	*Myosotis alpestris*	Alpine forget-me-not	
	Gentianales	Apocynaceae	*Oxypetalum coeruleum*	Tweedia	
		Gentianaceae	*Eustoma grandiflorum*	Lisianthus	
	Lamiales	Scrophulariaceae	*Antirrhinum majus*	Snapdragon	
		Lamiaceae	*Salvia splendens*	Scarlet sage	
		Verbenaceae	*Verbena × hortensis*	Garden verbena	
	Solonales	Solanaceae	*Nicotiana benthamiana*	Bentham's tobacco	
			Solanum lycopersicum	Tomato	
	Ranunculales	Ranunculaceae	*Delphinium grandiflorum*	Chinese delphinium	
			Aquilegia × hybrida	Hybrid columbine	
		Papaveraceae	*Eschscholtzia californica*	California poppy	
	Caryophyllales	Caryophyllaceae	*Dianthus superbus*	Fringed pink	
		Nyctaginaceae	*Mirabilis jalapa*	Four o'clock flower	
		Amaranthaceae	*Celosia argentea*	Cockscomb	
			Bassia scoparia	Kochia	
Monocots	Asparagales	Asparagaceae	*Asparagus officinalis*	Asparagus	
		Amaryllidaceae	*Allium ampeloprasum*	Leek	
	Poales	Poaceae	*Lagurus ovatus*	Hare's-tail grass	
			Avena sativa	Oat	
			Brachypodium distachyon	Brachypodium	
			Oryza sativa	Rice	
			Zea mays	Maize	
			Triticum aestivum	Wheat	
			Poa pratensis	Kentucky bluegrass	

[a]Numbers correspond orders from the top to bottom in Figure 5.

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
1	Cer	t18:0-h16:0	572.5	300.3	1	19.9	20	-30	0.6
2		t18:0-h18:0	600.6	300.3	2	21.9	20	-30	0.6
3		t18:0-h20:0	628.6	300.3	3	23.7	20	-32	0.6
4		t18:0-h20:1	626.6	300.3	4	22.2	20	-32	0.6
5		t18:0-h22:0	656.6	300.3	5	25.2	20	-32	0.6
6		t18:0-h22:1	654.6	300.3	6	23.7	20	-32	0.6
7		t18:0-h23:0	670.6	300.3	7	25.9	20	-32	0.6
8		t18:0-h23:1	668.6	300.3	8	24.4	20	-32	0.6
9		t18:0-h24:0	684.7	300.3	9	26.7	20	-34	0.6
10		t18:0-h24:1	682.6	300.3	10	25.0	20	-34	0.6
11		t18:0-h25:0	698.7	300.3	11	27.3	20	-34	0.6
12		t18:0-h25:1	696.7	300.3	12	25.8	20	-34	0.6
13		t18:0-h26:0	712.7	300.3	13	27.9	20	-34	0.6
14		t18:0-h26:1	710.7	300.3	14	26.4	20	-34	0.6
15		t18:1-h16:0	570.5	298.3	15	19.1	20	-30	0.9
16		t18:1-h18:0	598.5	298.3	16	21.1	20	-30	0.9
17		t18:1-h20:0	626.6	298.3	17	23.2	20	-32	0.9
18		t18:1-h20:1	624.6	298.3	18	21.7	20	-32	0.9
19		t18:1-h22:0	654.6	298.3	19	24.7	20	-32	0.9
20		t18:1-h22:1	652.6	298.3	20	23.2	20	-32	0.9
21		t18:1-h23:0	668.6	298.3	21	25.4	20	-32	0.9
22		t18:1-h23:1	666.6	298.3	22	23.9	20	-32	0.9
23		t18:1-h24:0	682.6	298.3	23	26.2	20	-34	0.9
24		t18:1-h24:1	680.6	298.3	24	24.7	20	-34	0.9
25		t18:1-h25:0	696.7	298.3	25	26.9	20	-34	0.9
26		t18:1-h25:1	694.6	298.3	26	25.4	20	-34	0.9
27		t18:1-h26:0	710.7	298.3	27	27.5	20	-34	0.9
28		t18:1-h26:1	708.7	298.3	28	25.9	20	-34	0.9
29		d18:0-h16:0	556.5	266.3	29	21.5	20	-30	0.6
30		d18:0-h18:0	584.6	266.3	30	23.3	20	-30	0.6
31		d18:0-h20:0	612.6	266.3	31	24.9	20	-32	0.6
32		d18:0-h20:1	610.6	266.3	32	23.6	20	-32	0.6
33		d18:0-h22:0	640.6	266.3	33	26.3	20	-32	0.6
34		d18:0-h22:1	638.6	266.3	34	24.8	20	-32	0.6
35		d18:0-h23:0	654.6	266.3	35	27.0	20	-32	0.6
36		d18:0-h23:1	652.6	266.3	36	25.5	20	-32	0.6
37		d18:0-h24:0	668.7	266.3	37	27.6	20	-34	0.6
38		d18:0-h24:1	666.6	266.3	38	26.1	20	-34	0.6
39		d18:0-h25:0	682.7	266.3	39	28.2	20	-34	0.6
40		d18:0-h25:1	680.7	266.3	40	26.9	20	-34	0.6
41		d18:0-h26:0	696.7	266.3	41	28.7	20	-34	0.6
42		d18:0-h26:1	694.7	266.3	42	28.0	20	-34	0.6
43		d18:1-h16:0	554.5	264.3	43	20.5	20	-30	0.8
44		d18:1-h18:0	582.6	264.3	44	22.5	20	-30	0.8
45		d18:1-h20:0	610.6	264.3	45	24.4	20	-32	0.8
46		d18:1-h20:1	608.6	264.3	46	23.1	20	-32	0.8
47		d18:1-h22:0	638.6	264.3	47	25.8	20	-32	0.8
48		d18:1-h22:1	636.6	264.3	48	24.3	20	-32	0.8
49		d18:1-h23:0	652.6	264.3	49	26.5	20	-32	0.8

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Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
50		d18:1-h23:1	650.6	264.3	50	25.0	20	-32	0.8
51		d18:1-h24:0	666.6	264.3	51	27.3	20	-34	0.8
52		d18:1-h24:1	664.6	264.3	52	25.6	20	-34	0.8
53		d18:1-h25:0	680.7	264.3	53	27.8	20	-34	0.8
54		d18:1-h25:1	678.6	264.3	54	26.5	20	-34	0.8
55		d18:1-h26:0	694.7	264.3	55	28.3	20	-34	0.8
56		d18:2-h26:1	692.7	264.3	56	27.0	20	-34	0.8
57		d18:2-h16:0	552.5	262.3	57	19.9	20	-30	0.8
58		d18:2-h18:0	580.5	262.3	58	20.8	20	-30	0.8
59		d18:2-h20:0	608.6	262.3	59	22.3	20	-32	0.8
60		d18:2-h20:1	606.6	262.3	60	22.4	20	-32	0.8
61		d18:2-h22:0	636.6	262.3	61	25.1	20	-32	0.8
62		d18:2-h22:1	634.6	262.3	62	23.6	20	-32	0.8
63		d18:2-h23:0	650.6	262.3	63	25.8	20	-32	0.8
64		d18:2-h23:1	648.6	262.3	64	24.3	20	-32	0.8
65		d18:2-h24:0	664.6	262.3	65	26.6	20	-34	0.8
66		d18:2-h24:1	662.6	262.3	66	25.0	20	-34	0.8
67		d18:2-h25:0	678.6	262.3	67	27.2	20	-34	0.8
68		d18:2-h25:1	676.6	262.3	68	25.9	20	-34	0.8
69		d18:2-h26:0	692.7	262.3	69	27.7	20	-30	0.8
70		d18:2-h26:1	690.6	262.3	70	26.4	20	-30	0.8
71		t18:0-c16:0	556.5	300.3	71	21.0	20	-30	1.2
72		t18:0-c18:0	584.6	300.3	72	22.8	20	-30	1.2
73		t18:0-c20:0	612.6	300.3	73	24.3	20	-32	1.2
74		t18:0-c20:1	610.6	300.3	74	23.1	20	-32	1.2
75		t18:0-c22:0	640.6	300.3	75	26.2	20	-32	1.2
76		t18:0-c22:1	638.6	300.3	76	24.4	20	-32	1.2
77		t18:0-c23:0	654.6	300.3	77	26.8	20	-32	1.2
78		t18:0-c23:1	652.6	300.3	78	25.1	20	-32	1.2
79		t18:0-c24:0	668.7	300.3	79	27.4	20	-34	1.2
80		t18:0-c24:1	666.6	300.3	80	25.3	20	-34	1.2
81		t18:0-c25:0	682.7	300.3	81	28.1	20	-34	1.2
82		t18:0-c25:1	680.7	300.3	82	26.5	20	-34	1.2
83		t18:0-c26:0	696.7	300.3	83	28.6	20	-34	1.2
84		t18:0-c26:1	694.7	300.3	84	27.2	20	-34	1.2
85		t18:1-c16:0	554.5	298.3	85	20.3	20	-30	1.6
86		t18:1-c18:0	582.6	298.3	86	22.2	20	-30	1.6
87		t18:1-c20:0	610.6	298.3	87	23.7	20	-32	1.6
88		t18:1-c20:1	608.6	298.3	88	22.5	20	-32	1.6
89		t18:1-c22:0	638.6	298.3	89	25.6	20	-32	1.6
90		t18:1-c22:1	636.6	298.3	90	23.8	20	-32	1.6
91		t18:1-c23:0	652.6	298.3	91	26.2	20	-32	1.6
92		t18:1-c23:1	650.6	298.3	92	24.5	20	-32	1.6
93		t18:1-c24:0	666.6	298.3	93	26.9	20	-34	1.6
94		t18:1-c24:1	664.6	298.3	94	25.3	20	-34	1.6
95		t18:1-c25:0	680.7	298.3	95	27.6	20	-34	1.6
96		t18:1-c25:1	678.6	298.3	96	25.9	20	-34	1.6
97		t18:1-c26:0	694.7	298.3	97	28.1	20	-34	1.6
98		t18:1-c26:1	692.7	298.3	98	26.7	20	-34	1.6

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Target #	Class	Structure	Precursor ion (m/z)	Product ion (m/z)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
99		d18:0-c16:0	540.5	266.3	99	22.4	20	-30	1.0
100		d18:0-c18:0	568.6	266.3	100	24.1	20	-30	1.0
101		d18:0-c20:0	596.6	266.3	101	25.6	20	-32	1.0
102		d18:0-c20:1	594.6	266.3	102	24.4	20	-32	1.0
103		d18:0-c22:0	624.6	266.3	103	27.2	20	-32	1.0
104		d18:0-c22:1	622.6	266.3	104	25.7	20	-32	1.0
105		d18:0-c23:0	638.7	266.3	105	28.1	20	-32	1.0
106		d18:0-c23:1	636.6	266.3	106	26.4	20	-32	1.0
107		d18:0-c24:0	652.7	266.3	107	28.4	20	-34	1.0
108		d18:0-c24:1	650.7	266.3	108	27.0	20	-34	1.0
109		d18:0-c25:0	666.7	266.3	109	29.4	20	-34	1.0
110		d18:0-c25:1	664.7	266.3	110	27.8	20	-34	1.0
111		d18:0-c26:0	680.7	266.3	111	29.6	20	-34	1.0
112		d18:0-c26:1	678.7	266.3	112	28.3	20	-34	1.0
113		d18:1-c16:0	538.5	264.3	113	21.7	20	-30	0.8
114		d18:1-c18:0	566.6	264.3	114	23.5	20	-30	0.8
115		d18:1-c20:0	594.6	264.3	115	25.0	20	-32	0.8
116		d18:1-c20:1	592.6	264.3	116	23.8	20	-32	0.8
117		d18:1-c22:0	622.6	264.3	117	25.9	20	-32	0.8
118		d18:1-c22:1	620.6	264.3	118	25.1	20	-32	0.8
119		d18:1-c23:0	636.6	264.3	119	27.5	20	-32	0.8
120		d18:1-c23:1	634.6	264.3	120	25.8	20	-32	0.8
121		d18:1-c24:0	650.7	264.3	121	27.3	20	-34	0.8
122		d18:1-c24:1	648.6	264.3	122	27.6	20	-34	0.8
123		d18:1-c25:0	664.7	264.3	123	28.8	20	-34	0.8
124		d18:1-c25:1	662.7	264.3	124	27.2	20	-34	0.8
125		d18:1-c26:0	678.7	264.3	125	29.0	20	-34	0.8
126		d18:1-c26:1	676.7	264.3	126	27.7	20	-34	0.8
127		d18:2-c16:0	536.5	262.3	127	21.1	20	-30	0.8
128		d18:2-c18:0	564.5	262.3	128	22.9	20	-30	0.8
129		d18:2-c20:0	592.6	262.3	129	24.4	20	-32	0.8
130		d18:2-c20:1	590.6	262.3	130	23.2	20	-32	0.8
131		d18:2-c22:0	620.6	262.3	131	25.3	20	-32	0.8
132		d18:2-c22:1	618.6	262.3	132	24.5	20	-32	0.8
133		d18:2-c23:0	634.6	262.3	133	26.9	20	-32	0.8
134		d18:2-c23:1	632.6	262.3	134	25.2	20	-32	0.8
135		d18:2-c24:0	648.6	262.3	135	26.7	20	-34	0.8
136		d18:2-c24:1	646.6	262.3	136	27.0	20	-34	0.8
137		d18:2-c25:0	662.7	262.3	137	28.2	20	-34	0.8
138		d18:2-c25:1	660.6	262.3	138	26.6	20	-34	0.8
139		d18:2-c26:0	676.7	262.3	139	28.4	20	-34	0.8
140		d18:2-c26:1	674.7	262.3	140	27.1	20	-34	0.8
141		d18:1-h12:0 (IS)	498.5	264.3	141	16.7	20	-28	
142		d18:1-c12:0 (IS)	482.5	264.3	142	17.8	20	-24	
143	GlcCer	t18:0-h16:0	734.6	300.3	143	16.7	20	-40	4.2
144		t18:0-h18:0	762.6	300.3	144	18.8	20	-42	4.2
145		t18:0-h20:0	790.6	300.3	145	21.0	20	-44	4.2
146		t18:0-h20:1	788.6	300.3	146	19.6	20	-44	4.2
147		t18:0-h22:0	818.7	300.3	147	22.7	20	-44	4.2

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Target #	Class	Structure	Precursor ion (m/z)	Product ion (m/z)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
148		t18:0-h22:1	816.7	300.3	148	21.3	20	-44	4.2
149		t18:0-h23:0	832.7	300.3	149	23.5	20	-44	4.2
150		t18:0-h23:1	830.7	300.3	150	22.1	20	-44	4.2
151		t18:0-h24:0	846.7	300.3	151	24.2	20	-44	4.2
152		t18:0-h24:1	844.7	300.3	152	22.7	20	-44	4.2
153		t18:0-h25:0	860.7	300.3	153	24.9	20	-46	4.2
154		t18:0-h25:1	858.7	300.3	154	23.5	20	-46	4.2
155		t18:0-h26:0	874.7	300.3	155	25.7	20	-46	4.2
156		t18:0-h26:1	872.7	300.3	156	24.2	20	-46	4.6
157		t18:1-h16:0	732.6	298.3	157	16.1	20	-40	4.6
158		t18:1-h18:0	760.6	298.3	158	18.2	20	-42	4.6
159		t18:1-h20:0	788.6	298.3	159	20.4	20	-44	4.6
160		t18:1-h20:1	786.6	298.3	160	19.0	20	-44	4.6
161		t18:1-h22:0	816.7	298.3	161	22.1	20	-44	4.6
162		t18:1-h22:1	814.6	298.3	162	20.7	20	-44	4.6
163		t18:1-h23:0	830.7	298.3	163	22.9	20	-44	4.6
164		t18:1-h23:1	828.7	298.3	164	21.5	20	-44	4.6
165		t18:1-h24:0	844.7	298.3	165	23.6	20	-44	4.6
166		t18:1-h24:1	842.7	298.3	166	22.1	20	-44	4.6
167		t18:1-h25:0	858.7	298.3	167	24.3	20	-46	4.6
168		t18:1-h25:1	856.7	298.3	168	22.9	20	-46	4.6
169		t18:1-h26:0	872.7	298.3	169	25.1	20	-46	4.6
170		t18:1-h26:1	870.7	298.3	170	23.6	20	-46	4.6
171		d18:0-h16:0	718.6	266.3	171	18.0	20	-38	5.6
172		d18:0-h18:0	746.6	266.3	172	20.0	20	-38	5.6
173		d18:0-h20:0	774.7	266.3	173	21.8	20	-40	5.6
174		d18:0-h20:1	772.6	266.3	174	20.3	20	-40	5.6
175		d18:0-h22:0	802.7	266.3	175	23.5	20	-40	5.6
176		d18:0-h22:1	800.7	266.3	176	22.0	20	-40	5.6
177		d18:0-h23:0	816.7	266.3	177	24.1	20	-40	5.6
178		d18:0-h23:1	814.7	266.3	178	22.6	20	-40	5.6
179		d18:0-h24:0	830.7	266.3	179	24.9	20	-40	5.6
180		d18:0-h24:1	828.7	266.3	180	23.2	20	-40	5.6
181		d18:0-h25:0	844.7	266.3	181	25.7	20	-42	5.6
182		d18:0-h25:1	842.7	266.3	182	24.2	20	-42	5.6
183		d18:0-h26:0	858.7	266.3	183	26.3	20	-42	5.6
184		d18:0-h26:1	856.7	266.3	184	24.8	20	-42	5.6
185		d18:1-h16:0	716.6	264.3	185	17.6	20	-38	6.2
186		d18:1-h18:0	744.6	264.3	186	19.6	20	-38	6.2
187		d18:1-h20:0	772.6	264.3	187	21.4	20	-40	6.2
188		d18:1-h20:1	770.6	264.3	188	19.9	20	-40	6.2
189		d18:1-h22:0	800.7	264.3	189	23.1	20	-40	6.2
190		d18:1-h22:1	798.7	264.3	190	21.6	20	-40	6.2
191		d18:1-h23:0	814.7	264.3	191	23.7	20	-40	6.2
192		d18:1-h23:1	812.7	264.3	192	22.2	20	-40	6.2
193		d18:1-h24:0	828.7	264.3	193	24.5	20	-40	6.2
194		d18:1-h24:1	826.7	264.3	194	22.8	20	-40	6.2
195		d18:1-h25:0	842.7	264.3	195	25.3	20	-42	6.2
196		d18:1-h25:1	840.7	264.3	196	23.8	20	-42	6.2

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (m/z)	Product ion (m/z)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
197		d18:1-h26:0	856.7	264.3	197	25.9	20	-42	6.2
198		d18:1-h26:1	854.7	264.3	198	24.4	20	-42	6.2
199		d18:2-h16:0	714.6	262.3	199	16.8	20	-38	3.8
200		d18:2-h18:0	742.6	262.3	200	18.8	20	-38	3.8
201		d18:2-h20:0	770.6	262.3	201	20.7	20	-40	3.8
202		d18:2-h20:1	768.6	262.3	202	19.2	20	-40	3.8
203		d18:2-h22:0	798.7	262.3	203	22.4	20	-40	3.8
204		d18:2-h22:1	796.6	262.3	204	20.9	20	-40	3.8
205		d18:2-h23:0	812.7	262.3	205	23.3	20	-40	3.8
206		d18:2-h23:1	810.7	262.3	206	21.8	20	-40	3.8
207		d18:2-h24:0	826.7	262.3	207	24.1	20	-40	3.8
208		d18:2-h24:1	824.7	262.3	208	22.4	20	-40	3.8
209		d18:2-h25:0	840.7	262.3	209	24.9	20	-42	3.8
210		d18:2-h25:1	838.7	262.3	210	23.4	20	-42	3.8
211		d18:2-h26:0	854.7	262.3	211	25.5	20	-42	3.8
212		d18:2-h26:1	852.7	262.3	212	24.0	20	-42	3.8
213		t18:0-c16:0	718.6	300.3	213	17.0	20	-40	4.2
214		t18:0-c18:0	746.6	300.3	214	19.1	20	-42	4.2
215		t18:0-c20:0	774.7	300.3	215	21.1	20	-44	4.2
216		t18:0-c20:1	772.6	300.3	216	20.0	20	-44	4.2
217		t18:0-c22:0	802.7	300.3	217	22.8	20	-44	4.2
218		t18:0-c22:1	800.7	300.3	218	21.7	20	-44	4.2
219		t18:0-c23:0	816.7	300.3	219	22.8	20	-44	4.2
220		t18:0-c23:1	814.7	300.3	220	22.5	20	-44	4.2
221		t18:0-c24:0	830.7	300.3	221	24.4	20	-44	4.2
222		t18:0-c24:1	828.7	300.3	222	23.5	20	-44	4.2
223		t18:0-c25:0	844.7	300.3	223	25.2	20	-44	4.2
224		t18:0-c25:1	842.7	300.3	224	24.1	20	-44	4.2
225		t18:0-c26:0	858.7	300.3	225	25.8	20	-46	4.2
226		t18:0-c26:1	856.7	300.3	226	24.9	20	-46	4.6
227		t18:1-c16:0	716.6	298.3	227	16.5	20	-40	4.6
228		t18:1-c18:0	744.6	298.3	228	18.6	20	-42	4.6
229		t18:1-c20:0	772.6	298.3	229	20.6	20	-44	4.6
230		t18:1-c20:1	770.6	298.3	230	19.5	20	-44	4.6
231		t18:1-c22:0	800.7	298.3	231	22.3	20	-44	4.6
232		t18:1-c22:1	798.7	298.3	232	21.2	20	-44	4.6
233		t18:1-c23:0	814.7	298.3	233	23.1	20	-44	4.6
234		t18:1-c23:1	812.7	298.3	234	22.0	20	-44	4.6
235		t18:1-c24:0	828.7	298.3	235	23.9	20	-44	4.6
236		t18:1-c24:1	826.7	298.3	236	23.0	20	-44	4.6
237		t18:1-c25:0	842.7	298.3	237	24.7	20	-44	4.6
238		t18:1-c25:1	840.7	298.3	238	23.6	20	-44	4.6
239		t18:1-c26:0	856.7	298.3	239	25.3	20	-46	4.6
240		t18:1-c26:1	854.7	298.3	240	24.4	20	-46	4.6
241		d18:0-c16:0	702.6	266.3	241	18.7	20	-38	5.6
242		d18:0-c18:0	730.6	266.3	242	20.8	20	-38	5.6
243		d18:0-c20:0	758.7	266.3	243	22.8	20	-40	5.6
244		d18:0-c20:1	756.6	266.3	244	21.7	20	-40	5.6
245		d18:0-c22:0	786.7	266.3	245	24.5	20	-40	5.6

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (m/z)	Product ion (m/z)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
246		d18:0-c22:1	784.7	266.3	246	23.4	20	-40	5.6
247		d18:0-c23:0	800.7	266.3	247	24.5	20	-40	5.6
248		d18:0-c23:1	798.7	266.3	248	24.2	20	-40	5.6
249		d18:0-c24:0	814.7	266.3	249	26.1	20	-40	5.6
250		d18:0-c24:1	812.7	266.3	250	25.2	20	-40	5.6
251		d18:0-c25:0	828.7	266.3	251	26.9	20	-40	5.6
252		d18:0-c25:1	826.7	266.3	252	25.8	20	-40	5.6
253		d18:0-c26:0	842.7	266.3	253	27.5	20	-42	5.6
254		d18:0-c26:1	840.7	266.3	254	26.6	20	-42	5.6
255		d18:1-c16:0	700.6	264.3	255	18.3	20	-38	6.2
256		d18:1-c18:0	728.6	264.3	256	20.2	20	-38	6.2
257		d18:1-c20:0	756.6	264.3	257	22.2	20	-40	6.2
258		d18:1-c20:1	754.6	264.3	258	21.2	20	-40	6.2
259		d18:1-c22:0	784.7	264.3	259	24.0	20	-40	6.2
260		d18:1-c22:1	782.7	264.3	260	22.9	20	-40	6.2
261		d18:1-c23:0	798.7	264.3	261	24.0	20	-40	6.2
262		d18:1-c23:1	796.7	264.3	262	23.7	20	-40	6.2
263		d18:1-c24:0	812.7	264.3	263	25.3	20	-40	6.2
264		d18:1-c24:1	810.7	264.3	264	24.7	20	-40	6.2
265		d18:1-c25:0	826.7	264.3	265	26.4	20	-40	6.2
266		d18:1-c25:1	824.7	264.3	266	25.3	20	-40	6.2
267		d18:1-c26:0	840.7	264.3	267	27.0	20	-42	6.2
268		d18:1-c26:0	838.7	264.3	268	26.1	20	-42	6.2
269		d18:2-c16:0	698.6	262.3	269	17.8	20	-38	3.8
270		d18:2-c18:0	726.6	262.3	270	19.7	20	-38	3.8
271		d18:2-c20:0	754.6	262.3	271	21.7	20	-40	3.8
272		d18:2-c20:1	752.6	262.3	272	20.7	20	-40	3.8
273		d18:2-c22:0	782.7	262.3	273	23.5	20	-40	3.8
274		d18:2-c22:1	780.6	262.3	274	22.4	20	-40	3.8
275		d18:2-c23:0	796.7	262.3	275	23.5	20	-40	3.8
276		d18:2-c23:1	794.7	262.3	276	23.2	20	-40	3.8
277		d18:2-c24:0	810.7	262.3	277	24.8	20	-40	3.8
278		d18:2-c24:1	808.7	262.3	278	24.2	20	-40	3.8
279		d18:2-c25:0	824.7	262.3	279	25.9	20	-40	3.8
280		d18:2-c25:1	822.7	262.3	280	24.8	20	-40	3.8
281		d18:2-c26:0	838.7	262.3	281	26.5	20	-42	3.8
282		d18:2-c26:1	836.7	262.3	282	25.6	20	-42	3.8
283		d18:1-c12:0 (IS)	644.5	264.3	283	17.8	20	-32	
284	GIPC	H_t18:0-h16:0	1152.6	554.5	284	8.3	20	-40	0.25
285		H_t18:0-h18:0	1180.7	582.6	285	10.3	20	-42	0.25
286		H_t18:0-h20:0	1208.7	610.6	286	11.7	20	-44	0.25
287		H_t18:0-h20:1	1206.7	608.6	287	9.6	20	-44	0.25
288		H_t18:0-h22:0	1236.7	638.6	288	12.9	20	-46	0.25
289		H_t18:0-h22:1	1234.7	636.6	289	10.8	20	-46	0.25
290		H_t18:0-h23:0	1250.7	652.6	290	13.9	20	-46	0.25
291		H_t18:0-h23:1	1248.7	650.6	291	11.8	20	-46	0.25
292		H_t18:0-h24:0	1264.8	666.6	292	14.6	20	-48	0.25
293		H_t18:0-h24:1	1262.7	664.6	293	13.4	20	-48	0.25
294		H_t18:0-h25:0	1278.8	680.7	294	15.5	20	-48	0.25

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
295		H_t18:0-h25:1	1276.8	678.6	295	13.4	20	-48	0.25
296		H_t18:0-h26:0	1292.8	694.7	296	16.2	20	-48	0.25
297		H_t18:0-h26:1	1290.8	692.7	297	15.0	20	-48	0.25
298		H_t18:1-h16:0	1150.6	552.5	298	7.8	20	-40	0.18
299		H_t18:1-h18:0	1178.7	580.5	299	9.9	20	-42	0.18
300		H_t18:1-h20:0	1206.7	608.6	287	11.3	20	-44	0.18
301		H_t18:1-h20:1	1204.7	606.6	300	9.2	20	-44	0.18
302		H_t18:1-h22:0	1234.7	636.6	289	12.6	20	-46	0.18
303		H_t18:1-h22:1	1232.7	634.6	301	10.4	20	-46	0.18
304		H_t18:1-h23:0	1248.7	650.6	291	13.4	20	-46	0.18
305		H_t18:1-h23:1	1246.7	648.6	302	11.4	20	-46	0.18
306		H_t18:1-h24:0	1262.7	664.6	293	14.2	20	-48	0.18
307		H_t18:1-h24:1	1260.7	662.6	303	12.0	20	-48	0.18
308		H_t18:1-h25:0	1276.8	678.6	295	15.0	20	-48	0.18
309		H_t18:1-h25:1	1274.7	676.6	304	13.0	20	-48	0.18
310		H_t18:1-h26:0	1290.8	692.7	297	15.8	20	-48	0.18
311		H_t18:1-h26:1	1288.8	690.6	305	13.8	20	-48	0.18
312		H_d18:0-h16:0	1136.6	538.5	306	9.1	20	-40	0.25
313		H_d18:0-h18:0	1164.7	566.6	307	11.2	20	-42	0.25
314		H_d18:0-h20:0	1192.7	594.6	308	12.6	20	-44	0.25
315		H_d18:0-h20:1	1190.7	592.6	309	10.5	20	-44	0.25
316		H_d18:0-h22:0	1220.7	622.6	310	13.9	20	-46	0.25
317		H_d18:0-h22:1	1218.7	620.6	311	11.7	20	-46	0.25
318		H_d18:0-h23:0	1234.7	636.6	312	14.7	20	-46	0.25
319		H_d18:0-h23:1	1232.7	634.6	313	12.7	20	-46	0.25
320		H_d18:0-h24:0	1248.8	650.7	314	15.5	20	-48	0.25
321		H_d18:0-h24:1	1246.7	648.6	315	13.3	20	-48	0.25
322		H_d18:0-h25:0	1262.8	664.7	316	16.3	20	-48	0.25
323		H_d18:0-h25:1	1260.8	662.7	317	14.3	20	-48	0.25
324		H_d18:0-h26:0	1276.8	678.7	318	17.1	20	-48	0.25
325		H_d18:0-h26:1	1274.8	676.7	319	15.1	20	-48	0.25
326		H_d18:1-h16:0	1134.6	536.5	320	8.5	20	-40	0.35
327		H_d18:1-h18:0	1162.7	564.5	321	10.6	20	-42	0.35
328		H_d18:1-h20:0	1190.7	592.6	309	12.0	20	-44	0.35
329		H_d18:1-h20:1	1188.7	590.6	322	9.9	20	-44	0.35
330		H_d18:1-h22:0	1218.7	620.6	311	13.3	20	-46	0.35
331		H_d18:1-h22:1	1216.7	618.6	323	11.1	20	-46	0.35
332		H_d18:1-h23:0	1232.7	634.6	313	14.1	20	-46	0.35
333		H_d18:1-h23:1	1230.7	632.6	324	12.1	20	-46	0.35
334		H_d18:1-h24:0	1246.7	648.6	315	14.9	20	-48	0.35
335		H_d18:1-h24:1	1244.7	646.6	325	12.7	20	-48	0.35
336		H_d18:1-h25:0	1260.8	662.7	317	15.7	20	-48	0.35
337		H_d18:1-h25:1	1258.7	660.6	326	13.7	20	-48	0.35
338		H_d18:1-h26:0	1274.8	676.7	319	16.5	20	-48	0.35
339		H_d18:1-h26:1	1272.8	674.7	327	14.5	20	-48	0.35
340		H_t18:0-c16:0	1136.6	534.5	306	8.5	20	-40	0.25
341		H_t18:0-c18:0	1164.7	562.5	307	10.6	20	-42	0.25
342		H_t18:0-c20:0	1192.7	590.6	308	12.0	20	-44	0.25
343		H_t18:0-c20:1	1190.7	588.5	309	9.9	20	-44	0.25

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
344		H_t18:0-c22:0	1220.7	618.6	310	13.5	20	-46	0.25
345		H_t18:0-c22:1	1218.7	616.6	311	11.1	20	-46	0.25
346		H_t18:0-c23:0	1234.7	632.6	312	14.1	20	-46	0.25
347		H_t18:0-c23:1	1232.7	630.6	313	12.1	20	-46	0.25
348		H_t18:0-c24:0	1248.8	646.6	314	14.9	20	-48	0.25
349		H_t18:0-c24:1	1246.7	644.6	315	12.7	20	-48	0.25
350		H_t18:0-c25:0	1262.8	660.6	316	15.7	20	-48	0.25
351		H_t18:0-c25:1	1260.8	658.6	317	13.7	20	-48	0.25
352		H_t18:0-c26:0	1276.8	674.7	318	17.4	20	-48	0.25
353		H_t18:0-c26:1	1274.8	672.6	319	15.4	20	-48	0.25
354		H_t18:1-c16:0	1134.6	538.5	320	8.1	20	-40	0.18
355		H_t18:1-c18:0	1162.7	566.6	321	10.2	20	-42	0.18
356		H_t18:1-c20:0	1190.7	594.6	309	11.6	20	-44	0.18
357		H_t18:1-c20:1	1188.7	592.6	322	9.5	20	-44	0.18
358		H_t18:1-c22:0	1218.7	622.6	311	13.1	20	-46	0.18
359		H_t18:1-c22:1	1216.7	620.6	323	10.7	20	-46	0.18
360		H_t18:1-c23:0	1232.7	636.6	313	13.7	20	-46	0.18
361		H_t18:1-c23:1	1230.7	634.6	324	11.7	20	-46	0.18
362		H_t18:1-c24:0	1246.7	650.7	315	14.5	20	-48	0.18
363		H_t18:1-c24:1	1244.7	648.6	325	12.3	20	-48	0.18
364		H_t18:1-c25:0	1260.8	664.7	317	15.3	20	-48	0.18
365		H_t18:1-c25:1	1258.7	662.7	326	13.3	20	-48	0.18
366		H_t18:1-c26:0	1274.8	678.7	319	17.0	20	-48	0.18
367		H_t18:1-c26:1	1272.8	676.7	327	15.0	20	-48	0.18
368		H_d18:0-c16:0	1120.6	536.5	328	9.7	20	-40	0.25
369		H_d18:0-c18:0	1148.7	564.5	329	11.9	20	-42	0.25
370		H_d18:0-c20:0	1176.7	592.6	330	13.3	20	-44	0.25
371		H_d18:0-c20:1	1174.7	590.6	331	11.2	20	-44	0.25
372		H_d18:0-c22:0	1204.7	620.6	332	14.8	20	-46	0.25
373		H_d18:0-c22:1	1202.7	618.6	333	12.4	20	-46	0.25
374		H_d18:0-c23:0	1218.8	634.6	334	15.4	20	-46	0.25
375		H_d18:0-c23:1	1216.7	632.6	335	13.4	20	-46	0.25
376		H_d18:0-c24:0	1232.8	648.6	336	16.2	20	-48	0.25
377		H_d18:0-c24:1	1230.8	646.6	337	14.0	20	-48	0.25
378		H_d18:0-c25:0	1246.8	662.7	338	17.0	20	-48	0.25
379		H_d18:0-c25:1	1244.8	660.6	339	15.0	20	-48	0.25
380		H_d18:0-c26:0	1260.8	676.7	340	18.7	20	-48	0.25
381		H_d18:0-c26:1	1258.8	674.7	341	16.7	20	-48	0.25
382		H_d18:1-c16:0	1118.6	522.5	342	9.3	20	-40	0.35
383		H_d18:1-c18:0	1146.7	550.6	343	11.5	20	-42	0.35
384		H_d18:1-c20:0	1174.7	578.6	331	12.9	20	-44	0.35
385		H_d18:1-c20:1	1172.7	576.6	344	10.8	20	-44	0.35
386		H_d18:1-c22:0	1202.7	606.6	333	14.4	20	-46	0.35
387		H_d18:1-c22:1	1200.7	604.6	345	12.0	20	-46	0.35
388		H_d18:1-c23:0	1216.7	620.6	335	15.0	20	-46	0.35
389		H_d18:1-c23:1	1214.7	618.6	346	13.0	20	-46	0.35
390		H_d18:1-c24:0	1230.8	634.7	337	15.8	20	-48	0.35
391		H_d18:1-c24:1	1228.7	632.6	347	13.6	20	-48	0.35
392		H_d18:1-c25:0	1244.8	648.7	339	16.6	20	-48	0.35

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
393		H_d18:1-c25:1	1242.8	646.7	348	14.6	20	-48	0.35
394		H_d18:1-c26:0	1258.8	662.7	341	18.3	20	-48	0.35
395		H_d18:1-c26:1	1256.8	660.7	349	16.3	20	-48	0.35
396		HH_t18:0-h16:0	1314.7	554.5	350	7.6	20	-40	0.25
397		HH_t18:0-h18:0	1342.7	582.6	351	9.6	20	-42	0.25
398		HH_t18:0-h20:0	1370.7	610.6	352	11.0	20	-44	0.25
399		HH_t18:0-h20:1	1368.7	608.6	353	8.9	20	-44	0.25
400		HH_t18:0-h22:0	1398.8	638.6	354	12.2	20	-46	0.25
401		HH_t18:0-h22:1	1396.8	636.6	355	10.1	20	-46	0.25
402		HH_t18:0-h23:0	1412.8	652.6	356	13.2	20	-46	0.25
403		HH_t18:0-h23:1	1410.8	650.6	357	11.1	20	-46	0.25
404		HH_t18:0-h24:0	1426.8	666.6	358	13.9	20	-48	0.25
405		HH_t18:0-h24:1	1424.8	664.6	359	12.7	20	-48	0.25
406		HH_t18:0-h25:0	1440.8	680.7	360	14.8	20	-48	0.25
407		HH_t18:0-h25:1	1438.8	678.6	361	12.7	20	-48	0.25
408		HH_t18:0-h26:0	1454.8	694.7	362	15.5	20	-48	0.25
409		HH_t18:0-h26:1	1452.8	692.7	363	14.3	20	-48	0.25
410		HH_t18:1-h16:0	1312.7	552.5	364	7.1	20	-40	0.18
411		HH_t18:1-h18:0	1340.7	580.5	365	9.2	20	-42	0.18
412		HH_t18:1-h20:0	1368.7	608.6	353	10.6	20	-44	0.18
413		HH_t18:1-h20:1	1366.7	606.6	366	8.5	20	-44	0.18
414		HH_t18:1-h22:0	1396.8	636.6	355	11.9	20	-46	0.18
415		HH_t18:1-h22:1	1394.7	634.6	367	9.7	20	-46	0.18
416		HH_t18:1-h23:0	1410.8	650.6	357	12.7	20	-46	0.18
417		HH_t18:1-h23:1	1408.8	648.6	368	10.7	20	-46	0.18
418		HH_t18:1-h24:0	1424.8	664.6	359	13.5	20	-48	0.18
419		HH_t18:1-h24:1	1422.8	662.6	369	11.3	20	-48	0.18
420		HH_t18:1-h25:0	1438.8	678.6	361	14.3	20	-48	0.18
421		HH_t18:1-h25:1	1436.8	676.6	370	12.3	20	-48	0.18
422		HH_t18:1-h26:0	1452.8	692.7	363	15.1	20	-48	0.18
423		HH_t18:1-h26:1	1450.8	690.6	371	13.1	20	-48	0.18
424		HH_d18:0-h16:0	1298.7	538.5	372	8.4	20	-40	0.25
425		HH_d18:0-h18:0	1326.7	566.6	373	10.5	20	-42	0.25
426		HH_d18:0-h20:0	1354.8	594.6	374	11.9	20	-44	0.25
427		HH_d18:0-h20:1	1352.7	592.6	375	9.8	20	-44	0.25
428		HH_d18:0-h22:0	1382.8	622.6	376	13.2	20	-46	0.25
429		HH_d18:0-h22:1	1380.8	620.6	377	11.0	20	-46	0.25
430		HH_d18:0-h23:0	1396.8	636.6	378	14.0	20	-46	0.25
431		HH_d18:0-h23:1	1394.8	634.6	379	12.0	20	-46	0.25
432		HH_d18:0-h24:0	1410.8	650.7	380	14.8	20	-48	0.25
433		HH_d18:0-h24:1	1408.8	648.6	381	12.6	20	-48	0.25
434		HH_d18:0-h25:0	1424.8	664.7	382	15.6	20	-48	0.25
435		HH_d18:0-h25:1	1422.8	662.7	383	13.6	20	-48	0.25
436		HH_d18:0-h26:0	1438.8	678.7	384	16.4	20	-48	0.25
437		HH_d18:0-h26:1	1436.8	676.7	385	14.4	20	-48	0.25
438		HH_d18:1-h16:0	1296.7	536.5	386	7.8	20	-40	0.35
439		HH_d18:1-h18:0	1324.7	564.5	387	9.9	20	-42	0.35
440		HH_d18:1-h20:0	1352.7	592.6	375	11.3	20	-44	0.35
441		HH_d18:1-h20:1	1350.7	590.6	388	9.2	20	-44	0.35

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
442		HH_d18:1-h22:0	1380.8	620.6	377	12.6	20	-46	0.35
443		HH_d18:1-h22:1	1378.8	618.6	389	10.4	20	-46	0.35
444		HH_d18:1-h23:0	1394.8	634.6	379	13.4	20	-46	0.35
445		HH_d18:1-h23:1	1392.8	632.6	390	11.4	20	-46	0.35
446		HH_d18:1-h24:0	1408.8	648.6	381	14.2	20	-48	0.35
447		HH_d18:1-h24:1	1406.8	646.6	391	12.0	20	-48	0.35
448		HH_d18:1-h25:0	1422.8	662.7	383	15.0	20	-48	0.35
449		HH_d18:1-h25:1	1420.8	660.6	392	13.0	20	-48	0.35
450		HH_d18:1-h26:0	1436.8	676.7	385	15.8	20	-48	0.35
451		HH_d18:1-h26:1	1434.8	674.7	393	13.8	20	-48	0.35
452		HH_t18:0-c16:0	1298.7	534.5	372	7.8	20	-40	0.25
453		HH_t18:0-c18:0	1326.7	562.5	373	9.9	20	-42	0.25
454		HH_t18:0-c20:0	1354.8	590.6	374	11.3	20	-44	0.25
455		HH_t18:0-c20:1	1352.7	588.5	375	9.2	20	-44	0.25
456		HH_t18:0-c22:0	1382.8	618.6	376	12.8	20	-46	0.25
457		HH_t18:0-c22:1	1380.8	616.6	377	10.4	20	-46	0.25
458		HH_t18:0-c23:0	1396.8	632.6	378	13.4	20	-46	0.25
459		HH_t18:0-c23:1	1394.8	630.6	379	11.4	20	-46	0.25
460		HH_t18:0-c24:0	1410.8	646.6	380	14.2	20	-48	0.25
461		HH_t18:0-c24:1	1408.8	644.6	381	12.0	20	-48	0.25
462		HH_t18:0-c25:0	1424.8	660.6	382	15.0	20	-48	0.25
463		HH_t18:0-c25:1	1422.8	658.6	383	13.0	20	-48	0.25
464		HH_t18:0-c26:0	1438.8	674.7	384	16.7	20	-48	0.25
465		HH_t18:0-c26:1	1436.8	672.6	385	14.7	20	-48	0.25
466		HH_t18:1-c16:0	1296.7	538.5	386	7.4	20	-40	0.18
467		HH_t18:1-c18:0	1324.7	566.6	387	9.5	20	-42	0.18
468		HH_t18:1-c20:0	1352.7	594.6	375	10.9	20	-44	0.18
469		HH_t18:1-c20:1	1350.7	592.6	388	8.8	20	-44	0.18
470		HH_t18:1-c22:0	1380.8	622.6	377	12.4	20	-46	0.18
471		HH_t18:1-c22:1	1378.8	620.6	389	10.0	20	-46	0.18
472		HH_t18:1-c23:0	1394.8	636.6	379	13.0	20	-46	0.18
473		HH_t18:1-c23:1	1392.8	634.6	390	11.0	20	-46	0.18
474		HH_t18:1-c24:0	1408.8	650.7	381	13.8	20	-48	0.18
475		HH_t18:1-c24:1	1406.8	648.6	391	11.6	20	-48	0.18
476		HH_t18:1-c25:0	1422.8	664.7	383	14.6	20	-48	0.18
477		HH_t18:1-c25:1	1420.8	662.7	392	12.6	20	-48	0.18
478		HH_t18:1-c26:0	1436.8	678.7	385	16.3	20	-48	0.18
479		HH_t18:1-c26:1	1434.8	676.7	393	14.3	20	-48	0.18
480		HH_d18:0-c16:0	1282.7	536.5	394	9.0	20	-40	0.25
481		HH_d18:0-c18:0	1310.7	564.5	395	11.2	20	-42	0.25
482		HH_d18:0-c20:0	1338.8	592.6	396	12.6	20	-44	0.25
483		HH_d18:0-c20:1	1336.7	590.6	397	10.5	20	-44	0.25
484		HH_d18:0-c22:0	1366.8	620.6	398	14.1	20	-46	0.25
485		HH_d18:0-c22:1	1364.8	618.6	399	11.7	20	-46	0.25
486		HH_d18:0-c23:0	1380.8	634.6	400	14.7	20	-46	0.25
487		HH_d18:0-c23:1	1378.8	632.6	401	12.7	20	-46	0.25
488		HH_d18:0-c24:0	1394.8	648.6	402	15.5	20	-48	0.25
489		HH_d18:0-c24:1	1392.8	646.6	403	13.3	20	-48	0.25
490		HH_d18:0-c25:0	1408.8	662.7	404	16.3	20	-48	0.25

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
491		HH_d18:0-c25:1	1406.8	660.6	405	14.3	20	-48	0.25
492		HH_d18:0-c26:0	1422.9	676.7	406	18.0	20	-48	0.25
493		HH_d18:0-c26:1	1420.8	674.7	407	16.0	20	-48	0.25
494		HH_d18:1-c16:0	1280.7	522.5	408	8.6	20	-40	0.35
495		HH_d18:1-c18:0	1308.7	550.6	409	10.8	20	-42	0.35
496		HH_d18:1-c20:0	1336.7	578.6	397	12.2	20	-44	0.35
497		HH_d18:1-c20:1	1334.7	576.6	410	10.1	20	-44	0.35
498		HH_d18:1-c22:0	1364.8	606.6	399	13.7	20	-46	0.35
499		HH_d18:1-c22:1	1362.8	604.6	411	11.3	20	-46	0.35
500		HH_d18:1-c23:0	1378.8	620.6	401	14.3	20	-46	0.35
501		HH_d18:1-c23:1	1376.8	618.6	412	12.3	20	-46	0.35
502		HH_d18:1-c24:0	1392.8	634.7	403	15.1	20	-48	0.35
503		HH_d18:1-c24:1	1390.8	632.6	413	12.9	20	-48	0.35
504		HH_d18:1-c25:0	1406.8	648.7	405	15.9	20	-48	0.35
505		HH_d18:1-c25:1	1404.8	646.7	414	13.9	20	-48	0.35
506		HH_d18:1-c26:0	1420.8	662.7	407	17.6	20	-48	0.35
507		HH_d18:1-c26:1	1418.8	660.7	415	15.6	20	-48	0.35
508		N_t18:0-h16:0	1151.6	554.5	416	9.9	20	-44	0.06
509		N_t18:0-h18:0	1179.7	582.5	417	12.6	20	-44	0.06
510		N_t18:0-h20:0	1207.7	610.6	418	14.2	20	-46	0.06
511		N_t18:0-h20:1	1205.7	608.6	419	12.5	20	-46	0.06
512		N_t18:0-h22:0	1235.7	638.6	420	15.4	20	-46	0.06
513		N_t18:0-h22:1	1233.7	636.6	421	13.7	20	-46	0.06
514		N_t18:0-h23:0	1249.8	652.6	422	16.2	20	-46	0.06
515		N_t18:0-h23:1	1247.7	650.6	423	14.5	20	-46	0.06
516		N_t18:0-h24:0	1263.8	666.6	424	17.2	20	-48	0.06
517		N_t18:0-h24:1	1261.8	664.6	425	15.7	20	-48	0.06
518		N_t18:0-h25:0	1277.8	680.7	426	17.9	20	-48	0.06
519		N_t18:0-h25:1	1275.8	678.6	427	16.2	20	-48	0.06
520		N_t18:0-h26:0	1291.8	694.7	428	18.8	20	-48	0.06
521		N_t18:0-h26:1	1289.8	692.7	429	17.4	20	-48	0.06
522		N_t18:1-h16:0	1149.6	552.5	430	9.3	20	-44	0.04
523		N_t18:1-h18:0	1177.7	580.5	431	12.0	20	-44	0.04
524		N_t18:1-h20:0	1205.7	608.6	419	13.6	20	-46	0.04
525		N_t18:1-h20:1	1203.7	606.5	432	11.9	20	-46	0.04
526		N_t18:1-h22:0	1233.7	636.6	421	14.8	20	-46	0.04
527		N_t18:1-h22:1	1231.7	634.6	433	13.1	20	-46	0.04
528		N_t18:1-h23:0	1247.7	650.6	423	15.6	20	-46	0.04
529		N_t18:1-h23:1	1245.7	648.6	434	13.9	20	-46	0.04
530		N_t18:1-h24:0	1261.8	664.6	425	16.6	20	-48	0.04
531		N_t18:1-h24:1	1259.7	662.6	435	15.1	20	-48	0.04
532		N_t18:1-h25:0	1275.8	678.6	427	17.3	20	-48	0.04
533		N_t18:1-h25:1	1273.8	676.6	436	15.6	20	-48	0.04
534		N_t18:1-h26:0	1289.8	692.7	429	18.2	20	-48	0.04
535		N_t18:1-h26:1	1287.8	690.6	437	16.8	20	-48	0.04
536		N_d18:0-h16:0	1135.7	538.5	438	10.4	20	-44	0.05
537		N_d18:0-h18:0	1163.7	566.6	439	13.1	20	-44	0.05
538		N_d18:0-h20:0	1191.7	594.6	440	14.7	20	-46	0.05
539		N_d18:0-h20:1	1189.7	592.6	441	13.0	20	-46	0.05

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
540		N_d18:0-h22:0	1219.7	622.6	442	15.9	20	-46	0.05
541		N_d18:0-h22:1	1217.7	620.6	443	14.2	20	-46	0.05
542		N_d18:0-h23:0	1233.8	636.6	444	16.7	20	-46	0.05
543		N_d18:0-h23:1	1231.7	634.6	445	15.0	20	-46	0.05
544		N_d18:0-h24:0	1247.8	650.6	446	17.7	20	-48	0.05
545		N_d18:0-h24:1	1245.8	648.6	447	16.2	20	-48	0.05
546		N_d18:0-h25:0	1261.8	664.7	448	18.4	20	-48	0.05
547		N_d18:0-h25:1	1259.8	662.6	449	16.7	20	-48	0.05
548		N_d18:0-h26:0	1275.8	678.7	450	19.3	20	-48	0.05
549		N_d18:0-h26:1	1273.8	676.7	451	17.9	20	-48	0.05
550		N_d18:1-h16:0	1133.6	536.5	452	9.8	20	-44	0.15
551		N_d18:1-h18:0	1161.7	564.5	453	12.5	20	-44	0.15
552		N_d18:1-h20:0	1189.7	592.6	441	14.1	20	-46	0.15
553		N_d18:1-h20:1	1187.7	590.6	454	12.4	20	-46	0.15
554		N_d18:1-h22:0	1217.7	620.6	443	15.3	20	-46	0.15
555		N_d18:1-h22:1	1215.7	618.6	455	13.6	20	-46	0.15
556		N_d18:1-h23:0	1231.7	634.6	445	16.1	20	-46	0.15
557		N_d18:1-h23:1	1229.7	632.6	456	14.4	20	-46	0.15
558		N_d18:1-h24:0	1245.8	648.6	447	17.1	20	-48	0.15
559		N_d18:1-h24:1	1243.7	646.6	457	15.6	20	-48	0.15
560		N_d18:1-h25:0	1259.8	662.6	449	17.8	20	-48	0.15
561		N_d18:1-h25:1	1257.8	660.6	458	16.1	20	-48	0.15
562		N_d18:1-h26:0	1273.8	676.7	451	18.7	20	-48	0.15
563		N_d18:1-h26:1	1271.8	674.6	459	17.3	20	-48	0.15
564		N_t18:0-c16:0	1135.7	534.5	438	10.1	20	-44	0.06
565		N_t18:0-c18:0	1163.7	562.5	439	12.8	20	-44	0.06
566		N_t18:0-c20:0	1191.7	590.6	440	14.4	20	-46	0.06
567		N_t18:0-c20:1	1189.7	588.5	441	12.7	20	-46	0.06
568		N_t18:0-c22:0	1219.7	618.6	442	15.6	20	-46	0.06
569		N_t18:0-c22:1	1217.7	616.6	443	13.9	20	-46	0.06
570		N_t18:0-c23:0	1233.8	632.6	444	16.4	20	-46	0.06
571		N_t18:0-c23:1	1231.7	630.6	445	14.7	20	-46	0.06
572		N_t18:0-c24:0	1247.8	646.6	446	17.4	20	-48	0.06
573		N_t18:0-c24:1	1245.8	644.6	447	15.9	20	-48	0.06
574		N_t18:0-c25:0	1261.8	660.6	448	18.1	20	-48	0.06
575		N_t18:0-c25:1	1259.8	658.6	449	16.4	20	-48	0.06
576		N_t18:0-c26:0	1275.8	674.6	450	19.0	20	-48	0.06
577		N_t18:0-c26:1	1273.8	672.6	451	17.6	20	-48	0.06
578		N_t18:1-c16:0	1133.6	538.5	452	9.5	20	-44	0.04
579		N_t18:1-c18:0	1161.7	566.6	453	12.2	20	-44	0.04
580		N_t18:1-c20:0	1189.7	594.6	441	13.8	20	-46	0.04
581		N_t18:1-c20:1	1187.7	592.6	454	12.1	20	-46	0.04
582		N_t18:1-c22:0	1217.7	622.6	443	15.0	20	-46	0.04
583		N_t18:1-c22:1	1215.7	620.6	455	13.3	20	-46	0.04
584		N_t18:1-c23:0	1231.7	636.6	445	15.8	20	-46	0.04
585		N_t18:1-c23:1	1229.7	634.6	456	14.1	20	-46	0.04
586		N_t18:1-c24:0	1245.8	650.6	447	16.8	20	-48	0.04
587		N_t18:1-c24:1	1243.7	648.6	457	15.3	20	-48	0.04
588		N_t18:1-c25:0	1259.8	664.7	449	17.5	20	-48	0.04

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
589		N_t18:1-c25:1	1257.8	662.6	458	15.8	20	-48	0.04
590		N_t18:1-c26:0	1273.8	678.7	451	18.4	20	-48	0.04
591		N_t18:1-c26:1	1271.8	676.7	459	17.0	20	-48	0.04
592		N_d18:0-c16:0	1119.7	536.5	460	11.7	20	-42	0.05
593		N_d18:0-c18:0	1147.7	564.5	461	14.4	20	-42	0.05
594		N_d18:0-c20:0	1175.7	592.6	462	16.0	20	-44	0.05
595		N_d18:0-c20:1	1173.7	590.6	463	14.3	20	-44	0.05
596		N_d18:0-c22:0	1203.7	620.6	464	17.2	20	-44	0.05
597		N_d18:0-c22:1	1201.7	618.6	465	15.5	20	-44	0.05
598		N_d18:0-c23:0	1217.8	634.6	466	18.0	20	-44	0.05
599		N_d18:0-c23:1	1215.7	632.6	467	16.3	20	-44	0.05
600		N_d18:0-c24:0	1231.8	648.6	468	19.0	20	-46	0.05
601		N_d18:0-c24:1	1229.8	646.6	469	17.5	20	-46	0.05
602		N_d18:0-c25:0	1245.8	662.6	470	19.7	20	-46	0.05
603		N_d18:0-c25:1	1243.8	660.6	471	18.0	20	-46	0.05
604		N_d18:0-c26:0	1259.8	676.7	472	20.6	20	-46	0.05
605		N_d18:0-c26:1	1257.8	674.6	473	19.2	20	-46	0.05
606		N_d18:1-c16:0	1117.6	522.5	474	11.1	20	-40	0.15
607		N_d18:1-c18:0	1145.7	550.6	475	13.8	20	-40	0.15
608		N_d18:1-c20:0	1173.7	578.6	463	15.4	20	-42	0.15
609		N_d18:1-c20:1	1171.7	576.6	476	13.7	20	-42	0.15
610		N_d18:1-c22:0	1201.7	606.6	465	16.6	20	-42	0.15
611		N_d18:1-c22:1	1199.7	604.6	477	14.9	20	-42	0.15
612		N_d18:1-c23:0	1215.7	620.6	467	17.4	20	-42	0.15
613		N_d18:1-c23:1	1213.7	618.6	478	15.7	20	-42	0.15
614		N_d18:1-c24:0	1229.8	634.7	469	18.4	20	-44	0.15
615		N_d18:1-c24:1	1227.7	632.6	479	16.9	20	-44	0.15
616		N_d18:1-c25:0	1243.8	648.7	471	19.1	20	-44	0.15
617		N_d18:1-c25:1	1241.8	646.7	480	17.4	20	-44	0.15
618		N_d18:1-c26:0	1257.8	662.7	473	20.0	20	-44	0.15
619		N_d18:1-c26:1	1255.8	660.7	481	18.6	20	-44	0.15
620		NH_t18:0-h16:0	1313.7	554.5	482	8.7	20	-50	0.08
621		NH_t18:0-h18:0	1341.7	582.5	483	11.4	20	-50	0.08
622		NH_t18:0-h20:0	1369.8	610.6	484	13.0	20	-52	0.08
623		NH_t18:0-h20:1	1367.7	608.6	485	11.3	20	-52	0.08
624		NH_t18:0-h22:0	1397.8	638.6	486	14.2	20	-54	0.08
625		NH_t18:0-h22:1	1395.8	636.6	487	12.5	20	-54	0.08
626		NH_t18:0-h23:0	1411.8	652.6	488	15.0	20	-54	0.08
627		NH_t18:0-h23:1	1409.8	650.6	489	13.3	20	-54	0.08
628		NH_t18:0-h24:0	1425.8	666.6	490	16.0	20	-56	0.08
629		NH_t18:0-h24:1	1423.8	664.6	491	14.5	20	-56	0.08
630		NH_t18:0-h25:0	1439.8	680.7	492	16.7	20	-58	0.08
631		NH_t18:0-h25:1	1437.8	678.6	493	15.0	20	-58	0.08
632		NH_t18:0-h26:0	1453.9	694.7	494	17.6	20	-60	0.08
633		NH_t18:0-h26:1	1451.8	692.7	495	16.2	20	-60	0.08
634		NH_t18:1-h16:0	1311.7	552.5	496	8.1	20	-50	0.06
635		NH_t18:1-h18:0	1339.7	580.5	497	10.8	20	-50	0.06
636		NH_t18:1-h20:0	1367.7	608.6	485	12.4	20	-52	0.06
637		NH_t18:1-h20:1	1365.7	606.5	498	10.7	20	-52	0.06

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
638		NH_t18:1-h22:0	1395.8	636.6	487	13.6	20	-54	0.06
639		NH_t18:1-h22:1	1393.8	634.6	499	11.9	20	-54	0.06
640		NH_t18:1-h23:0	1409.8	650.6	489	14.4	20	-54	0.06
641		NH_t18:1-h23:1	1407.8	648.6	500	12.7	20	-54	0.06
642		NH_t18:1-h24:0	1423.8	664.6	491	15.4	20	-56	0.06
643		NH_t18:1-h24:1	1421.8	662.6	501	13.9	20	-56	0.06
644		NH_t18:1-h25:0	1437.8	678.6	493	16.1	20	-58	0.06
645		NH_t18:1-h25:1	1435.8	676.6	502	14.4	20	-58	0.06
646		NH_t18:1-h26:0	1451.8	692.7	495	17.0	20	-60	0.06
647		NH_t18:1-h26:1	1449.8	690.6	503	15.6	20	-60	0.06
648		NH_d18:0-h16:0	1297.7	538.5	504	9.2	20	-50	0.10
649		NH_d18:0-h18:0	1325.7	566.6	505	11.9	20	-50	0.10
650		NH_d18:0-h20:0	1353.8	594.6	506	13.5	20	-52	0.10
651		NH_d18:0-h20:1	1351.8	592.6	507	11.8	20	-52	0.10
652		NH_d18:0-h22:0	1381.8	622.6	508	14.7	20	-54	0.10
653		NH_d18:0-h22:1	1379.8	620.6	509	13.0	20	-54	0.10
654		NH_d18:0-h23:0	1395.8	636.6	510	15.5	20	-54	0.10
655		NH_d18:0-h23:1	1393.8	634.6	511	13.8	20	-54	0.10
656		NH_d18:0-h24:0	1409.8	650.6	512	16.5	20	-56	0.10
657		NH_d18:0-h24:1	1407.8	648.6	513	15.0	20	-56	0.10
658		NH_d18:0-h25:0	1423.8	664.7	514	17.2	20	-58	0.10
659		NH_d18:0-h25:1	1421.8	662.6	515	15.5	20	-58	0.10
660		NH_d18:0-h26:0	1437.9	678.7	516	18.1	20	-60	0.10
661		NH_d18:0-h26:1	1435.8	676.7	517	16.7	20	-60	0.10
662		NH_d18:1-h16:0	1295.7	536.5	518	8.6	20	-50	0.18
663		NH_d18:1-h18:0	1323.7	564.5	519	11.3	20	-50	0.18
664		NH_d18:1-h20:0	1351.8	592.6	507	12.9	20	-52	0.18
665		NH_d18:1-h20:1	1349.7	590.6	520	11.2	20	-52	0.18
666		NH_d18:1-h22:0	1379.8	620.6	509	14.1	20	-54	0.18
667		NH_d18:1-h22:1	1377.8	618.6	521	12.4	20	-54	0.18
668		NH_d18:1-h23:0	1393.8	634.6	511	14.9	20	-54	0.18
669		NH_d18:1-h23:1	1391.8	632.6	522	13.2	20	-54	0.18
670		NH_d18:1-h24:0	1407.8	648.6	513	15.9	20	-56	0.18
671		NH_d18:1-h24:1	1405.8	646.6	523	14.4	20	-56	0.18
672		NH_d18:1-h25:0	1421.8	662.6	515	16.6	20	-58	0.18
673		NH_d18:1-h25:1	1419.8	660.6	524	14.9	20	-58	0.18
674		NH_d18:1-h26:0	1435.8	676.7	517	17.5	20	-60	0.18
675		NH_d18:1-h26:1	1433.8	674.6	525	16.1	20	-60	0.18
676		NH_t18:0-c16:0	1297.7	534.5	504	8.9	20	-50	0.08
677		NH_t18:0-c18:0	1325.7	562.5	505	11.6	20	-50	0.08
678		NH_t18:0-c20:0	1353.8	590.6	506	13.2	20	-52	0.08
679		NH_t18:0-c20:1	1351.8	588.5	507	11.5	20	-52	0.08
680		NH_t18:0-c22:0	1381.8	618.6	508	14.4	20	-54	0.08
681		NH_t18:0-c22:1	1379.8	616.6	509	12.7	20	-54	0.08
682		NH_t18:0-c23:0	1395.8	632.6	510	15.2	20	-54	0.08
683		NH_t18:0-c23:1	1393.8	630.6	511	13.5	20	-54	0.08
684		NH_t18:0-c24:0	1409.8	646.6	512	16.2	20	-56	0.08
685		NH_t18:0-c24:1	1407.8	644.6	513	14.7	20	-56	0.08
686		NH_t18:0-c25:0	1423.8	660.6	514	16.9	20	-58	0.08

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
687		NH_t18:0-c25:1	1421.8	658.6	515	15.2	20	-58	0.08
688		NH_t18:0-c26:0	1437.9	674.6	516	17.8	20	-60	0.08
689		NH_t18:0-c26:1	1435.8	672.6	517	16.4	20	-60	0.08
690		NH_t18:1-c16:0	1295.7	538.5	518	8.3	20	-50	0.06
691		NH_t18:1-c18:0	1323.7	566.6	519	11.0	20	-50	0.06
692		NH_t18:1-c20:0	1351.8	594.6	507	12.6	20	-52	0.06
693		NH_t18:1-c20:1	1349.7	592.6	520	10.9	20	-52	0.06
694		NH_t18:1-c22:0	1379.8	622.6	509	13.8	20	-54	0.06
695		NH_t18:1-c22:1	1377.8	620.6	521	12.1	20	-54	0.06
696		NH_t18:1-c23:0	1393.8	636.6	511	14.6	20	-54	0.06
697		NH_t18:1-c23:1	1391.8	634.6	522	12.9	20	-54	0.06
698		NH_t18:1-c24:0	1407.8	650.6	513	15.6	20	-56	0.06
699		NH_t18:1-c24:1	1405.8	648.6	523	14.1	20	-56	0.06
700		NH_t18:1-c25:0	1421.8	664.7	515	16.3	20	-58	0.06
701		NH_t18:1-c25:1	1419.8	662.6	524	14.6	20	-58	0.06
702		NH_t18:1-c26:0	1435.8	678.7	517	17.2	20	-60	0.06
703		NH_t18:1-c26:1	1433.8	676.7	525	15.8	20	-60	0.06
704		NH_d18:0-c16:0	1281.7	536.5	526	10.5	20	-48	0.10
705		NH_d18:0-c18:0	1309.7	564.5	527	13.2	20	-48	0.10
706		NH_d18:0-c20:0	1337.8	592.6	528	14.8	20	-50	0.10
707		NH_d18:0-c20:1	1335.8	590.6	529	13.1	20	-50	0.10
708		NH_d18:0-c22:0	1365.8	620.6	530	16.0	20	-52	0.10
709		NH_d18:0-c22:1	1363.8	618.6	531	14.3	20	-52	0.10
710		NH_d18:0-c23:0	1379.8	634.6	532	16.8	20	-52	0.10
711		NH_d18:0-c23:1	1377.8	632.6	533	15.1	20	-52	0.10
712		NH_d18:0-c24:0	1393.8	648.6	534	17.8	20	-54	0.10
713		NH_d18:0-c24:1	1391.8	646.6	535	16.3	20	-54	0.10
714		NH_d18:0-c25:0	1407.8	662.6	536	18.5	20	-56	0.10
715		NH_d18:0-c25:1	1405.8	660.6	537	16.8	20	-56	0.10
716		NH_d18:0-c26:0	1421.9	676.7	538	19.4	20	-58	0.10
717		NH_d18:0-c26:1	1419.8	674.6	539	18.0	20	-58	0.10
718		NH_d18:1-c16:0	1279.7	522.5	540	9.9	20	-46	0.18
719		NH_d18:1-c18:0	1307.7	550.6	541	12.6	20	-46	0.18
720		NH_d18:1-c20:0	1335.8	578.6	529	14.2	20	-48	0.18
721		NH_d18:1-c20:1	1333.7	576.6	542	12.5	20	-48	0.18
722		NH_d18:1-c22:0	1363.8	606.6	531	15.4	20	-50	0.18
723		NH_d18:1-c22:1	1361.8	604.6	543	13.7	20	-50	0.18
724		NH_d18:1-c23:0	1377.8	620.6	533	16.2	20	-50	0.18
725		NH_d18:1-c23:1	1375.8	618.6	544	14.5	20	-50	0.18
726		NH_d18:1-c24:0	1391.8	634.7	535	17.2	20	-52	0.18
727		NH_d18:1-c24:1	1389.8	632.6	545	15.7	20	-52	0.18
728		NH_d18:1-c25:0	1405.8	648.7	537	17.9	20	-54	0.18
729		NH_d18:1-c25:1	1403.8	646.7	546	16.2	20	-54	0.18
730		NH_d18:1-c26:0	1419.8	662.7	539	18.8	20	-56	0.18
731		NH_d18:1-c26:1	1417.8	660.7	547	17.4	20	-56	0.18
732		NAc_t18:0-h16:0	1193.7	554.5	548	8.3	20	-40	0.05
733		NAc_t18:0-h18:0	1221.7	582.5	549	10.3	20	-40	0.05
734		NAc_t18:0-h20:0	1249.7	610.6	550	12.0	20	-42	0.05
735		NAc_t18:0-h20:1	1247.7	608.6	551	10.6	20	-42	0.05

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
736		NAc_t18:0-h22:0	1277.7	638.6	552	13.3	20	-42	0.05
737		NAc_t18:0-h22:1	1275.7	636.6	553	11.9	20	-42	0.05
738		NAc_t18:0-h23:0	1291.8	652.6	554	13.6	20	-42	0.05
739		NAc_t18:0-h23:1	1289.7	650.6	555	12.2	20	-42	0.05
740		NAc_t18:0-h24:0	1305.8	666.6	556	14.6	20	-44	0.05
741		NAc_t18:0-h24:1	1303.8	664.6	557	13.3	20	-44	0.05
742		NAc_t18:0-h25:0	1319.8	680.7	558	15.5	20	-44	0.05
743		NAc_t18:0-h25:1	1317.8	678.6	559	14.1	20	-44	0.05
744		NAc_t18:0-h26:0	1333.8	694.7	560	16.4	20	-44	0.05
745		NAc_t18:0-h26:1	1331.8	692.7	561	15.0	20	-44	0.05
746		NAc_t18:1-h16:0	1191.6	552.5	562	7.7	20	-40	0.06
747		NAc_t18:1-h18:0	1219.7	580.5	563	9.7	20	-40	0.06
748		NAc_t18:1-h20:0	1247.7	608.6	551	11.4	20	-42	0.06
749		NAc_t18:1-h20:1	1245.7	606.5	564	10.0	20	-42	0.06
750		NAc_t18:1-h22:0	1275.7	636.6	553	12.7	20	-42	0.06
751		NAc_t18:1-h22:1	1273.7	634.6	565	11.3	20	-42	0.06
752		NAc_t18:1-h23:0	1289.7	650.6	555	13.0	20	-42	0.06
753		NAc_t18:1-h23:1	1287.7	648.6	566	11.6	20	-42	0.06
754		NAc_t18:1-h24:0	1303.8	664.6	557	14.0	20	-44	0.06
755		NAc_t18:1-h24:1	1301.7	662.6	567	12.7	20	-44	0.06
756		NAc_t18:1-h25:0	1317.8	678.6	559	14.9	20	-44	0.06
757		NAc_t18:1-h25:1	1315.8	676.6	568	13.5	20	-44	0.06
758		NAc_t18:1-h26:0	1331.8	692.7	561	15.8	20	-44	0.06
759		NAc_t18:1-h26:1	1329.8	690.6	569	14.4	20	-44	0.06
760		NAc_d18:0-h16:0	1177.7	538.5	570	9.3	20	-40	0.10
761		NAc_d18:0-h18:0	1205.7	566.6	571	11.3	20	-40	0.10
762		NAc_d18:0-h20:0	1233.7	594.6	572	13.0	20	-42	0.10
763		NAc_d18:0-h20:1	1231.7	592.6	573	11.6	20	-42	0.10
764		NAc_d18:0-h22:0	1261.8	622.6	574	14.3	20	-42	0.10
765		NAc_d18:0-h22:1	1259.7	620.6	575	12.9	20	-42	0.10
766		NAc_d18:0-h23:0	1275.8	636.6	576	14.6	20	-42	0.10
767		NAc_d18:0-h23:1	1273.8	634.6	577	13.2	20	-42	0.10
768		NAc_d18:0-h24:0	1289.8	650.6	578	15.6	20	-44	0.10
769		NAc_d18:0-h24:1	1287.8	648.6	579	14.3	20	-44	0.10
770		NAc_d18:0-h25:0	1303.8	664.7	580	16.5	20	-44	0.10
771		NAc_d18:0-h25:1	1301.8	662.6	581	15.1	20	-44	0.10
772		NAc_d18:0-h26:0	1317.8	678.7	582	17.4	20	-44	0.10
773		NAc_d18:0-h26:1	1315.8	676.7	583	16.0	20	-44	0.10
774		NAc_d18:1-h16:0	1175.6	536.5	584	8.7	20	-40	0.15
775		NAc_d18:1-h18:0	1203.7	564.5	585	10.7	20	-40	0.15
776		NAc_d18:1-h20:0	1231.7	592.6	573	12.4	20	-42	0.15
777		NAc_d18:1-h20:1	1229.7	590.6	586	11.0	20	-42	0.15
778		NAc_d18:1-h22:0	1259.7	620.6	575	13.7	20	-42	0.15
779		NAc_d18:1-h22:1	1257.7	618.6	587	12.3	20	-42	0.15
780		NAc_d18:1-h23:0	1273.8	634.6	577	14.0	20	-42	0.15
781		NAc_d18:1-h23:1	1271.7	632.6	588	12.6	20	-42	0.15
782		NAc_d18:1-h24:0	1287.8	648.6	579	15.0	20	-44	0.15
783		NAc_d18:1-h24:1	1285.8	646.6	589	13.7	20	-44	0.15
784		NAc_d18:1-h25:0	1301.8	662.6	581	15.9	20	-44	0.15

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
785		NAc_d18:1-h25:1	1299.8	660.6	590	14.5	20	-44	0.15
786		NAc_d18:1-h26:0	1315.8	676.7	583	16.8	20	-44	0.15
787		NAc_d18:1-h26:1	1313.8	674.6	591	15.4	20	-44	0.15
788		NAc_t18:0-c16:0	1177.7	534.5	570	9.0	20	-40	0.05
789		NAc_t18:0-c18:0	1205.7	562.5	571	11.0	20	-40	0.05
790		NAc_t18:0-c20:0	1233.7	590.6	572	12.7	20	-42	0.05
791		NAc_t18:0-c20:1	1231.7	588.5	573	11.3	20	-42	0.05
792		NAc_t18:0-c22:0	1261.8	618.6	574	14.0	20	-42	0.05
793		NAc_t18:0-c22:1	1259.7	616.6	575	12.6	20	-42	0.05
794		NAc_t18:0-c23:0	1275.8	632.6	576	14.3	20	-42	0.05
795		NAc_t18:0-c23:1	1273.8	630.6	577	12.9	20	-42	0.05
796		NAc_t18:0-c24:0	1289.8	646.6	578	15.3	20	-44	0.05
797		NAc_t18:0-c24:1	1287.8	644.6	579	14.0	20	-44	0.05
798		NAc_t18:0-c25:0	1303.8	660.6	580	16.2	20	-44	0.05
799		NAc_t18:0-c25:1	1301.8	658.6	581	14.8	20	-44	0.05
800		NAc_t18:0-c26:0	1317.8	674.6	582	17.1	20	-44	0.05
801		NAc_t18:0-c26:1	1315.8	672.6	583	15.7	20	-44	0.05
802		NAc_t18:1-c16:0	1175.6	538.5	584	8.4	20	-40	0.06
803		NAc_t18:1-c18:0	1203.7	566.6	585	10.4	20	-40	0.06
804		NAc_t18:1-c20:0	1231.7	594.6	573	12.1	20	-42	0.06
805		NAc_t18:1-c20:1	1229.7	592.6	586	10.7	20	-42	0.06
806		NAc_t18:1-c22:0	1259.7	622.6	575	13.4	20	-42	0.06
807		NAc_t18:1-c22:1	1257.7	620.6	587	12.0	20	-42	0.06
808		NAc_t18:1-c23:0	1273.8	636.6	577	13.7	20	-42	0.06
809		NAc_t18:1-c23:1	1271.7	634.6	588	12.3	20	-42	0.06
810		NAc_t18:1-c24:0	1287.8	650.6	579	14.7	20	-44	0.06
811		NAc_t18:1-c24:1	1285.8	648.6	589	13.4	20	-44	0.06
812		NAc_t18:1-c25:0	1301.8	664.7	581	15.6	20	-44	0.06
813		NAc_t18:1-c25:1	1299.8	662.6	590	14.2	20	-44	0.06
814		NAc_t18:1-c26:0	1315.8	678.7	583	16.5	20	-44	0.06
815		NAc_t18:1-c26:1	1313.8	676.7	591	15.1	20	-44	0.06
816		NAc_d18:0-c16:0	1161.7	536.5	592	10.6	20	-38	0.10
817		NAc_d18:0-c18:0	1189.7	564.5	593	12.6	20	-38	0.10
818		NAc_d18:0-c20:0	1217.7	592.6	594	14.3	20	-40	0.10
819		NAc_d18:0-c20:1	1215.7	590.6	595	12.9	20	-40	0.10
820		NAc_d18:0-c22:0	1245.8	620.6	596	15.6	20	-40	0.10
821		NAc_d18:0-c22:1	1243.7	618.6	597	14.2	20	-40	0.10
822		NAc_d18:0-c23:0	1259.8	634.6	598	15.9	20	-40	0.10
823		NAc_d18:0-c23:1	1257.8	632.6	599	14.5	20	-40	0.10
824		NAc_d18:0-c24:0	1273.8	648.6	600	16.9	20	-42	0.10
825		NAc_d18:0-c24:1	1271.8	646.6	601	15.6	20	-42	0.10
826		NAc_d18:0-c25:0	1287.8	662.6	602	17.8	20	-42	0.10
827		NAc_d18:0-c25:1	1285.8	660.6	603	16.4	20	-42	0.10
828		NAc_d18:0-c26:0	1301.8	676.7	604	18.7	20	-42	0.10
829		NAc_d18:0-c26:1	1299.8	674.6	605	17.3	20	-42	0.10
830		NAc_d18:1-c16:0	1159.7	522.5	606	10.0	20	-36	0.15
831		NAc_d18:1-c18:0	1187.7	550.6	607	12.0	20	-36	0.15
832		NAc_d18:1-c20:0	1215.7	578.6	595	13.7	20	-38	0.15
833		NAc_d18:1-c20:1	1213.7	576.6	608	12.3	20	-38	0.15

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
834		NAc_d18:1-c22:0	1243.7	606.6	597	15.0	20	-38	0.15
835		NAc_d18:1-c22:1	1241.7	604.6	609	13.6	20	-38	0.15
836		NAc_d18:1-c23:0	1257.8	620.6	599	15.3	20	-38	0.15
837		NAc_d18:1-c23:1	1255.7	618.6	610	13.9	20	-38	0.15
838		NAc_d18:1-c24:0	1271.8	634.7	601	16.3	20	-40	0.15
839		NAc_d18:1-c24:1	1269.8	632.6	611	15.0	20	-40	0.15
840		NAc_d18:1-c25:0	1285.8	648.7	603	17.2	20	-40	0.15
841		NAc_d18:1-c25:1	1283.8	646.7	612	15.8	20	-40	0.15
842		NAc_d18:1-c26:0	1299.8	662.7	605	18.1	20	-40	0.15
843		NAc_d18:1-c26:1	1297.8	660.7	613	16.7	20	-40	0.15
844		NAcH_t18:0-h16:0	1355.7	554.5	614	7.1	20	-48	0.06
845		NAcH_t18:0-h18:0	1383.7	582.5	615	9.1	20	-48	0.06
846		NAcH_t18:0-h20:0	1411.8	610.6	616	10.8	20	-50	0.06
847		NAcH_t18:0-h20:1	1409.8	608.6	617	9.4	20	-50	0.06
848		NAcH_t18:0-h22:0	1439.8	638.6	618	12.1	20	-50	0.06
849		NAcH_t18:0-h22:1	1437.8	636.6	619	10.7	20	-50	0.06
850		NAcH_t18:0-h23:0	1453.8	652.6	620	12.4	20	-50	0.06
851		NAcH_t18:0-h23:1	1451.8	650.6	621	11.0	20	-50	0.06
852		NAcH_t18:0-h24:0	1467.8	666.6	622	13.4	20	-52	0.06
853		NAcH_t18:0-h24:1	1465.8	664.6	623	12.1	20	-52	0.06
854		NAcH_t18:0-h25:0	1481.8	680.7	624	14.3	20	-52	0.06
855		NAcH_t18:0-h25:1	1479.8	678.6	625	12.9	20	-52	0.06
856		NAcH_t18:0-h26:0	1495.9	694.7	626	15.2	20	-52	0.06
857		NAcH_t18:0-h26:1	1493.8	692.7	627	13.8	20	-52	0.06
858		NAcH_t18:1-h16:0	1353.7	552.5	628	6.5	20	-48	0.08
859		NAcH_t18:1-h18:0	1381.7	580.5	629	8.5	20	-48	0.08
860		NAcH_t18:1-h20:0	1409.8	608.6	617	10.2	20	-50	0.08
861		NAcH_t18:1-h20:1	1407.7	606.5	630	8.8	20	-50	0.08
862		NAcH_t18:1-h22:0	1437.8	636.6	619	11.5	20	-50	0.08
863		NAcH_t18:1-h22:1	1435.8	634.6	631	10.1	20	-50	0.08
864		NAcH_t18:1-h23:0	1451.8	650.6	621	11.8	20	-50	0.08
865		NAcH_t18:1-h23:1	1449.8	648.6	632	10.4	20	-50	0.08
866		NAcH_t18:1-h24:0	1465.8	664.6	623	12.8	20	-52	0.08
867		NAcH_t18:1-h24:1	1463.8	662.6	633	11.5	20	-52	0.08
868		NAcH_t18:1-h25:0	1479.8	678.6	625	13.7	20	-52	0.08
869		NAcH_t18:1-h25:1	1477.8	676.6	634	12.3	20	-52	0.08
870		NAcH_t18:1-h26:0	1493.8	692.7	627	14.6	20	-52	0.08
871		NAcH_t18:1-h26:1	1491.8	690.6	635	13.2	20	-52	0.08
872		NAcH_d18:0-h16:0	1339.7	538.5	636	8.1	20	-48	0.16
873		NAcH_d18:0-h18:0	1367.7	566.6	637	10.1	20	-48	0.16
874		NAcH_d18:0-h20:0	1395.8	594.6	638	11.8	20	-50	0.16
875		NAcH_d18:0-h20:1	1393.8	592.6	639	10.4	20	-50	0.16
876		NAcH_d18:0-h22:0	1423.8	622.6	640	13.1	20	-50	0.16
877		NAcH_d18:0-h22:1	1421.8	620.6	641	11.7	20	-50	0.16
878		NAcH_d18:0-h23:0	1437.8	636.6	642	13.4	20	-50	0.16
879		NAcH_d18:0-h23:1	1435.8	634.6	643	12.0	20	-50	0.16
880		NAcH_d18:0-h24:0	1451.8	650.6	644	14.4	20	-52	0.16
881		NAcH_d18:0-h24:1	1449.8	648.6	645	13.1	20	-52	0.16
882		NAcH_d18:0-h25:0	1465.9	664.7	646	15.3	20	-52	0.16

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (*m*/*z*)	Product ion (*m*/*z*)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
883		NAcH_d18:0-h25:1	1463.8	662.6	647	13.9	20	-52	0.16
884		NAcH_d18:0-h26:0	1479.9	678.7	648	16.2	20	-52	0.16
885		NAcH_d18:0-h26:1	1477.9	676.7	649	14.8	20	-52	0.16
886		NAcH_d18:1-h16:0	1337.7	536.5	650	7.5	20	-48	0.24
887		NAcH_d18:1-h18:0	1365.7	564.5	651	9.5	20	-48	0.24
888		NAcH_d18:1-h20:0	1393.8	592.6	639	11.2	20	-50	0.24
889		NAcH_d18:1-h20:1	1391.7	590.6	652	9.8	20	-50	0.24
890		NAcH_d18:1-h22:0	1421.8	620.6	641	12.5	20	-50	0.24
891		NAcH_d18:1-h22:1	1419.8	618.6	653	11.1	20	-50	0.24
892		NAcH_d18:1-h23:0	1435.8	634.6	643	12.8	20	-50	0.24
893		NAcH_d18:1-h23:1	1433.8	632.6	654	11.4	20	-50	0.24
894		NAcH_d18:1-h24:0	1449.8	648.6	645	13.8	20	-52	0.24
895		NAcH_d18:1-h24:1	1447.8	646.6	655	12.5	20	-52	0.24
896		NAcH_d18:1-h25:0	1463.8	662.6	647	14.7	20	-52	0.24
897		NAcH_d18:1-h25:1	1461.8	660.6	656	13.3	20	-52	0.24
898		NAcH_d18:1-h26:0	1477.9	676.7	649	15.6	20	-52	0.24
899		NAcH_d18:1-h26:1	1475.8	674.6	657	14.2	20	-52	0.24
900		NAcH_t18:0-c16:0	1339.7	534.5	636	7.8	20	-48	0.06
901		NAcH_t18:0-c18:0	1367.7	562.5	637	9.8	20	-48	0.06
902		NAcH_t18:0-c20:0	1395.8	590.6	638	11.5	20	-50	0.06
903		NAcH_t18:0-c20:1	1393.8	588.5	639	10.1	20	-50	0.06
904		NAcH_t18:0-c22:0	1423.8	618.6	640	12.8	20	-50	0.06
905		NAcH_t18:0-c22:1	1421.8	616.6	641	11.4	20	-50	0.06
906		NAcH_t18:0-c23:0	1437.8	632.6	642	13.1	20	-50	0.06
907		NAcH_t18:0-c23:1	1435.8	630.6	643	11.7	20	-50	0.06
908		NAcH_t18:0-c24:0	1451.8	646.6	644	14.1	20	-52	0.06
909		NAcH_t18:0-c24:1	1449.8	644.6	645	12.8	20	-52	0.06
910		NAcH_t18:0-c25:0	1465.9	660.6	646	15.0	20	-52	0.06
911		NAcH_t18:0-c25:1	1463.8	658.6	647	13.6	20	-52	0.06
912		NAcH_t18:0-c26:0	1479.9	674.6	648	15.9	20	-52	0.06
913		NAcH_t18:0-c26:1	1477.9	672.6	649	14.5	20	-52	0.06
914		NAcH_t18:1-c16:0	1337.7	538.5	650	7.2	20	-48	0.08
915		NAcH_t18:1-c18:0	1365.7	566.6	651	9.2	20	-48	0.08
916		NAcH_t18:1-c20:0	1393.8	594.6	639	10.9	20	-50	0.08
917		NAcH_t18:1-c20:1	1391.7	592.6	652	9.5	20	-50	0.08
918		NAcH_t18:1-c22:0	1421.8	622.6	641	12.2	20	-50	0.08
919		NAcH_t18:1-c22:1	1419.8	620.6	653	10.8	20	-50	0.08
920		NAcH_t18:1-c23:0	1435.8	636.6	643	12.5	20	-50	0.08
921		NAcH_t18:1-c23:1	1433.8	634.6	654	11.1	20	-50	0.08
922		NAcH_t18:1-c24:0	1449.8	650.6	645	13.5	20	-52	0.08
923		NAcH_t18:1-c24:1	1447.8	648.6	655	12.2	20	-52	0.08
924		NAcH_t18:1-c25:0	1463.8	664.7	647	14.4	20	-52	0.08
925		NAcH_t18:1-c25:1	1461.8	662.6	656	13.0	20	-52	0.08
926		NAcH_t18:1-c26:0	1477.9	678.7	649	15.3	20	-52	0.08
927		NAcH_t18:1-c26:1	1475.8	676.7	657	13.9	20	-52	0.08
928		NAcH_d18:0-c16:0	1323.7	536.5	658	9.4	20	-46	0.16
929		NAcH_d18:0-c18:0	1351.8	564.5	659	11.4	20	-46	0.16
930		NAcH_d18:0-c20:0	1379.8	592.6	660	13.1	20	-48	0.16
931		NAcH_d18:0-c20:1	1377.8	590.6	661	11.7	20	-48	0.16

Table S2. List of MRMs and scheduled time for plant sphingolipids.

Target #	Class	Structure	Precursor ion (m/z)	Product ion (m/z)	MRM event#	Retention time (min)	Dwell time (msec)	Collision energy (V)	Calculation factor
932		NAcH_d18:0-c22:0	1407.8	620.6	662	14.4	20	-48	0.16
933		NAcH_d18:0-c22:1	1405.8	618.6	663	13.0	20	-48	0.16
934		NAcH_d18:0-c23:0	1421.8	634.6	664	14.7	20	-48	0.16
935		NAcH_d18:0-c23:1	1419.8	632.6	665	13.3	20	-48	0.16
936		NAcH_d18:0-c24:0	1435.8	648.6	666	15.7	20	-50	0.16
937		NAcH_d18:0-c24:1	1433.8	646.6	667	14.4	20	-50	0.16
938		NAcH_d18:0-c25:0	1449.9	662.6	668	16.6	20	-50	0.16
939		NAcH_d18:0-c25:1	1447.8	660.6	669	15.2	20	-50	0.16
940		NAcH_d18:0-c26:0	1463.9	676.7	670	17.5	20	-50	0.16
941		NAcH_d18:0-c26:1	1461.9	674.6	671	16.1	20	-50	0.16
942		NAcH_d18:1-c16:0	1321.7	522.5	672	8.8	20	-44	0.24
943		NAcH_d18:1-c18:0	1349.7	550.6	673	10.8	20	-44	0.24
944		NAcH_d18:1-c20:0	1377.8	578.6	661	12.5	20	-46	0.24
945		NAcH_d18:1-c20:1	1375.8	576.6	674	11.1	20	-46	0.24
946		NAcH_d18:1-c22:0	1405.8	606.6	663	13.8	20	-46	0.24
947		NAcH_d18:1-c22:1	1403.8	604.6	675	12.4	20	-46	0.24
948		NAcH_d18:1-c23:0	1419.8	620.6	665	14.1	20	-46	0.24
949		NAcH_d18:1-c23:1	1417.8	618.6	676	12.7	20	-46	0.24
950		NAcH_d18:1-c24:0	1433.8	634.7	667	15.1	20	-48	0.24
951		NAcH_d18:1-c24:1	1431.8	632.6	677	13.8	20	-48	0.24
952		NAcH_d18:1-c25:0	1447.8	648.7	669	16.0	20	-48	0.24
953		NAcH_d18:1-c25:1	1445.8	646.7	678	14.6	20	-48	0.24
954		NAcH_d18:1-c26:0	1461.9	662.7	671	16.9	20	-48	0.24
955		NAcH_d18:1-c26:1	1459.8	660.7	679	15.5	20	-48	0.24
956		GM1 (IS)	1546.9	366.1	680	11.0	20	-40	

Table S3. Molecular composition of GIPCs (mol%) in shoots of various plant species.

	Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
Total	Hex-GIPC	100.0	100.0	100.0	100.0	99.4	100.0	99.2	99.5	3.2	6.0	99.0	100.0	98.4	97.7
	HexN(Ac)-GIPC	0.0	0.0	0.0	0.0	0.6	0.0	0.8	0.5	96.8	94.0	1.0	0.0	1.6	2.3
	Heatmap														
Each species	H_t18:0-h16:0	0.6	5.5	0.6	4.2	2.1	5.1	1.2	3.2	0	0	0.3	8.2	0.9	1.3
	H_t18:0-h18:0	0	0.1	0.2	0	0	0.3	0	0.2	0	0	0	0.3	0	0.2
	H_t18:0-h20:0	0	0.1	0.5	0.1	0.2	0.1	0	0.1	0	0	0	0.3	0	0.3
	H_t18:0-h22:0	0.9	2.4	0.7	2.7	0.6	5.3	0.4	1.4	0.1	0.1	1.1	8.8	0.8	2.2
	H_t18:0-h22:1	0	0	0	0	0.5	0	0.2	0.1	0.1	0	0	0	0.1	0
	H_t18:0-h24:0	2.8	13.3	7.8	11.2	10.7	17.5	11.8	13	0.3	0.8	3.3	20.9	9.5	23
	H_t18:0-h24:1	0.7	2.7	2.9	1.1	1.2	1.5	1	2.1	0.1	0.2	1.5	2.1	1	1.3
	H_t18:0-h26:0	0.4	0.1	0.1	1.2	1	0.3	0.1	1.3	0	0	0.3	2.5	0.2	0.2
	H_t18:0-h26:1	0.2	0	0.1	0.1	0.1	0.2	0.3	0.2	0	0	0.2	0.1	0	0
	H_t18:1-h16:0	4.1	6.7	1	5.1	2	4.2	3.3	4.8	0	0	4.6	5.2	4.7	1.5
	H_t18:1-h18:0	0	0	0.3	0	0.5	0.1	0.1	0.1	0	0	0	0.2	0	0.2
	H_t18:1-h20:0	0	0.4	0.2	0.2	2.8	0.8	0.9	0.7	0	0	0.9	0.4	0.3	0.1
	H_t18:1-h22:0	10.2	7.9	11.7	10	8.3	10.3	11.9	12.4	0.1	0.3	1.4	6.4	10.4	7.5
	H_t18:1-h22:1	0	0	0	0	0	0.2	0.2	0.4	0	0	0.1	0	0	0
	H_t18:1-h24:0	31.6	33.8	38.4	47.1	39.5	26	41.4	28.6	1.8	2.4	43.8	27	50.6	37.1
	H_t18:1-h24:1	31.6	13.5	13.8	4.7	9.9	9.1	9.7	10.6	0.2	1.3	18.6	2.4	6.1	8.3
	H_t18:1-h26:0	6	1.2	6.2	0	7	8	3.8	8	0.1	0.2	4.4	3.3	5.3	4.1
	H_t18:1-h26:1	1.8	0.1	1.4	0.1	0.6	0.5	0.2	0.2	0	0	0.5	0	0	0.1
	H_t18:0-c16:0	0.5	0.6	0.1	0.2	0.2	0.6	0.1	0.3	0	0	0	0.7	0.1	0.1
	H_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c22:0	0.3	0.2	0.1	0.3	0	0.3	0.1	0.1	0	0	0.1	0.7	0.1	0.2
	H_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c24:0	1.1	1.7	1.1	0.6	1	2.1	1.7	1.2	0	0.1	0.4	2	0.6	2.2
	H_t18:0-c24:1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0	0	0.2	0.3	0.1	0.2
	H_t18:1-c26:0	0	0	0	0.1	0.1	0	0	0.2	0	0	0	0.1	0	0
	H_t18:1-c26:1	0.9	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c16:0	0.5	0.4	0.1	0.6	0.1	0.4	0.4	0.5	0	0	0.4	0.7	0.6	0.2
	H_t18:1-c18:0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0	0.3	0	0.1	0.1	0	0	0.1	0.1	0	0
	H_t18:1-c22:0	0.4	1.2	1.6	1	1.1	0.6	1	1.2	0	0	0.2	0.9	1.5	0.9
	H_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	1.7	2.8	5.6	4	2.8	2.7	3.6	2	0.2	0.1	3.7	2.6	3.3	3.2
	H_t18:1-c24:1	0.4	1.5	0.7	0.4	1.1	0.8	0.8	1.3	0	0.1	2.4	0.1	0.5	0.9

Table S3. Molecular composition of GIPCs (mol%) in shoots of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
H t18:1-c26:0	0.6	0.1	0.6	0	0.6	1.1	0.5	1	0	0	0.6	0.5	0.5	0.3
H t18:1-c26:1	0	0	0.1	0	0.1	0.1	0	0	0	0	0	0	0	0
HH t18:0-h22:0	0	0.1	0	0.3	0.1	0.2	0	0.1	0	0	0	0.1	0	0.4
HH t18:0-h24:0	0.1	0.6	0.5	1.2	0.4	0.6	0.8	1.3	0	0.1	2.9	1.4	0.3	0.6
HH t18:0-h24:1	0	0.2	0.2	0	0.3	0.2	0.4	0.3	0.1	0	0.6	0.1	0	0
HH t18:0-h26:0	0	0	0	0.2	0	0.2	0	0.3	0	0	0.1	0.3	0	0
HH t18:0-h26:1	0	0	0.1	0	0.1	0.1	0.1	0.1	0	0	0.2	0	0	0
HH t18:1-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH t18:1-h22:0	0	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0	0	0.1	0	0.1	0
HH t18:1-h24:0	0.1	1.4	2.1	2.6	3.2	0.3	2.3	1.7	0.1	0.1	5.6	0.9	0.7	0.9
HH t18:1-h24:1	0	0.8	0.4	0.1	0.1	0.2	0.3	0.1	0	0	0.2	0.1	0.1	0
HH t18:1-h26:0	0	0	0.1	0.3	0.1	0.1	0.1	0.1	0	0	0.2	0.1	0	0
N t18:0-h16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-h20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-h22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-h22:1	0	0	0.1	0	0	0	0.1	0.1	0	0	0.1	0	0.1	0.1
N t18:0-h24:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
N t18:0-h24:1	0	0	0	0	0.1	0	0.1	0.1	0	0	0.1	0	0.1	0.2
N t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-h26:1	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0
N t18:1-h16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:1-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:1-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:1-h22:0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0.1
N t18:1-h22:1	0	0	0	0	0.1	0	0.1	0	0	0	0.1	0	0.2	0.3
N t18:1-h24:0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0.1
N t18:1-h24:1	0	0	0.1	0	0.1	0	0.1	0	0	0.1	0.1	0	0.1	0.1
N t18:1-h26:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
N t18:1-h26:1	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
N t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-c20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N t18:0-c24:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIPCs (mol%) in shoots of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
N_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c24:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h22:1	0	0	0	0	0	0	0	0.1	0	0	0.2	0	0.2	0.2
NH_t18:0-h23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h24:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h24:1	0	0	0	0	0.2	0	0.1	0.1	0	0	0.2	0	0.6	0.8
NH_t18:0-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h25:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
NH_t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-h22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-h23:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
NH_t18:1-h24:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
NH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c24:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NH_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIPCs (mol%) in shoots of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
NH t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c24:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-h16:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
NAc t18:0-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-h22:0	0	0	0	0	0	0	0	0	0.6	0.6	0	0	0	0
NAc t18:0-h22:1	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0
NAc t18:0-h23:0	0	0	0	0	0	0	0	0	1.2	1.5	0	0	0	0
NAc t18:0-h24:0	0	0	0	0	0	0	0.1	0	16.7	16	0	0	0	0
NAc t18:0-h24:1	0	0	0	0	0	0	0	0	1.4	2.9	0	0	0	0
NAc t18:0-h25:0	0	0	0	0	0	0	0	0	0.7	0.2	0	0	0	0
NAc t18:0-h25:1	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0
NAc t18:0-h26:0	0	0	0	0	0	0	0	0	2.6	0.4	0	0	0	0
NAc t18:0-h26:1	0	0	0	0	0	0	0	0	0.8	0	0	0	0	0
NAc t18:1-h16:0	0	0	0	0	0	0	0	0	0.1	0.6	0	0	0	0
NAc t18:1-h18:0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0
NAc t18:1-h20:0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0
NAc t18:1-h22:0	0	0	0	0	0	0	0	0	8.5	7.8	0	0	0	0
NAc t18:1-h23:0	0	0	0	0	0	0	0	0	3	3.8	0	0	0	0
NAc t18:1-h24:0	0	0.1	0	0	0	0	0.1	0	33.7	36	0	0	0	0
NAc t18:1-h24:1	0	0	0	0	0	0	0	0	10.4	12.3	0	0	0	0
NAc t18:1-h25:0	0	0	0	0	0	0	0	0	1.9	2	0	0	0	0
NAc t18:1-h25:1	0	0	0	0	0	0	0	0	0.1	0.7	0	0	0	0
NAc t18:1-h26:0	0	0	0	0	0	0	0	0	6.1	3.3	0	0	0	0
NAc t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c22:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NAc t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c23:0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0	0
NAc t18:0-c24:0	0	0	0	0	0	0	0	0	0.6	0.4	0	0	0	0
NAc t18:0-c24:1	0	0	0	0	0	0	0	0	0.1	0.2	0	0	0	0
NAc t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c26:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0

Table S3. Molecular composition of GIPCs (mol%) in shoots of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
NAc t18:0-c26:1	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
NAc t18:1-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c22:0	0	0	0	0	0	0	0	0	0.8	0	0	0	0	0
NAc t18:1-c23:0	0	0	0	0	0	0	0	0	0.1	0.3	0	0	0	0
NAc t18:1-c24:0	0	0	0	0	0	0	0	0	1.1	2.5	0	0	0	0
NAc t18:1-c24:1	0	0	0	0	0	0	0	0	0.8	0.1	0	0	0	0
NAc t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c26:0	0	0	0	0	0	0	0	0	0.6	0.2	0	0	0	0
NAcH t18:0-h22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:0-h23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:0-h24:0	0	0	0	0	0	0	0	0	0.5	0.1	0	0	0	0
NAcH t18:0-h24:1	0	0	0	0	0	0	0	0	0.3	0	0	0	0	0
NAcH t18:0-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:0-h26:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
NAcH t18:1-h22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:1-h23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:1-h24:0	0	0	0	0	0	0	0	0	1.3	0.1	0	0	0	0
NAcH t18:1-h24:1	0	0	0	0	0	0	0	0	0.2	0.1	0	0	0	0
NAcH t18:1-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:1-h26:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0

Table S3. Molecular composition of GIF

	Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
Total	Hex-GIPC	99.1	99.1	100.0	92.0	91.5	98.1	98.3	99.7	98.8	53.1	0.4	85.1	6.3	0.0
	HexN(Ac)-GIPC	0.9	0.9	0.0	8.0	8.5	1.9	1.7	0.3	1.2	46.9	99.6	14.9	93.7	100.0
	Heatmap														
Each species	H_t18:0-h16:0	0.9	0.9	0	0	1	0	0	0.2	0.1	0.5	0	0.8	0	0
	H_t18:0-h18:0	0.1	0.1	0	0	0	0.1	0.1	0	0	0.1	0	0.1	0	0
	H_t18:0-h20:0	0.1	0.1	0	0	0	0.2	0.2	0.1	0	0.7	0	0.1	0.1	0
	H_t18:0-h22:0	2.6	2.6	10.7	0	0.3	3.4	3.5	0.4	5.5	6.5	0	1.7	0.4	0
	H_t18:0-h22:1	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.1	0	0.1	0	0	0.3	0
	H_t18:0-h24:0	12.1	11.7	22.6	1.8	6.3	3.7	3.8	2.4	8.5	17.2	0	5.8	1.4	0
	H_t18:0-h24:1	0.5	0.4	0.3	11.9	1.3	0.4	0.4	19.4	1	0.2	0	0.6	1	0
	H_t18:0-h26:0	0.4	0.4	2.5	0.2	0.2	0.5	0.5	0.1	0.2	1	0	0.3	0.2	0
	H_t18:0-h26:1	0.1	0.1	0	0.3	0.4	0.1	0.1	0.2	0.1	0	0	0	0	0
	H_t18:1-h16:0	5.3	5.1	0	0	0.5	0.5	0.5	1.4	0	0.1	0	4.2	0	0
	H_t18:1-h18:0	0.8	0.8	0	0	0.1	0.1	0.1	0.8	0	0	0	0.5	0	0
	H_t18:1-h20:0	0.3	0.3	0.4	0	0	4.1	4.2	2	0	0.9	0	1.1	0.1	0
	H_t18:1-h22:0	12.5	12.1	12.2	0.3	0.8	27.7	28.2	17.3	7.6	7.3	0.1	9.3	0.2	0
	H_t18:1-h22:1	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0
	H_t18:1-h24:0	39	37.8	35	14.1	34.6	34.3	34.9	17.9	60.5	13.9	0.2	45.4	0.4	0
	H_t18:1-h24:1	5.7	5.5	0	0.1	8.2	0	0	0	0.1	0	0	0	0	0
	H_t18:1-h26:0	8.3	8.1	4	0.2	3.6	5.8	5.9	2.3	4.5	0.3	0	2.9	0.2	0
	H_t18:1-h26:1	0.1	0.1	0	0	0.3	0	0	0	0	0	0	0	0	0
	H_t18:0-c16:0	0.1	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0
	H_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
	H_t18:0-c22:0	0.2	0.3	1.5	0	0	0.5	0.2	0.1	0.3	0.5	0	0.2	0	0
	H_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c24:0	1.6	1.7	3.1	0.2	0.7	0.5	0.3	0.2	0.8	1.4	0	0.9	0.1	0
	H_t18:0-c24:1	0	0	0	1.8	0.1	0.1	0	2.3	0.1	0	0	0.1	0.1	0
	H_t18:1-c26:0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c16:0	0.4	0.5	0	0	0	0.1	0.1	0.1	0	0	0	0.6	0	0
	H_t18:1-c18:0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0	0	0.3	0.6	0.2	0	0.1	0	0.1	0	0
	H_t18:1-c22:0	1.4	1.6	1	0	0.1	2.6	2.5	1.5	1	0.7	0	1.3	0	0
	H_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	2.2	5.1	4.9	2	3.1	4.1	2.9	1.7	6.4	0.9	0	3.1	0	0
	H_t18:1-c24:1	0.8	0.4	0	0	0.7	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
H_t18:1-c26:0	0.8	0.6	0.3	0	0.2	0.6	0.7	0.1	0.2	0	0	0.4	0	0
H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-h22:0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	1	0.2	0.1	0	0.1	0.3	0
HH_t18:0-h24:0	0.3	0.3	0.4	21.8	6.4	0.8	0.8	5	0.3	0.1	0	0.5	0.5	0
HH_t18:0-h24:1	0.2	0.2	0	0.7	0.4	0	0	0.1	0	0	0	0.1	0	0
HH_t18:0-h26:0	0.1	0.1	0	0.2	0.5	0	0	0.2	0.1	0	0	0	0.3	0
HH_t18:0-h26:1	0.1	0.1	0	0.4	0	0	0	0.1	0	0	0	0	0	0
HH_t18:1-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-h22:0	0.1	0.1	0.1	0.2	0.2	2.5	2.6	2.9	0.3	0.1	0	0.5	0.2	0
HH_t18:1-h24:0	1.3	1.3	0.3	35.1	17.7	4.1	4.2	17.3	0.7	0.1	0	3.7	0.3	0
HH_t18:1-h24:1	0.2	0.2	0	0	2.2	0	0	0	0	0	0	0	0	0
HH_t18:1-h26:0	0	0	0	0.3	0.7	0.1	0.1	2.3	0	0	0	0	0.1	0
N_t18:0-h16:0	0	0	0	0	0	0	0	0	0	0.1	1.2	0.1	0	0
N_t18:0-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h20:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0
N_t18:0-h20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h22:0	0	0	0	0	0	0	0	0	0	2.3	1.4	0.2	1.5	0.1
N_t18:0-h22:1	0.1	0.1	0	0.1	0	0	0	0	0	1.2	0	0	0.2	0
N_t18:0-h24:0	0	0	0	0	0	0	0	0	0.2	8.2	2.8	0.8	7.7	1.6
N_t18:0-h24:1	0.1	0	0	0.2	0.2	0	0	0	0	0.2	2	0.1	0.2	0
N_t18:0-h26:0	0	0	0	0	0	0	0	0	0	0.3	0.2	0	0.9	0.2
N_t18:0-h26:1	0	0	0	0	0	0	0	0	0.1	0.3	0.7	0.3	0.5	1.6
N_t18:1-h16:0	0	0	0	0	0	0	0	0	0	0.1	1.2	0.4	0	0
N_t18:1-h18:0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0
N_t18:1-h20:0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0
N_t18:1-h22:0	0	0	0	0.1	0	0	0	0	0	4.2	3.7	1.4	1.8	0.9
N_t18:1-h22:1	0.1	0.1	0	0.1	0.1	0.1	0	0	0	0.1	0.1	0.1	0	0
N_t18:1-h24:0	0	0	0	0.1	0.1	0	0	0	0.2	4.6	4.8	5.2	3.4	9.3
N_t18:1-h24:1	0.1	0.1	0	0.4	0.1	0.1	0	0	0	0	0.9	0.4	0	0
N_t18:1-h26:0	0	0	0	0	0	0	0	0	0.1	0.2	0.4	0.2	0.3	1.1
N_t18:1-h26:1	0.1	0.1	0	0.1	0	0	0	0	0	0	0	0	0	0
N_t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
N_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0.3	0.2	0	0.2	0
N_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
N_t18:0-c24:0	0	0	0	0	0	0	0	0	0	0.9	0.4	0.1	0.9	0.1

Table S3. Molecular composition of GIF

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
N_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
N_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
N_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.2
N_t18:1-c16:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
N_t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0.5	0.4	0.1	0.3	0
N_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c24:0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.6	0.3	0.8
N_t18:1-c24:1	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0	0	0
N_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
N_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NH_t18:0-h22:0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	1.5	0
NH_t18:0-h22:1	0.1	0.1	0	0.4	0	0.9	0	0	0	0	0	0	0	0	0
NH_t18:0-h23:0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.6	0
NH_t18:0-h24:0	0	0	0	0	0.9	0	0.2	0	0	0	0	1.3	0	15.1	0.1
NH_t18:0-h24:1	0.2	0.2	0	3.2	0	0.4	1.1	0	0	0	0	0	0	0	0.1
NH_t18:0-h25:0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	1.5	0
NH_t18:0-h25:1	0	0	0	0.3	0	0	0.1	0	0	0	0	0	0	0	0
NH_t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.7	0
NH_t18:0-h26:1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0
NH_t18:1-h22:0	0	0	0	0.1	0	0	0.1	0	0	0	0	0.7	0	0.8	0.1
NH_t18:1-h23:0	0.1	0.1	0	1.5	0.1	0.1	0	0	0	0	0	0.9	0	0.2	0
NH_t18:1-h24:0	0	0	0	0.2	2.1	0	0.1	0	0	0	0	3.7	0.1	4.8	0.6
NH_t18:1-h24:1	0	0	0	0.2	1.7	0	0	0	0	0	0	0.2	0	0	0
NH_t18:1-h25:0	0	0	0	0.2	0.1	0	0	0	0	0	0	0.2	0	0.2	0
NH_t18:1-h26:0	0	0	0	0	0.1	0	0	0	0	0	0	0.3	0	0.9	0.2
NH_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NH_t18:0-c22:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c24:0	0	0	0	0	0.1	0	0	0	0	0	0.1	0	1.4	0
NH_t18:0-c24:1	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
NH t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
NH t18:1-c24:0	0	0	0	0	0.2	0	0	0	0	0	0.1	0	0.4	0
NH t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NAc t18:0-h16:0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0
NAc t18:0-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-h20:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NAc t18:0-h22:0	0	0	0	0	0	0	0	0	0	1	1.4	0	0.8	0.8
NAc t18:0-h22:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0.5	0
NAc t18:0-h23:0	0	0	0	0	0	0	0	0	0	4	1.1	0.1	1.1	0.3
NAc t18:0-h24:0	0	0	0	0	0.1	0	0	0	0.1	5.5	3.5	0.3	7	6.2
NAc t18:0-h24:1	0	0	0	0	0.3	0	0	0	0	0.2	0.7	0	7.1	0.3
NAc t18:0-h25:0	0	0	0	0	0	0	0	0	0	0.8	0.2	0	0.3	0.1
NAc t18:0-h25:1	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0.3	0
NAc t18:0-h26:0	0	0	0	0	0	0	0	0	0	0.2	0.2	0	0.9	0.6
NAc t18:0-h26:1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0
NAc t18:1-h16:0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0
NAc t18:1-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-h22:0	0	0	0	0	0	0	0	0	0	4.5	13.8	0.5	0.7	7.2
NAc t18:1-h23:0	0	0	0	0	0	0	0	0	0	0.7	9.1	0.7	0.1	3.3
NAc t18:1-h24:0	0	0	0	0	0.3	0	0	0.1	0.3	4.2	26.9	2.2	6.9	52.4
NAc t18:1-h24:1	0	0	0	0	0.5	0	0	0	0	0	3	0	0.1	0
NAc t18:1-h25:0	0	0	0	0	0	0	0	0	0	0.4	1.4	0.1	0.4	1.5
NAc t18:1-h25:1	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0
NAc t18:1-h26:0	0	0	0	0	0	0	0	0	0	0.2	1.5	0.1	0.7	4.8
NAc t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c22:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1
NAc t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c23:0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0
NAc t18:0-c24:0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.1
NAc t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0
NAc t18:0-c25:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NAc t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1

Table S3. Molecular composition of GIF

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
NAc t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c22:0	0	0	0	0	0	0	0	0	0	0.1	0.5	0	0	0.3
NAc t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.1
NAc t18:1-c24:0	0	0	0	0	0	0	0	0	0	0.1	1.8	0	0.1	3.1
NAc t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
NAc t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
NAc t18:1-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0.4
NAcH t18:0-h22:0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0
NAcH t18:0-h23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:0-h24:0	0	0	0	0	0.1	0	0	0	0	0	0.2	0	1.2	0.1
NAcH t18:0-h24:1	0	0	0	0	0.2	0	0	0	0	0	0	0	0.1	0
NAcH t18:0-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0
NAcH t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	1.9	0
NAcH t18:1-h22:0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.1	0
NAcH t18:1-h23:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.4	0
NAcH t18:1-h24:0	0	0	0	0.1	0.5	0	0	0	0	0	0.9	0	10.3	0.4
NAcH t18:1-h24:1	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0
NAcH t18:1-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	0
NAcH t18:1-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	0.1

Table S3. Molecular composition of GIF

	Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
	Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
Total	Hex-GIPC	27.1	24.3	20.2	65.9	99.6	97.3	63.3	99.0	94.2	49.2	91.0	40.6	35.9	75.6
	HexN(Ac)-GIPC	72.9	75.7	79.8	34.1	0.4	2.7	36.7	1.0	5.8	50.8	9.0	59.4	64.1	24.4
	Heatmap														
Each species	H_t18:0-h16:0	0	0	0.3	0	0	0.3	3.8	3.1	2.1	4.4	0	0	0	1.5
	H_t18:0-h18:0	0	0	0.1	0	0	0.1	1.4	0.1	0	0.1	1.4	0	0	0
	H_t18:0-h20:0	0	0	0	0	0	0.1	0	0	0	0	1.8	0.1	0	0.1
	H_t18:0-h22:0	0	0.7	0.2	0.9	1.1	9.4	8.8	3.3	1.6	1	11.6	5	3.9	1.9
	H_t18:0-h22:1	0	0	0.2	0	0.3	0.1	0.1	0	0.2	0.2	0	0	0.1	0.3
	H_t18:0-h24:0	2.6	4.1	0.5	1.2	3.8	12	13.2	7.2	3.2	3.9	31.2	10.8	5.9	9.9
	H_t18:0-h24:1	0.8	0	0	0.2	1.4	0.1	0.4	0.1	0.4	8	0.4	0.2	0.3	0.4
	H_t18:0-h26:0	0.5	0.1	0.1	0.1	0.5	0.8	0.1	0.1	0.3	0.2	2.9	1.6	0.1	0.7
	H_t18:0-h26:1	0.1	0	0	0	0.1	0	0	0	0	0.1	0	0	0	0.1
	H_t18:1-h16:0	0	0	0	0.1	0.1	0.2	1.5	15	18.1	3.2	0	0	0.3	2
	H_t18:1-h18:0	0	0	0.4	0	0	0	0.9	0	0.1	0	0	0.1	0	0.3
	H_t18:1-h20:0	0	0	0	4.8	0.6	2.1	0.1	0.8	1	0.1	1.9	0.2	0.5	0.2
	H_t18:1-h22:0	0	4.6	4.3	13.8	11.7	19	7.1	16.4	14.2	1.4	5.4	4	6.6	3.6
	H_t18:1-h22:1	0	0	0	0	0	1.7	0	0	0	0.2	0	0	0	0
	H_t18:1-h24:0	0.3	12.1	8.5	37.5	49.1	33.8	18.4	38.8	36.3	9.1	17.9	11.4	12	21.9
	H_t18:1-h24:1	0	0	0	0	0	0.2	0	0	0	11.4	0	0	0	0
	H_t18:1-h26:0	0	0.7	0.4	2.5	8.6	7.2	1.1	2.4	4	0.2	1.7	1.6	0.9	0.6
	H_t18:1-h26:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
	H_t18:0-c16:0	0	0.1	0.2	0	0	0	0.5	0.4	0.2	0.6	0	0	0	0.1
	H_t18:0-c18:0	0	0	0	0	0	0	0.1	0	0	0	0.2	0	0	0
	H_t18:0-c20:0	0	0	0.1	0	0	0	0	0	0	0	0.2	0	0	0
	H_t18:0-c22:0	0	0	0.1	0.1	0.2	0.7	0.9	0.3	0.2	0.1	1.5	0.4	0.3	0.1
	H_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c24:0	0.3	0.1	0.1	0.1	0.6	1.7	1.3	0.7	0.2	0.3	2.2	1.4	0.8	0.8
	H_t18:0-c24:1	0.1	0	0	0	0.2	0	0	0	0	0.6	0	0	0	0.1
	H_t18:1-c26:0	0	0	0.1	0	0.1	0	0	0	0	0	0.4	0.2	0	0
	H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c16:0	0	0	0.2	0	0	0	0.1	1	1.4	0.2	0	0	0	0.1
	H_t18:1-c18:0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0.3	0.1	0.1	0	0.1	0.1	0	0.1	0	0.1	0
	H_t18:1-c22:0	0	0	0	1.2	1.3	2.2	1	1.9	1.9	0.1	0.4	0.6	0.9	0.5
	H_t18:1-c22:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	0	0	0.1	2.3	6	3.8	2.2	4.5	3.6	0.5	1.9	1	1.1	2.4
	H_t18:1-c24:1	0	0	0	0	0	0	0	0	0	1.6	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
H_t18:1-c26:0	0	0	0	0.2	0.8	0.6	0.1	0.3	0.5	0	0.2	0.2	0.1	0.1
H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-h22:0	0.1	0	0	0	0.2	0	0	0.1	0.1	0	0.2	0.1	0.1	2.1
HH_t18:0-h24:0	15.8	0	0	0	1.5	0.2	0	0.1	0.2	0.2	4	1	0.8	5.8
HH_t18:0-h24:1	0.2	0.2	0	0	0.1	0	0	0	0	0.1	0	0	0	0
HH_t18:0-h26:0	5.2	0	0	0	0	0	0	0	0	0	0.6	0.3	0	0.1
HH_t18:0-h26:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
HH_t18:1-h20:0	0	0	0	0	0	0	0	0	0.2	0	0	0	0	0.3
HH_t18:1-h22:0	0	0	0	0	0.4	0	0	0.5	1.2	0	0.3	0.1	0.3	5.5
HH_t18:1-h24:0	0.7	0	0	0.3	8.1	0.3	0	1.4	2.5	0.9	1.9	0.3	0.5	12.5
HH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
HH_t18:1-h26:0	0.3	0	0	0	2.5	0.1	0	0.1	0.3	0	0.2	0	0.1	0.1
N_t18:0-h16:0	0	0	0.6	0	0	0	0.6	0.1	0	1.3	0	0	0	0.3
N_t18:0-h18:0	0	0	0.1	0	0	0	0.1	0	0	0	0	0	0	0.1
N_t18:0-h20:0	0	0	0	0	0	0	0.1	0	0	0	0.1	0.3	0	0.1
N_t18:0-h20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h22:0	0.1	1.7	0.9	0	0	0.1	2.4	0	0	0.4	0.6	4.1	0	0.9
N_t18:0-h22:1	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0
N_t18:0-h24:0	1.2	3.9	2.3	0.3	0	0.1	2.9	0.1	0.1	2.4	0.9	7.2	0.1	5
N_t18:0-h24:1	0.1	0.4	0	0	0	0	0	0	0.3	4.1	0	0.2	0	0
N_t18:0-h26:0	0.1	0.3	0.1	0	0	0	0.1	0	0	0.1	0.1	0.9	0	0.5
N_t18:0-h26:1	0	0	0	0.2	0	0.1	0.4	0	0	0.3	0.1	0.7	0	1.1
N_t18:1-h16:0	0	0	3.5	0	0	0	0.3	0.1	0.1	0.9	0	0	0	0.8
N_t18:1-h18:0	0	0	1	0	0	0	0.1	0	0	0	0	0	0	0.2
N_t18:1-h20:0	0	0	0.1	0.1	0	0	0	0	0	0	0	0.2	0	0.1
N_t18:1-h22:0	0	4.5	7.4	0.7	0	0.2	1.8	0.1	0.1	0.6	0.1	4.7	0.1	1.6
N_t18:1-h22:1	0	0	0	0	0	0.1	0	0	0	0.1	0	0	0	0
N_t18:1-h24:0	0.1	10.3	16.2	1.7	0.2	1.1	2.9	0.2	0.2	2.3	0.4	7.6	0.1	6.3
N_t18:1-h24:1	0	0	0	0	0	0	0	0	0	7.3	0	0	0	0
N_t18:1-h26:0	0	0.4	0.9	0.1	0	0.1	0.2	0	0	0.2	0	0.5	0	0.7
N_t18:1-h26:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
N_t18:0-c16:0	0	0	0.1	0	0	0	0.1	0	0	0.1	0	0	0	0
N_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c22:0	0	0.2	0.1	0	0	0	0.3	0	0	0	0.1	0.6	0	0.1
N_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c24:0	0.2	0.6	0.3	0	0	0	0.3	0	0	0.1	0.1	0.9	0	0.3

Table S3. Molecular composition of GIF

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
N_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0
N_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1
N_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.1
N_t18:1-c16:0	0	0	0.4	0	0	0	0	0	0	0.1	0	0	0	0.1
N_t18:1-c18:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c22:0	0	0.6	0.8	0.1	0	0	0.1	0	0	0	0	0.5	0	0.2
N_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c24:0	0	1.4	1.6	0.2	0	0.2	0.2	0	0	0.1	0	0.4	0	0.8
N_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0.9	0	0	0	0
N_t18:1-c26:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1
N_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h22:0	1.7	0.2	0	0	0	0	0	0	0	0	0.2	1.3	0	0.1
NH_t18:0-h22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h23:0	1	0.1	0	0	0	0	0	0	0	0	0.1	0.3	0	0.1
NH_t18:0-h24:0	32.2	2.2	0.3	0	0	0	0	0	0	0.1	0.9	4.2	0	0.4
NH_t18:0-h24:1	0	0	2.6	0	0	0	0	0	0	0.4	0	0	0	0
NH_t18:0-h25:0	1.8	0.3	0.1	0	0	0	0	0	0	0	0.1	0.7	0	0
NH_t18:0-h25:1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0	0
NH_t18:0-h26:0	7.9	0.2	0.1	0	0	0	0	0	0	0	0	1	0	0.1
NH_t18:0-h26:1	0.1	0	0.2	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-h22:0	0.2	1.1	0.1	0	0	0	0	0	0	0.1	0.1	1.2	0	0.3
NH_t18:1-h23:0	0.1	0.4	0.2	0	0	0	0	0	0	0.1	0	0.4	0	0.2
NH_t18:1-h24:0	4.4	10.1	2	0	0	0.1	0	0	0	0.6	0.3	5.4	0	1.8
NH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	1.1	0	0	0	0
NH_t18:1-h25:0	0.4	1	0.6	0	0	0	0	0	0	0.1	0	1.1	0	0.1
NH_t18:1-h26:0	0.3	0.7	0.4	0	0	0	0	0	0	0	0	0.2	0	0.1
NH_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:0	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0	0
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c24:0	2.1	0.1	0	0	0	0	0	0	0	0	0	0.4	0	0
NH_t18:0-c24:1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0.1	0	0	0	0	0	0	0	0	0	0	0.1	0	0
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
NH_t18:1-c22:0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0
NH_t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c24:0	0.2	0.2	0.1	0	0	0	0	0	0	0	0	0.4	0	0.1
NH_t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c26:0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-h16:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-h18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-h20:0	0	0	0	0.2	0	0	0	0	0	0	0	0	0.1	0
NAc_t18:0-h22:0	0.1	0.4	0.2	0.5	0	0	1.8	0	0	0.2	0.3	0.6	4.5	0
NAc_t18:0-h22:1	0	4	2.7	0	0	0	0	0	0	0.1	0.1	0.3	0	0
NAc_t18:0-h23:0	0.1	0.2	0	0.3	0	0	0.6	0	0	0.1	0.2	0.2	0.7	0
NAc_t18:0-h24:0	4.2	0.8	0.2	1.8	0	0	2.7	0	0.3	0.9	0.4	1.1	7.4	0.2
NAc_t18:0-h24:1	0.9	6.4	3.2	0	0	0	0	0	0	2.5	0.3	1.3	0.1	0
NAc_t18:0-h25:0	0.1	0.1	0	0.1	0	0	0	0	0	0	0	0.1	0.3	0
NAc_t18:0-h25:1	0	0.2	0.2	0	0	0	0	0	0	0.2	0	0.1	0	0
NAc_t18:0-h26:0	0.8	0.1	0.1	0.2	0	0	0.1	0	0	0	0	0.1	0.3	0
NAc_t18:0-h26:1	0.2	0.5	0.5	0	0	0	0	0	0	0	0	0.2	0	0
NAc_t18:1-h16:0	0	0	1	0	0	0	0.3	0	0	0.9	0	0	0	0
NAc_t18:1-h18:0	0	0	0.2	0	0	0	0.2	0	0	0	0	0	0	0
NAc_t18:1-h20:0	0	0	0.1	0	0	0	0	0	0.1	0	0	0	0	0
NAc_t18:1-h22:0	0	4	2.7	6.1	0	0.1	5.2	0.1	1.2	1	0.2	1.1	14.1	0.2
NAc_t18:1-h23:0	0	1.1	1.8	2.6	0	0	1.8	0	0.3	0.5	0.1	0.4	3.4	0.1
NAc_t18:1-h24:0	0.9	6.6	2	14.8	0	0.3	8.8	0.2	2.1	4.8	0.6	1.9	24.9	0.9
NAc_t18:1-h24:1	0	0	0	0	0	0	0	0	0	10.1	0	0	0	0
NAc_t18:1-h25:0	0	0.2	0.2	0.9	0	0	0.2	0	0.1	0.2	0	0.2	1	0
NAc_t18:1-h25:1	0	0	0	0	0	0	0	0	0	0.7	0	0	0	0
NAc_t18:1-h26:0	0.2	0.5	0.3	1.6	0	0	0.5	0	0.2	0.2	0	0.2	2.6	0
NAc_t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c22:0	0	0	0	0	0	0	0.1	0	0	0	0	0	0.1	0
NAc_t18:0-c22:1	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NAc_t18:0-c24:0	0.3	0	0	0.1	0	0	0.3	0	0	0	0	0.1	0.5	0
NAc_t18:0-c24:1	0	0.1	0.2	0	0	0	0	0	0	0.2	0	0	0	0
NAc_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c26:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
NAc_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:1-c16:0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0
NAc_t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:1-c22:0	0	0.4	0.2	0.3	0	0	0.1	0	0	0	0	0.1	0.6	0
NAc_t18:1-c23:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.2	0
NAc_t18:1-c24:0	0.1	0.2	0.1	1	0	0	0.6	0	0.1	0.3	0	0	1.9	0
NAc_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0.8	0	0	0	0
NAc_t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:1-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH_t18:0-h22:0	0.1	0.1	0.1	0	0	0	0	0	0	0	0.4	0.3	0	0
NAcH_t18:0-h23:0	0.2	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0
NAcH_t18:0-h24:0	6.3	0.7	1	0	0	0	0	0	0	0	0.7	1	0.1	0
NAcH_t18:0-h24:1	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0
NAcH_t18:0-h25:0	0.2	0	0	0	0	0	0	0	0	0	0	0.1	0	0
NAcH_t18:0-h26:0	1.9	0	0.1	0	0	0	0	0	0	0	0.1	0.1	0	0
NAcH_t18:1-h22:0	0	0.6	0.5	0	0	0	0	0	0	0	0.1	0.6	0.1	0
NAcH_t18:1-h23:0	0	0.2	0.3	0	0	0	0	0	0	0	0	0.1	0	0
NAcH_t18:1-h24:0	1.3	4.4	5.8	0	0	0	0.1	0	0	0	0.5	1.8	0.2	0
NAcH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH_t18:1-h25:0	0	0.2	0.5	0	0	0	0	0	0	0	0	0.1	0	0
NAcH_t18:1-h26:0	0.3	0.2	0.8	0	0	0	0	0	0	0	0.1	0.6	0	0

Table S3. Molecular composition of GIF

	Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
	Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
Total	Hex-GIPC	80.2	0.1	0.1	38.9	87.6	0.5	58.9	21.9	29.5	14.9	0.0	0.0	0.0	0.0
	HexN(Ac)-GIPC	19.8	99.9	99.9	61.1	12.4	99.5	41.1	78.1	70.5	85.1	100.0	100.0	100.0	100.0
	Heatmap														
Each species	H_t18:0-h16:0	0.1	0	0	4.5	11.6	0	0.7	0	0.2	0	0	0	0	0
	H_t18:0-h18:0	0.3	0	0	0.2	0.7	0	0	0	0	0	0	0	0	0
	H_t18:0-h20:0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0
	H_t18:0-h22:0	2.8	0	0	1.6	2.9	0	0.2	1.8	1	1.6	0	0	0	0
	H_t18:0-h22:1	0.1	0	0	0.1	0	0	0.1	0	0	0.1	0	0	0	0
	H_t18:0-h24:0	5.4	0	0	6.8	14.4	0	6.2	3	6.9	1.1	0	0	0	0
	H_t18:0-h24:1	0.6	0	0	1.4	0.3	0.2	0.6	0.2	0.1	0.4	0	0	0	0
	H_t18:0-h26:0	0.4	0	0	0.3	0.8	0	0.2	0.1	0.9	0	0	0	0	0
	H_t18:0-h26:1	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
	H_t18:1-h16:0	1	0	0	3.1	6.4	0	4.4	0	0.2	0	0	0	0	0
	H_t18:1-h18:0	1.3	0	0	0	0	0	0.3	0.1	0	0	0	0	0	0
	H_t18:1-h20:0	0.5	0	0	0.1	0.3	0	0.2	0.5	0	0	0	0	0	0
	H_t18:1-h22:0	15.1	0	0	2.7	3.3	0	3.8	2.9	1.4	1.5	0	0	0	0
	H_t18:1-h22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-h24:0	38.2	0	0	13.1	34.6	0	29.6	9.2	14.5	5.9	0	0	0	0
	H_t18:1-h24:1	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0
	H_t18:1-h26:0	4.8	0	0	0.1	1.7	0	5.1	0.7	1.6	0.1	0	0	0	0
	H_t18:1-h26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c16:0	0	0	0	0.3	1.1	0	0.1	0	0	0	0	0	0	0
	H_t18:0-c18:0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c22:0	0.3	0	0	0.2	0.3	0	0	0.1	0	0.1	0	0	0	0
	H_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c24:0	0.4	0	0	0.8	1.4	0	0.7	0.4	1	0.1	0	0	0	0
	H_t18:0-c24:1	0.1	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0
	H_t18:1-c26:0	0	0	0	0	0.1	0	0	0	0.1	0	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c16:0	0.1	0	0	0.4	0.9	0	0.4	0	0	0	0	0	0	0
	H_t18:1-c18:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c22:0	1	0	0	0.3	0.3	0	0.3	0.4	0.1	0.1	0	0	0	0
	H_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	3.2	0	0	1.4	4.9	0	4	0.6	1	0.9	0	0	0	0
	H_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
H_t18:1-c26:0	0.5	0	0	0	0.2	0	0.4	0	0.2	0	0	0	0	0
H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-h22:0	0	0	0	0.1	0	0.2	0	0	0	0	0	0	0	0
HH_t18:0-h24:0	0.5	0	0	0.1	0.5	0.1	0.1	0.6	0	0.7	0	0	0	0
HH_t18:0-h24:1	0	0	0	0	0	0	0.3	0.1	0.1	0	0	0	0	0
HH_t18:0-h26:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-h26:1	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0
HH_t18:1-h20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-h22:0	0.2	0	0	0.1	0.1	0.1	0	0	0	0.1	0	0	0	0
HH_t18:1-h24:0	3.1	0	0	0.6	0.5	0	0.6	0.6	0	1.7	0	0	0	0
HH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-h26:0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
N_t18:0-h16:0	0	0	0	2.6	1.3	0.6	0.3	0	0.8	0.2	0	0	0	0
N_t18:0-h18:0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
N_t18:0-h20:0	0	0.1	0	0	0	0.2	0	0.1	0.1	0.1	0	0	0	0
N_t18:0-h20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h22:0	0.1	3.2	0.5	1.6	0.4	7.8	0.3	2	1.8	5.6	0	0.1	2.6	1.2
N_t18:0-h22:1	0	0	0	0	0	1	0	0	0	0	0	0	0	0.2
N_t18:0-h24:0	0.1	8.4	2.6	4	1.5	12.4	2.7	3.8	6.5	6.4	0	0.6	11.9	1.8
N_t18:0-h24:1	0	0	0	0	0	2.3	0.1	0.1	0	0.1	2.5	0.1	0	6.6
N_t18:0-h26:0	0	0.9	0.1	0.5	0	0.5	0.4	0.2	1.5	0.3	0	0	0.8	0.2
N_t18:0-h26:1	0	0	0	0.5	0.1	0.2	2.3	0.6	3.6	0.5	0	0	0	0.1
N_t18:1-h16:0	0	0	0	1.1	0.4	0.1	2.4	0	0.6	0.1	0	0	0	0
N_t18:1-h18:0	0	0	0	0	0	0	0.1	0.2	0	0	0	0	0	0
N_t18:1-h20:0	0	0	0	0	0	0	0.1	0.4	0.1	0.2	0	0	0	0.1
N_t18:1-h22:0	0.3	1	4.2	1.5	0.5	2.5	1.6	3.6	3.1	9.1	0	0	0	1
N_t18:1-h22:1	0	0	0	0	0	0	0	0	0	0	1.2	0	0	0.3
N_t18:1-h24:0	0.6	2	5.3	5.1	2.7	3.6	15.2	6.6	17.2	12.6	0.9	0.1	0.2	2.7
N_t18:1-h24:1	0	0	0	0	0	0	0	0.1	0	0	1.6	0	0	6.1
N_t18:1-h26:0	0	0.2	0.8	0.3	0.1	0.1	1.5	0.4	2.4	0.3	0	0	0	0.3
N_t18:1-h26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
N_t18:0-c16:0	0	0	0	0.2	0.1	0.1	0	0	0.1	0	0	0	0	0
N_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c22:0	0	0.4	0.1	0.1	0.1	0.5	0	0.1	0.2	0.4	0	0	0	0.7
N_t18:0-c22:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.1
N_t18:0-c24:0	0	0.4	0.2	0.4	0.1	1.5	0.3	0.2	0.8	0.9	0	0.1	0.7	1.4

Table S3. Molecular composition of GIF

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
N_t18:0-c24:1	0	0	0	0	0	0.2	0	0	0	0	0.2	0	0	2.9
N_t18:0-c26:0	0	0.1	0	0	0	0	0	0	0.2	0	0	0	0	0.1
N_t18:0-c26:1	0	0	0	0.1	0	0	0.1	0.1	0.4	0	0	0	0	0.1
N_t18:1-c16:0	0	0	0	0.2	0	0	0.3	0	0.1	0	0	0	0	0
N_t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c22:0	0	0.1	0.3	0.1	0.1	0.2	0.1	0.5	0.3	0.9	0	0	0	0.1
N_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
N_t18:1-c24:0	0	0.3	0.8	0.7	0.3	0.3	1	0.8	1.5	1.3	0.1	0	0	0.4
N_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.4
N_t18:1-c26:0	0	0	0.1	0	0	0	0.2	0	0.3	0	0	0	0	0.2
N_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
NH_t18:0-h20:0	0	0	0	0	0	1.6	0	0	0	0	0	0.1	0	0
NH_t18:0-h22:0	0	0.7	0.1	0	0	17.4	0	0	0	0.1	0	6.6	1.8	1
NH_t18:0-h22:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.2
NH_t18:0-h23:0	0	0.1	0.1	0	0	1.1	0	0	0	0.1	0	1.3	1.7	0.3
NH_t18:0-h24:0	0	4.1	0.1	0	0.1	13.5	0.7	0.3	0.1	1.2	10.9	29.2	14.8	7.9
NH_t18:0-h24:1	0	0	1.3	0	0	0	0	0	0	0	0	0	0	1.2
NH_t18:0-h25:0	0	0.4	0	0	0	0.4	0	0	0	0	0	0.6	2.8	0.6
NH_t18:0-h25:1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.6
NH_t18:0-h26:0	0	1.4	0	0	0	1.1	0.1	0	0	0	0	4.6	1.8	1.4
NH_t18:0-h26:1	0	0.1	0.1	0	0	1.3	0	0	0	0	0	0	0	0.2
NH_t18:1-h22:0	0	0.1	0.1	0	0	4.8	0	0	0	0.1	0	1	0	0.2
NH_t18:1-h23:0	0	0	0.1	0	0	0.3	0	0	0	0.2	1.7	0.1	0	0
NH_t18:1-h24:0	0	1	1	0	0	6.4	2.4	0.6	0.2	2.4	25.1	5.7	0.2	2.4
NH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	0	20	0	0	0.3
NH_t18:1-h25:0	0	0.1	0.2	0	0	0.5	0.1	0	0	0	0.9	0.2	0	0.5
NH_t18:1-h26:0	0	0.3	0.2	0	0	1.3	0.7	0.1	0	0	1	1.9	0	1
NH_t18:0-c20:0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
NH_t18:0-c22:0	0	0	0	0	0	1.3	0	0	0	0	0	0.5	0.1	0.1
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0
NH_t18:0-c24:0	0	0.3	0	0	0	0	0	0	0	0	0.4	1.4	0.2	0.6
NH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0	0.1	0	0	0	0.1	0	0	0	0	0	0.3	0.2	0.1
NH_t18:0-c26:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
NH t18:1-c22:0	0	0	0	0	0	0.4	0	0	0	0	0	0.1	0	0
NH t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c24:0	0	0	0.1	0	0	0.4	0.1	0	0	0.2	2.1	0	0	0.1
NH t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH t18:1-c26:0	0	0	0	0	0	0.1	0	0	0	0	0	0.2	0	0.1
NAc t18:0-h16:0	0	0	0	0.1	0	0.4	0	0	0	0	0	0	0	0
NAc t18:0-h18:0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
NAc t18:0-h20:0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0.1
NAc t18:0-h22:0	0.5	0.6	0.4	2.1	0.1	2	0	3.1	0.4	3.4	0	1.3	3.2	1
NAc t18:0-h22:1	0	0	3.8	0	0	0.1	0	0	0	0	0	0.1	0	0.7
NAc t18:0-h23:0	0.1	2.6	0.5	0.6	0.1	0.4	0	0.8	0.2	0.7	0	0.1	2.2	0.4
NAc t18:0-h24:0	1	32.9	3.4	9	0.7	2.1	0.5	6.1	3.9	4.1	1.2	9.4	15.6	1.4
NAc t18:0-h24:1	0.1	0.2	25.9	0	0.1	0.5	0.4	0.9	0	0.8	3.2	1.3	0.5	4.5
NAc t18:0-h25:0	0.1	1.2	0.4	0.2	0	0	0	0.1	0.1	0	0	0.2	1.4	0.1
NAc t18:0-h25:1	0	0	1.2	0	0	0	0	0	0	0	0	0.1	0	0.1
NAc t18:0-h26:0	0.1	2.8	0.3	0.5	0	0.1	0	0.2	0.3	0.1	0	1.3	1.4	0.3
NAc t18:0-h26:1	0	0	2	0	0	0	0.1	0	0	0	0	0.1	0	0.1
NAc t18:1-h16:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-h18:0	0.1	0	0	0.4	0	0	0	0.5	0	0	0	0	0	0.1
NAc t18:1-h20:0	0.1	0	0.1	0	0	0	0	0	0	0.1	0	0	0	0.3
NAc t18:1-h22:0	4.7	0	3.8	4.9	0.4	0.8	0.5	9.5	1.8	9.1	0	0.2	2.3	3.5
NAc t18:1-h23:0	1.2	2	3.9	1.5	0.6	0.3	0.2	3	1.2	2.8	0	0.1	0.3	1.3
NAc t18:1-h24:0	8.4	24.3	25.9	18.6	2.1	2.8	4.4	23.8	16.7	16	3.2	2.3	3.6	5.9
NAc t18:1-h24:1	0	0	0	0	0	0	0	0.8	0	0	6.2	0	0	13.9
NAc t18:1-h25:0	0.3	1.2	1.2	0.4	0.1	0	0.1	0.6	0.4	0.1	0	0.1	0	0.5
NAc t18:1-h25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4
NAc t18:1-h26:0	0.7	0.1	2	1.1	0	0.1	0.5	1.7	1.6	0.7	0	0.4	0	1
NAc t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c22:0	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0	0.3	0.1
NAc t18:0-c22:1	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c23:0	0	0.2	0.1	0	0	0	0	0	0	0	0	0	0.1	0
NAc t18:0-c24:0	0.1	0.9	0.3	0.7	0.1	0.1	0	0	0	0.2	0	0.4	0.9	0.1
NAc t18:0-c24:1	0	0	0.9	0	0	0	0	0.1	0	0	0.1	0.1	0	0.4
NAc t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:0-c26:0	0	0.2	0	0	0	0	0	0	0	0	0	0.1	0	0

Table S3. Molecular composition of GIF

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
NAc t18:0-c26:1	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c16:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c22:0	0.1	0	0.2	0.2	0	0	0	0	0.1	0	0	0	0.1	0.2
NAc t18:1-c23:0	0.1	0.1	0.2	0.1	0.1	0	0	0.1	0.1	0.2	0	0	0	0.1
NAc t18:1-c24:0	0.7	2.3	0.9	1.1	0	0.3	0.1	2.4	1.6	1.1	0.1	0.2	0.3	0.5
NAc t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0.4
NAc t18:1-c25:0	0	0.1	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc t18:1-c26:0	0	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0	0
NAcH t18:0-h22:0	0	0.1	0	0	0	0.2	0	0.1	0	0	0	3.5	3.7	0.7
NAcH t18:0-h23:0	0	0	0	0	0	0	0	0	0	0	0	0.5	1	0.1
NAcH t18:0-h24:0	0	1	0	0	0.1	1.2	0.1	0.9	0	0.3	1.3	16.1	14.1	3.3
NAcH t18:0-h24:1	0	0	0	0	0	0	0	0	0	0	2.1	0	0	1
NAcH t18:0-h25:0	0	0	0	0	0	0	0	0	0	0	0	0.3	1	0.2
NAcH t18:0-h26:0	0	0.2	0	0	0	0	0	0.1	0	0	0	1.6	1.5	0.8
NAcH t18:1-h22:0	0	0	0	0	0	0.1	0	0.1	0	0.1	0	0.4	0	0.3
NAcH t18:1-h23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH t18:1-h24:0	0.1	0.4	0.3	0	0	0.3	0.4	1.3	0.1	1.1	5.6	4	0.6	2.2
NAcH t18:1-h24:1	0	0	0	0	0	0	0	0	0	0	5.8	0	0	0.4
NAcH t18:1-h25:0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	0.2
NAcH t18:1-h26:0	0	0.2	0	0	0	0.1	0.1	0.4	0	0	0	0.3	0	0.3

Table S3. Molecular composition of GIF

	Plant #	57	58	59	60	61
	Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
Total	Hex-GIPC	0.0	0.0	0.0	0.0	0.0
	HexN(Ac)-GIPC	100.0	100.0	100.0	100.0	100.0
	Heatmap					
Each species	H_t18:0-h16:0	0	0	0	0	0
	H_t18:0-h18:0	0	0	0	0	0
	H_t18:0-h20:0	0	0	0	0	0
	H_t18:0-h22:0	0	0	0	0	0
	H_t18:0-h22:1	0	0	0	0	0
	H_t18:0-h24:0	0	0	0	0	0
	H_t18:0-h24:1	0	0	0	0	0
	H_t18:0-h26:0	0	0	0	0	0
	H_t18:0-h26:1	0	0	0	0	0
	H_t18:1-h16:0	0	0	0	0	0
	H_t18:1-h18:0	0	0	0	0	0
	H_t18:1-h20:0	0	0	0	0	0
	H_t18:1-h22:0	0	0	0	0	0
	H_t18:1-h22:1	0	0	0	0	0
	H_t18:1-h24:0	0	0	0	0	0
	H_t18:1-h24:1	0	0	0	0	0
	H_t18:1-h26:0	0	0	0	0	0
	H_t18:1-h26:1	0	0	0	0	0
	H_t18:0-c16:0	0	0	0	0	0
	H_t18:0-c18:0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0
	H_t18:0-c22:0	0	0	0	0	0
	H_t18:0-c22:1	0	0	0	0	0
	H_t18:0-c24:0	0	0	0	0	0
	H_t18:0-c24:1	0	0	0	0	0
	H_t18:1-c26:0	0	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0
	H_t18:1-c16:0	0	0	0	0	0
	H_t18:1-c18:0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0	0
	H_t18:1-c22:0	0	0	0	0	0
	H_t18:1-c22:1	0	0	0	0	0
	H_t18:1-c24:0	0	0	0	0	0
	H_t18:1-c24:1	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
H_t18:1-c26:0	0	0	0	0	0
H_t18:1-c26:1	0	0	0	0	0
HH_t18:0-h22:0	0	0	0	0	0
HH_t18:0-h24:0	0	0	0	0	0
HH_t18:0-h24:1	0	0	0	0	0
HH_t18:0-h26:0	0	0	0	0	0
HH_t18:0-h26:1	0	0	0	0	0
HH_t18:1-h20:0	0	0	0	0	0
HH_t18:1-h22:0	0	0	0	0	0
HH_t18:1-h24:0	0	0	0	0	0
HH_t18:1-h24:1	0	0	0	0	0
HH_t18:1-h26:0	0	0	0	0	0
N_t18:0-h16:0	0	0	0	0.1	0
N_t18:0-h18:0	0	0	0	0	0.2
N_t18:0-h20:0	0.1	0.5	0.1	0.2	0.2
N_t18:0-h20:1	0	0	0	0	0
N_t18:0-h22:0	2	4.5	3.6	2.8	2.6
N_t18:0-h22:1	0.2	0	0	0.3	0.1
N_t18:0-h24:0	0.9	12.8	7	3.3	5.4
N_t18:0-h24:1	1.4	0	0	5.4	2.7
N_t18:0-h26:0	0.1	2.1	0.9	0.1	0.2
N_t18:0-h26:1	0	0.1	0	0.1	0
N_t18:1-h16:0	0	0	0	0	0
N_t18:1-h18:0	0	0	0	0	0.1
N_t18:1-h20:0	0.1	0	0	0	0
N_t18:1-h22:0	1.1	0.3	0.7	1.1	1.7
N_t18:1-h22:1	0.1	0	0	0.2	0.1
N_t18:1-h24:0	1	0.7	1.3	2.6	3.4
N_t18:1-h24:1	0.5	0	0	2.4	3.9
N_t18:1-h26:0	0.1	0.1	0.1	0.2	0.2
N_t18:1-h26:1	0	0	0	0.1	0
N_t18:0-c16:0	0	0	0	0.1	0
N_t18:0-c18:0	0	0	0.1	0	0.3
N_t18:0-c20:0	0.1	0.1	0.3	0.1	0
N_t18:0-c20:1	0	0	0	0	0
N_t18:0-c22:0	0.2	0	2.4	0.1	0
N_t18:0-c22:1	0	0	0.1	0.1	0
N_t18:0-c24:0	0.7	3	2.3	2	0

Table S3. Molecular composition of GIF

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
N_t18:0-c24:1	0.6	0	0	1.9	0.1
N_t18:0-c26:0	0	0.4	0.2	0.1	0
N_t18:0-c26:1	0	0	0	0.1	0
N_t18:1-c16:0	0	0	0	0	0
N_t18:1-c18:0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0
N_t18:1-c22:0	0.1	0	0	0.1	0
N_t18:1-c22:1	0	0	0	0	0
N_t18:1-c24:0	0.1	0	0	0.3	0.1
N_t18:1-c24:1	0	0	0	0.1	0
N_t18:1-c26:0	0	0	0	0	0
N_t18:1-c26:1	0	0	0	0	0
NH_t18:0-h20:0	0.2	0.4	0.2	0.1	0
NH_t18:0-h22:0	1.9	2.3	3.9	1.6	1.5
NH_t18:0-h22:1	0.2	0	0.1	0.1	0
NH_t18:0-h23:0	0.8	3	1.4	1.2	1.8
NH_t18:0-h24:0	11.7	17	17.6	12.5	18.9
NH_t18:0-h24:1	1.5	0.1	0.1	1.9	2
NH_t18:0-h25:0	0.7	3.5	1	1.1	2.5
NH_t18:0-h25:1	0.3	0	0.1	0.6	0.7
NH_t18:0-h26:0	1.1	4.7	2.1	0.6	1.5
NH_t18:0-h26:1	0.5	0.1	0	0.3	0
NH_t18:1-h22:0	0.3	0	0.1	0.1	0.3
NH_t18:1-h23:0	0	0	0	0	0.5
NH_t18:1-h24:0	2.2	0.4	1.1	1.8	6
NH_t18:1-h24:1	0.2	0	0	0.3	0.4
NH_t18:1-h25:0	0.2	0.1	0.1	0.4	0.6
NH_t18:1-h26:0	0.4	0.1	0.1	0.2	0.5
NH_t18:0-c20:0	0	0	0	0	0
NH_t18:0-c22:0	0	0.1	0.3	0.1	0.1
NH_t18:0-c22:1	0	0	0	0	0
NH_t18:0-c23:0	0.1	0.2	0	0.1	0.1
NH_t18:0-c24:0	1.1	0.3	1	0.7	0.2
NH_t18:0-c24:1	0.1	0	0	0.1	0.1
NH_t18:0-c25:0	0	0.1	0.1	0	0.1
NH_t18:0-c25:1	0	0	0	0	0
NH_t18:0-c26:0	0	0.2	0.1	0	0
NH_t18:0-c26:1	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
NH_t18:1-c22:0	0	0	0	0	0
NH_t18:1-c23:0	0	0	0	0	0
NH_t18:1-c24:0	0	0	0	0.2	0.3
NH_t18:1-c25:0	0	0	0	0	0
NH_t18:1-c26:0	0	0	0	0	0
NAc_t18:0-h16:0	0	0	0	0	0
NAc_t18:0-h18:0	0	0.1	0	0	0.2
NAc_t18:0-h20:0	0.4	0.8	0.6	0.3	0.1
NAc_t18:0-h22:0	2.7	4.6	4.5	2.4	1.2
NAc_t18:0-h22:1	0.4	0	0.2	0.5	0.1
NAc_t18:0-h23:0	0.9	2	1.1	0.5	1
NAc_t18:0-h24:0	0.9	8.8	4.8	2.3	6.5
NAc_t18:0-h24:1	0.7	0	0.4	4.6	1.4
NAc_t18:0-h25:0	0.1	0.8	0.5	0.3	0.1
NAc_t18:0-h25:1	0.1	0	0	0.1	0.2
NAc_t18:0-h26:0	0.5	1.4	1.1	0.3	0.2
NAc_t18:0-h26:1	0.2	0	0	0.1	0.1
NAc_t18:1-h16:0	0	0	0	0	0
NAc_t18:1-h18:0	0	0	0	0	0.1
NAc_t18:1-h20:0	0.5	0.2	0.3	0.3	0.1
NAc_t18:1-h22:0	4.4	0.7	3.2	3.3	5.1
NAc_t18:1-h23:0	0.2	0.2	0.3	1.1	0.6
NAc_t18:1-h24:0	4.3	1	3.8	7.4	5.1
NAc_t18:1-h24:1	1	0	0	5.4	7.4
NAc_t18:1-h25:0	0.1	0.1	0.1	0.3	0.3
NAc_t18:1-h25:1	0	0	0	0.1	0.1
NAc_t18:1-h26:0	0.4	0.1	0.3	0.4	0.1
NAc_t18:0-c16:0	0	0	0	0	0
NAc_t18:0-c18:0	0	0	0	0	0
NAc_t18:0-c20:0	0	0.1	0.1	0	0
NAc_t18:0-c22:0	0.1	0.4	0.3	0.2	0
NAc_t18:0-c22:1	0	0	0	0	0
NAc_t18:0-c23:0	0	0.1	0	0	0.1
NAc_t18:0-c24:0	0	0.8	0.1	0	0.3
NAc_t18:0-c24:1	0	0	0	0.4	0
NAc_t18:0-c25:0	0	0	0	0	0
NAc_t18:0-c25:1	0	0	0	0	0
NAc_t18:0-c26:0	0	0	0	0	0

Table S3. Molecular composition of GIF

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
NAc_t18:0-c26:1	0	0	0	0	0
NAc_t18:1-c16:0	0	0	0	0	0
NAc_t18:1-c18:0	0	0	0	0	0
NAc_t18:1-c20:0	0	0	0	0	0
NAc_t18:1-c22:0	0.2	0.1	0.1	0.2	0.3
NAc_t18:1-c23:0	0	0	0	0.1	0
NAc_t18:1-c24:0	0.2	0.1	0.3	0.4	0.4
NAc_t18:1-c24:1	0.1	0	0	0.3	0.1
NAc_t18:1-c25:0	0	0	0	0	0
NAc_t18:1-c25:1	0	0	0	0	0
NAc_t18:1-c26:0	0	0	0	0	0
NAcH_t18:0-h22:0	3.3	0.9	2.5	0.7	0.2
NAcH_t18:0-h23:0	0.7	0.9	0.6	0.5	0.2
NAcH_t18:0-h24:0	15.5	6.6	7.8	5	3.3
NAcH_t18:0-h24:1	2.2	0	0.1	1.6	0.5
NAcH_t18:0-h25:0	0.5	0.6	0.2	0.3	0.3
NAcH_t18:0-h26:0	2.9	0.8	0.8	0.6	0.4
NAcH_t18:1-h22:0	0.5	0.1	0.2	0.1	0
NAcH_t18:1-h23:0	0	0	0	0	0.2
NAcH_t18:1-h24:0	2.4	0.3	0.8	1.2	0.9
NAcH_t18:1-h24:1	0.2	0	0	0.2	0
NAcH_t18:1-h25:0	0.2	0	0	0.1	0.3
NAcH_t18:1-h26:0	0.5	0	0.1	0.1	0.1

Table S4. Molecular composition of GIPCs (mol%) in seeds of various plant species.

	Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
Total	Hex-GIPC	56.4	41.9	48.9	43.2	23.6	34.8	23.3	30.9	33.8	40.2	62.7	20.4	36.1	13.4
	HexN(Ac)-GIPC	43.6	58.1	51.1	56.8	76.4	65.2	76.7	69.1	66.2	59.8	37.3	79.6	63.9	86.6
	Heatmap														
Each species	H_t18:0-h16:0	0.6	0.3	0	0	0.6	0.4	0	0	0	0	1	0.1	0.1	0
	H_t18:0-h20:0	0	0	0.3	0	0	0	0	0	0	0	0.1	0	0	0
	H_t18:0-h22:0	0	0.3	2.5	0	1.1	1	0.8	0.4	0.5	0.3	5.4	4.6	1.5	0.6
	H_t18:0-h22:1	0.3	0.1	0.2	0	0	0.3	0.2	0	0.1	0.4	0.2	0.1	0.2	0.5
	H_t18:0-h24:0	4.3	2	9.8	0.7	5.1	2.4	0.8	3.7	2.7	0.7	3.3	4.5	0.9	2
	H_t18:0-h24:1	1.4	2.8	0.8	0.8	0.6	1.7	0.7	1.4	1.2	0.4	2.3	1	0.6	0.7
	H_t18:0-h26:0	0.1	0	0.2	0.1	0.4	0	0	0.1	0	0	0	0	0.3	0
	H_t18:0-h26:1	0.1	0.1	0.1	0	0.1	0	0	0.2	0	0	0.3	0.1	0.2	0
	H_t18:1-h16:0	1.4	0.4	0.1	0.2	0.1	0.1	0.1	0	0	0	0.4	0	0.9	0
	H_t18:1-h20:0	0.3	0	0.2	0	0	0	0.1	0	0	0	0	0	0	0
	H_t18:1-h22:0	4	2.4	8.1	0.2	2.6	5.9	2.2	3.1	2.7	4.3	1.4	0.2	4.4	0.2
	H_t18:1-h22:1	0.1	0	0.1	0.1	0	1.3	0.1	0.1	0.1	0.5	0.1	0.1	0	0
	H_t18:1-h24:0	17.4	8.9	12	7.1	4.8	7.2	5.1	8.6	11.7	13.2	8	3	14.3	0.4
	H_t18:1-h24:1	7.7	10.8	1.8	20.8	0.3	6	3.3	3.1	4.7	10.6	4.9	1.7	0.3	3.9
	H_t18:1-h26:0	0.1	0	0	0.1	0.1	0	0	0.2	0.3	0	0.1	0.1	0.6	1.1
	H_t18:0-c16:0	0.5	0.1	0	0	0.1	0.1	0	0	0	0	0.3	0	0	0
	H_t18:0-c20:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c22:0	0.1	0.1	0.6	0	0.2	0.2	0.2	0.1	0.1	0.1	0.7	1	0.4	0.2
	H_t18:0-c22:1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0.1
	H_t18:0-c24:0	0.2	0.5	2.4	0.1	1	0.3	0.2	0.9	0.6	0.2	0.6	1.3	0.2	0.5
	H_t18:0-c24:1	0.1	0.8	0.2	0.2	0.1	0.5	0.2	0.2	0.3	0.1	0.6	0.1	0.1	0.1
	H_t18:1-c26:0	0.3	0	0	0	0.1	0	0	0	0	0	0	0	0.1	0
	H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
	H_t18:1-c16:0	0.1	0.1	0	0.1	0	0	0	0	0	0	0.1	0	0.2	0
	H_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c22:0	0	0.4	1.6	0	0.5	0.9	0.5	0.5	0.5	0.8	0.2	0.1	1.2	0
	H_t18:1-c22:1	0	0	0	0	0	0.2	0	0	0	0.1	0	0	0	0
	H_t18:1-c24:0	0.9	1.3	2.9	1.9	0.8	1.7	0.9	1.6	2.4	2.1	2.2	0.6	3	0.1
	H_t18:1-c24:1	0.1	2.2	0.3	4.3	0.1	1.6	0.5	0.4	1.2	2.8	0.7	0.3	0.1	0.6
	H_t18:1-c26:0	0.2	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
	HH_t18:0-h22:0	0	0.2	0.3	0.2	0.4	0.2	0.1	0.2	0.2	1	1.9	0.1	1	0
	HH_t18:0-h24:0	3.3	3	1.4	2.3	1.4	1.6	2.9	4.6	2.3	0.6	13.3	0.4	3.5	0.3
	HH_t18:0-h24:1	1.7	0.3	0.1	0.2	0.2	0	0.1	0.1	0.3	0	1.8	0.1	0	0.2
	HH_t18:0-h26:0	0.2	0.6	0.1	0.1	0.1	0	0	0.5	0.2	0.3	1.2	0.1	0.3	0

Table S4. Molecular composition of GIPCs (mol%) in seeds of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
HH_t18:1-h22:0	0.1	0.1	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.6	0.8	0.4	0.1	0
HH_t18:1-h24:0	3	2.4	1.7	2.1	2.2	0.7	3.4	0.1	1.2	0.9	6.1	0.1	0.5	1.1
HH_t18:1-h24:1	0.1	1.1	0.1	0.6	0	0.2	0.3	0.2	0.2	0.1	1.3	0.1	0.1	0
HH_t18:1-h26:0	0.2	0.3	0.1	0	0.1	0	0	0	0	0	0.5	0.1	0.2	0
HH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0.1	0
HH_t18:0-c24:0	0.2	0	0	0.2	0.1	0	0.1	0.3	0.2	0	0.6	0	0.3	0
HH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
HH_t18:0-c26:0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
HH_t18:1-c24:0	0.9	0	0.1	0.2	0.1	0	0.3	0	0	0	0.2	0	0	0.1
HH_t18:1-c24:1	0	0.1	0	0.1	0	0	0	0	0	0	0.1	0	0	0
HH_t18:1-c26:0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h16:0	0.4	0.3	0.1	0.1	1	0.7	0.4	0.4	0.4	0	0.1	0.5	0.1	0
N_t18:0-h18:0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
N_t18:0-h20:0	0.1	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0
N_t18:0-h20:1	0	0	0.1	0	0	0	0.1	0	0	0	0	0.1	0.1	0.4
N_t18:0-h22:0	0.6	0.8	5.4	0.2	7.2	7.7	4.5	6	1.8	1.6	1	10	0.7	1.3
N_t18:0-h22:1	0.1	0.1	0.3	0.1	0	2.7	0.5	0.5	0.3	0.1	0.2	0.9	0.4	0
N_t18:0-h24:0	2.3	1.6	4.8	0.6	12.5	3.4	10.3	7.2	10.1	2.6	1.6	8.3	1.3	1.2
N_t18:0-h24:1	1.7	6.7	1.9	2.2	2.4	6.2	5.4	4.6	4.2	4.1	5.2	12.5	0.7	1.4
N_t18:0-h26:0	0.2	0	0	0	0.2	0	0	0.1	0.1	0	0.1	0.1	0.1	0.2
N_t18:0-h26:1	1.5	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.6	0.1	3.6	2.3
N_t18:1-h16:0	0.7	0.6	0	0.6	1.1	0.7	1.1	0.5	0.4	0.3	0.1	0.2	0.6	0.4
N_t18:1-h18:0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
N_t18:1-h20:0	0.1	0	0.3	0	0.1	0	0	0	0	0.1	0	0	0	0.4
N_t18:1-h22:0	2.6	1.5	4.2	0.8	11.3	9.3	7.6	7	2.7	4.4	0.8	6.8	2.3	15.5
N_t18:1-h22:1	0.1	0	0.2	0.7	0	3.5	3.1	0.8	1.4	2.4	0.4	1.3	0	0
N_t18:1-h24:0	11.7	5.6	3.4	3.8	20.6	6.2	15	14.4	16.8	7.6	2.4	7.1	5	5.9
N_t18:1-h24:1	10.2	23.3	3.9	25.3	4.4	12	11.3	11.3	10.1	22.3	12.7	5.7	4.3	16.3
N_t18:1-h26:0	1	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.4	0.1	2.4	1.3
N_t18:1-h26:1	0.2	0	0	0.1	0	0	0	0.1	0	0.1	0.1	0.1	0.2	0.3
N_t18:0-c16:0	0	0.1	0	0	0.3	0.2	0.1	0	0.1	0	0	0.1	0	0
N_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
N_t18:0-c22:0	0.1	0.1	1.1	0	0.8	1.2	1.2	1.6	0.3	0.3	0.2	2.5	0.1	0.3
N_t18:0-c22:1	0	0	0.1	0	0	0.5	0.1	0.1	0	0	0	0.1	0.1	0
N_t18:0-c24:0	0.1	0.3	0.6	0.2	2.2	0.7	2	2.1	2.9	0.3	0.3	2.1	0.3	0.3

Table S4. Molecular composition of GIPCs (mol%) in seeds of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
N_t18:0-c24:1	0.1	1.9	0.3	0.5	0.4	1.1	0.9	1.1	0.7	0.6	1.4	3.1	0.1	0.3
N_t18:0-c26:0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
N_t18:0-c26:1	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0.4	0.5
N_t18:1-c16:0	0	0.1	0	0.2	0.2	0.1	0.2	0.1	0.1	0	0	0	0.2	0.1
N_t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
N_t18:1-c22:0	0.2	0.4	0.6	0.2	2.7	2.7	1.9	1.1	0.6	0.9	0.1	1	0.3	1.7
N_t18:1-c22:1	0	0	0	0.1	0	0.4	0.6	0.2	0.2	0.3	0.1	0.2	0	0
N_t18:1-c24:0	0.6	0.7	0.9	0.7	3.8	1.2	2.4	2.1	4.7	1.9	0.5	1.6	1.2	1.7
N_t18:1-c24:1	0.2	7	0.5	2.5	0.8	2.5	1.2	2.8	2.7	2.5	3.3	1.2	0.9	2.1
N_t18:1-c26:0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.7	0.4
N_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NH_t18:0-h22:0	0	0	0.1	0.1	0	0.1	0.1	0.3	0	0.2	0	0	0.3	0.3
NH_t18:0-h22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h23:0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0.1	0
NH_t18:0-h24:0	0	1.2	1.4	3.3	0.1	0	0.8	0.6	0.1	0.4	0.1	0.1	7.6	0.7
NH_t18:0-h24:1	0	0.1	0	0.2	0	0	0	0	0	0	0	0	0.3	0
NH_t18:0-h25:0	0	0	0.1	0.2	0	0	0	0	0	0	0	0	0.3	0
NH_t18:0-h25:1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h26:0	0	0.5	0.3	1.4	0	0	0	0	0.1	0.1	0.1	0.1	1.1	0.1
NH_t18:0-h26:1	0	0	0.1	0.1	0	0	0	0	0	0	0	0	0.9	0.3
NH_t18:1-h22:0	0	0	0.2	0	0.2	0.2	0.3	0.1	0	0.5	0	0	0.3	0.5
NH_t18:1-h23:0	0	0	0.1	0.1	0.1	0.1	0.3	0.1	0	0.2	0	0	0.2	0.2
NH_t18:1-h24:0	0.1	1	0.6	4.1	0.4	0.4	2.6	0.5	0	0.6	0.4	0	8.5	7.3
NH_t18:1-h24:1	0.7	0.1	0.1	1.6	0	0.1	0.5	0.1	0	0	0.1	0	0.8	0.4
NH_t18:1-h25:0	0	0	0.1	0.3	0	0	0	0	0	0.1	0	0	0.6	0.2
NH_t18:1-h25:1	0	0	0	0	0	0	0	0.1	0	0	0	0	0.1	0.1
NH_t18:1-h26:0	0	0.8	0.6	3.3	0	0	0.1	0	0.1	0.2	0.7	0.2	1.3	1.1
NH_t18:1-h26:1	0.3	0	0	0.2	0	0	0	0	0	0	0	0	0.2	0.1
NH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c24:0	0	0.1	0.1	0.3	0	0	0.1	0	0	0	0	0	0.6	0.1
NH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0

Table S4. Molecular composition of GIPCs (mol%) in seeds of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
NH_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c24:0	0	0.1	0.1	0.3	0	0	0.1	0	0	0	0	0	0.2	0.2
NH_t18:1-c24:1	0	0	0	0.2	0	0	0	0	0	0	0	0	0.1	0
NH_t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c26:0	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-h22:0	0	0	1.9	0	0.1	0	0	0.1	0.1	0.1	0	1.4	0.4	0.4
NAc_t18:0-h22:1	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0
NAc_t18:0-h23:0	0	0	0.3	0	0	0	0	0.1	0.1	0	0	0.3	0.3	0
NAc_t18:0-h24:0	0	0.1	3.2	0	0.4	0.1	0.1	0.3	0.8	0.3	0.2	1	0.8	0.5
NAc_t18:0-h24:1	0	0.2	0.4	0.2	0.1	0	0.1	0.1	0.2	0.4	0.3	1.2	0.5	0.5
NAc_t18:0-h25:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-h25:1	1.4	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-h26:0	0	0	0	0	0	0	0	0.1	0.3	0	0	0	0	0
NAc_t18:1-h22:0	0	0.1	2	0	0.7	0.2	0.3	0.1	0.1	0.2	0.1	1.1	1.5	6.6
NAc_t18:1-h23:0	0	0.1	0.3	0	0.1	0	0	0	0.1	0.3	0	0.4	0.7	0.3
NAc_t18:1-h24:0	0	0.3	3.3	0.2	0.7	0.1	0.5	0.4	0.2	0.9	0.8	0.8	3.6	4.1
NAc_t18:1-h24:1	0.1	1.4	3	0.9	0.1	0.2	0.4	0.2	0.4	0.8	1.6	4	2.7	4
NAc_t18:1-h25:0	1.4	0	0	0	0	0	0	0	0	0	0	0	0.4	0
NAc_t18:1-h26:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0.2	0.3
NAc_t18:0-c22:0	0	0	0.3	0	0	0	0	0	0	0	0	0.2	0.1	0.1
NAc_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c23:0	0	0	0.1	0	0	0	0	0	0	0	0	0.1	0	0
NAc_t18:0-c24:0	0	0	0.7	0	0.1	0	0	0	0.1	0.1	0.1	0.1	0.2	0.1
NAc_t18:0-c24:1	0	0	0.1	0	0	0	0	0	0	0.1	0	0.3	0.1	0.1
NAc_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c25:1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
NAc_t18:0-c26:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
NAc_t18:1-c22:0	0	0	0.2	0	0.1	0	0	0	0	0.1	0	0.2	0.2	0.9
NAc_t18:1-c23:0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0.1
NAc_t18:1-c24:0	0	0	0.6	0.1	0.1	0	0.1	0.1	0	0.1	0.2	0.1	1	1
NAc_t18:1-c24:1	0	0.3	0.7	0.2	0	0.1	0	0.1	0.1	0.2	0.4	1.1	0.3	0.6
NAc_t18:1-c25:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NAc_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
NAcH_t18:0-h22:0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0
NAcH_t18:0-h23:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NAcH_t18:0-h24:0	0	0	0.1	0	0	0	0.1	0.7	1.4	0.2	0	0.1	0.1	0
NAcH_t18:0-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S4. Molecular composition of GIPCs (mol%) in seeds of various plant species.

Plant #	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Arabidopsis	Camelina	Watercress	Wallflower	Rapeseed	Turnip	Cabbage	Brown mustard	Radish	Rocket	Woad	Sea kale	Stock	Chinese violet cress
NAcH_t18:0-h26:0	0.2	0	0	0	0	0	0	0.1	0.7	0.1	0	0	0	0
NAcH_t18:1-h22:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NAcH_t18:1-h23:0	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NAcH_t18:1-h24:0	0	0.1	0.5	0.1	0	0	0.1	0.1	0.1	0.2	0.1	0	0.2	0.2
NAcH_t18:1-h25:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NAcH_t18:1-h26:0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0

Table S4. Molecular composition of C

	Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
Total	Hex-GIPC	26.8	24	17.5	41.2	19.7	99.4	16.6	32.8	22.9	23.9	0.7	29.8	0	0.1
	HexN(Ac)-GIPC	73.2	76	82.5	58.8	80.3	0.6	83.4	67.2	77.1	76.1	99.3	70.2	100	99.9
	Heatmap														
Each species	H_t18:0-h16:0	0	0	0	0	0.1	1.3	0	0	0	0.1	0	0.2	0	0
	H_t18:0-h20:0	0	0	0	0.1	0	0.7	0	0	0.4	0	0	0.1	0	0
	H_t18:0-h22:0	0.3	0.1	0.5	1.5	0.5	6.4	0.7	3.2	7.4	3	0	1.6	0	0
	H_t18:0-h22:1	0	0.2	0.4	0.8	0.1	1.9	0.2	0.3	0.6	0.2	0	0.3	0	0
	H_t18:0-h24:0	1.4	1.6	0.8	1	0.7	15.3	1.2	1.1	0.5	4.1	0	1.9	0	0
	H_t18:0-h24:1	1.7	1.4	1.5	0.3	5	2	0.9	1.3	0.4	1.1	0	0.3	0	0
	H_t18:0-h26:0	0	0	0	0.1	0.1	0.5	0.2	0	0.3	1.7	0	0	0	0
	H_t18:0-h26:1	0	0	0.1	0.1	0.2	0	0.3	0.2	0	0.5	0	0	0	0
	H_t18:1-h16:0	0.3	0	0	0	0.7	2.2	0	0	0	0.2	0	2.1	0	0
	H_t18:1-h20:0	0	0	0	1.3	0	1.6	0	0.1	0	0.2	0	0.3	0	0
	H_t18:1-h22:0	5.9	3.6	3.1	6.4	0.1	17.5	0.5	5.3	4.4	0.6	0.1	2.5	0	0
	H_t18:1-h22:1	0	0.1	0	0.1	0	0	0	0	0	0	0	0.1	0	0
	H_t18:1-h24:0	8.6	2.7	3.9	6.5	2.9	17.5	2	8.4	0.2	2.9	0.1	12.8	0	0
	H_t18:1-h24:1	3	0.1	0	0.2	3.3	0	0	0	0	0	0	0.2	0	0
	H_t18:1-h26:0	0.2	0	0.7	0	0.3	0.5	0.3	0.3	0	0.4	0	0.4	0	0
	H_t18:0-c16:0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0	0.2	0	0	0.1	0	0	0	0	0
	H_t18:0-c22:0	0.1	0	0.1	0.2	0.1	1.2	0.2	0.6	1.6	0.4	0	0.5	0	0
	H_t18:0-c22:1	0	0	0.1	0.1	0	0.5	0	0	0.1	0	0	0.1	0	0
	H_t18:0-c24:0	0.2	0.3	0.1	0.2	0.2	2.8	0.2	0.2	0.1	0.7	0	0.5	0	0
	H_t18:0-c24:1	0.5	0.4	0.2	0.1	0.9	0.2	0.1	0.3	0.1	0.3	0	0.1	0	0
	H_t18:1-c26:0	0	0	0	0	0	0.1	0	0	0.1	0.4	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
	H_t18:1-c16:0	0.1	0	0	0	0.1	0.6	0	0	0	0	0	0.5	0	0
	H_t18:1-c20:0	0	0	0	0.3	0	0.5	0	0	0	0	0	0	0	0
	H_t18:1-c22:0	0.9	0.5	0.4	1.2	0	3.6	0.1	1.3	0.9	0.2	0	0.5	0	0
	H_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	0.9	0.3	0.5	1.5	0.3	5.2	0.4	2.5	0	0.5	0	1.5	0	0
	H_t18:1-c24:1	0.4	0	0	0.1	0.6	0	0	0	0	0	0	0	0	0
	H_t18:1-c26:0	0	0	0.1	0	0.1	0.1	0	0.1	0	0.1	0	0.1	0	0
	HH_t18:0-h22:0	0	0.3	0.3	0.1	0	2.7	0.2	3.1	1.4	0.3	0.2	0.2	0	0
	HH_t18:0-h24:0	0.6	0.4	0.6	11	0.9	2.9	3	1.7	2	1.3	0	0.8	0	0
	HH_t18:0-h24:1	0	0.1	0	0.2	0.3	0	0.3	0.5	0.5	0	0	0.2	0	0
	HH_t18:0-h26:0	0	0	0.1	0.3	0.2	0.6	0.5	0	0	0.1	0	0	0	0

Table S4. Molecular composition of C

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
HH_t18:1-h22:0	0.3	3.3	0.1	0.7	0	4.8	0.4	0.4	0.3	0.2	0	0.6	0	0
HH_t18:1-h24:0	1	6.9	3.3	5.8	1.1	1.9	3.6	1.6	1.2	3.5	0.1	1	0	0.1
HH_t18:1-h24:1	0.2	0.5	0	0	0.1	0	0	0	0	0	0	0.2	0	0
HH_t18:1-h26:0	0	0	0.2	0.1	0	1	0.5	0	0	0.3	0	0	0	0
HH_t18:0-c22:0	0	0	0	0	0	0.1	0	0.2	0.1	0	0	0	0	0
HH_t18:0-c24:0	0.1	0	0.1	0.5	0.1	0.3	0.2	0.1	0	0.1	0	0.1	0	0
HH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-c26:0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
HH_t18:1-c22:0	0	0.3	0	0	0	0.1	0	0	0	0	0	0	0	0
HH_t18:1-c24:0	0.1	0.6	0.3	0.5	0	0.1	0	0	0.1	0.3	0	0.1	0	0
HH_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c26:0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
N_t18:0-h16:0	0.1	0.1	0	0	0.3	0	0	0	0	0.4	0.7	0.1	0	0
N_t18:0-h18:0	0	0	0	0	0	0	0	0	0	0	0.2	0.1	0	0
N_t18:0-h20:0	0	0	0	0.1	0	0	0.1	0	0.5	0.1	0.1	0.2	0	0
N_t18:0-h20:1	0	0.1	0.1	0.1	0	0	0	0.5	0.9	0.5	0	0.1	0	0
N_t18:0-h22:0	0.6	1.3	1.4	1.2	0.2	0	2.1	1.4	9.7	1.5	1	2.8	0.5	0.4
N_t18:0-h22:1	0.3	0.1	1.2	0.7	0.3	0.2	0.3	0.1	0.9	1.7	1.2	1	0	0.2
N_t18:0-h24:0	0.6	3.3	3.9	0.6	1.8	0	7	4.2	13.7	7	2.3	5.9	10.5	11.4
N_t18:0-h24:1	5	7.9	7.3	6.4	2	0	9.9	10.9	4.5	8.4	5.5	2.1	6.7	7.7
N_t18:0-h26:0	0.1	0.1	0.4	0	0	0	0.7	0.3	3.8	4.5	0.4	0.1	2	1.8
N_t18:0-h26:1	1.7	0.3	0.3	0	0.1	0	3.7	4	0.5	0.3	0.9	0	1.1	1.2
N_t18:1-h16:0	1.3	0.2	0	0	0.8	0	0	0	0	2.1	4.7	0.8	0	0
N_t18:1-h18:0	0.1	0	0	0	0.1	0	0	0.1	0	0.1	0.9	0.2	0	0
N_t18:1-h20:0	0.1	0.1	0.3	0.5	0	0	0.1	0.3	0.6	1	0.3	0.5	0	0
N_t18:1-h22:0	6.4	9	11.2	11.8	1.4	0	1.5	9.5	8.2	7.1	6.4	7.7	2.4	2
N_t18:1-h22:1	0.1	0.3	0.1	0.8	0.2	0	0.1	0	0	0.2	0.4	1.2	0	0
N_t18:1-h24:0	13.5	8.2	25.2	7.5	2.9	0	11.5	9.8	17.7	10.4	15.5	9.5	10.5	12.7
N_t18:1-h24:1	21.3	2	0.1	1.2	11.8	0	0	0.1	0	0.1	8.7	3.3	0	0
N_t18:1-h26:0	1.1	0.2	2.7	0	0.3	0	1.6	2.8	0.2	1	4.6	0.2	4.9	5.4
N_t18:1-h26:1	0.6	0	0	0	0.5	0	0	0	0	0	0.1	0.1	0	0
N_t18:0-c16:0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
N_t18:0-c18:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-c20:0	0	0	0	0	0	0	0	0	0.1	0	0	0.1	0	0
N_t18:0-c20:1	0	0	0	0	0	0	0	0.1	0.2	0.1	0	0	0	0
N_t18:0-c22:0	0.1	0.3	0.3	0.3	0	0	0.5	0.3	1.7	0.2	0.2	0.8	0.1	0.1
N_t18:0-c22:1	0.1	0	0.1	0.2	0	0	0.1	0	0.2	0.3	0.2	0.2	0	0
N_t18:0-c24:0	0.2	0.4	1	0.1	0.5	0	0.9	1.2	2.7	0.9	0.5	0.7	2.1	1.2

Table S4. Molecular composition of C

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
N_t18:0-c24:1	0.6	2.1	1.2	1.2	0.4	0	2.5	3.3	0.8	1.5	0.7	0.6	0.8	1.5
N_t18:0-c26:0	0	0	0.1	0	0	0	0.2	0.1	0.7	1	0.1	0	0.6	0.3
N_t18:0-c26:1	0.3	0.1	0.1	0	0	0	0.9	0.6	0.1	0	0.2	0	0.2	0.3
N_t18:1-c16:0	0.3	0	0	0	0.2	0	0	0	0	0.5	0.8	0.1	0	0
N_t18:1-c18:0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0
N_t18:1-c20:0	0	0	0.1	0.1	0	0	0	0.1	0.1	0.2	0.1	0.1	0	0
N_t18:1-c22:0	1.8	1.9	2.3	2.2	0.3	0	0.4	2.4	1.5	1.4	1.1	2.3	0.7	0.4
N_t18:1-c22:1	0	0	0	0.2	0	0	0	0	0	0	0.1	0.3	0	0
N_t18:1-c24:0	2.9	1.8	3.6	2	0.5	0	2.3	1.8	3.1	1.9	2.1	1.6	1.4	1.3
N_t18:1-c24:1	3.9	0.4	0	0.3	2.6	0	0	0	0	0	1.3	0.7	0	0
N_t18:1-c26:0	0.3	0	0.7	0	0.1	0	0.3	0.5	0	0.3	1.3	0	0.8	0.7
N_t18:1-c26:1	0.1	0	0	0	0.1	0	0	0	0	0	0	0	0	0
NH_t18:0-h22:0	0	0	0.5	0.1	0.1	0	0.3	0.1	0	0.1	0.4	0.1	0	0.1
NH_t18:0-h22:1	0	0	0.3	0.1	0	0	0.7	0	0	1.3	0	0.2	0	0
NH_t18:0-h23:0	0	0	0.2	0	0	0	0.9	0.4	0	0.2	0.2	0.3	0.1	0.1
NH_t18:0-h24:0	0.2	0.1	4.1	1.6	5.2	0	10.1	3.2	0	1.6	1.5	4.8	3.8	3.3
NH_t18:0-h24:1	0	0.2	0.8	0	1.3	0	1	0	0	6	0.5	0	0	0
NH_t18:0-h25:0	0	0	0.3	0.1	0.2	0	1.1	0	0	0.4	0	0.3	0.2	0.3
NH_t18:0-h25:1	0	0	0.1	0.1	0.2	0	0.1	0	0	0.6	0	0.1	0	0
NH_t18:0-h26:0	0	0	0.4	0	8.7	0	1.7	0.2	0	0.3	0.4	0.1	1.6	1.7
NH_t18:0-h26:1	0	0	0.3	0	0.7	0	0.3	0	0	0.1	0	0	0.2	0.3
NH_t18:1-h22:0	0.1	0	0.3	0.1	0.3	0	0.6	0.2	0	0.2	0.9	0.1	0.1	0.1
NH_t18:1-h23:0	0.1	0	0.5	1.2	0.3	0	0.9	0.2	0	0.2	0.6	0.2	0.2	0.2
NH_t18:1-h24:0	1.5	0	7.5	1.2	11.2	0	11.3	2.2	0	1.3	8.1	5.7	8.1	6.2
NH_t18:1-h24:1	0.1	0	0.1	0.1	9.4	0	0	0	0	0.1	1.8	0.1	0	0
NH_t18:1-h25:0	0	0	0.8	0.1	0.6	0	4.3	0.1	0	0.3	0.7	0.5	0.5	0.4
NH_t18:1-h25:1	0.3	0	0	0	0.1	0	0	0	0	0	0	0	0	0
NH_t18:1-h26:0	0.1	0	0.6	0	7.5	0	1.6	0.1	0	0.1	0.8	0.1	2.1	2
NH_t18:1-h26:1	0.1	0	0	0	2.2	0	0	0	0	0	0.1	0	0	0
NH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c24:0	0	0	0.3	0.1	0.4	0	0	0.1	0	0.1	0.1	0.4	0.2	0.3
NH_t18:0-c24:1	0	0	0.1	0	0.1	0	0.1	0	0	0.5	0	0	0	0
NH_t18:0-c25:0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0	0	0	0	0.2	0	0	0	0	0	0	0	0.1	0
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S4. Molecular composition of C

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
NH_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c23:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c24:0	0.1	0	0.4	0.1	0.6	0	1.1	0	0	0.1	0	0.5	0.7	0.4
NH_t18:1-c24:1	0	0	0	0	0.2	0	0	0	0	0	0.2	0	0	0
NH_t18:1-c25:0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
NH_t18:1-c26:0	0	0	0	0	0.4	0	0.2	0	0	0	0	0	0.2	0.1
NAc_t18:0-h22:0	0	0.8	0	0.1	0	0	0	0.7	0.7	0.1	0.5	0.2	0.2	0.2
NAc_t18:0-h22:1	0	0	0	0.3	0	0	0	0.2	0	0	0.4	0	0	0
NAc_t18:0-h23:0	0	0.3	0	0.1	0	0	0	0.2	0.1	0.4	0.6	0.2	0.7	0.6
NAc_t18:0-h24:0	0.2	1.7	0.4	0.7	0.2	0	0	0.5	1.6	0.3	1.5	0.5	5.4	4.1
NAc_t18:0-h24:1	0.2	0.1	0.2	1.6	0	0	0	0.2	0.3	0.5	1	0.6	8.7	7.3
NAc_t18:0-h25:0	0	0.1	0	0.1	0	0	0	0	0	0.8	0.2	0	0.3	0.2
NAc_t18:0-h25:1	0	0.1	0	0.1	0	0	0	0	0	0.5	0	0	0.3	0.3
NAc_t18:0-h26:0	0	0.1	0	0	0	0	0	0	0	0.3	0.2	0	0.3	0.3
NAc_t18:1-h22:0	0.8	7.5	0.1	1.2	0	0	0	1.4	0.6	0.2	1.6	1.2	0.2	0.2
NAc_t18:1-h23:0	0.2	2.7	0	0.5	0	0	0	0.2	0.2	0.2	0.5	1.1	0.3	0.3
NAc_t18:1-h24:0	1.8	11.6	0.2	4.9	0.3	0.3	0.2	1.4	0.5	0.6	1.9	5.1	6.8	7.2
NAc_t18:1-h24:1	2.2	1.7	0	0.1	0.7	0	0	0	0	0	3.9	0.3	0	0
NAc_t18:1-h25:0	0.1	0.4	0	0.1	0	0	0	0.2	0	0.5	0.3	0.3	0.4	0.3
NAc_t18:1-h26:0	0.1	0.4	0	0	0	0	0	0	0	0.1	0.5	0.1	0.6	0.7
NAc_t18:0-c22:0	0	0.2	0	0	0	0	0	0.1	0.1	0	0.1	0.1	0	0
NAc_t18:0-c22:1	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0
NAc_t18:0-c23:0	0	0.1	0	0	0	0	0	0	0	0.1	0.1	0	0.1	0.1
NAc_t18:0-c24:0	0	0.3	0	0.2	0	0	0	0.1	0.4	0	0.2	0.1	0.7	0.9
NAc_t18:0-c24:1	0	0	0.1	0.4	0	0	0	0.1	0.1	0.1	0.1	0.1	1.4	1.2
NAc_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0	0.1
NAc_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0.1
NAc_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1
NAc_t18:1-c22:0	0.2	1.9	0	0.4	0	0	0	0.3	0.2	0	0.4	0.2	0	0.1
NAc_t18:1-c23:0	0	0.6	0	0.1	0	0	0	0.1	0	0	0.1	0.3	0.1	0
NAc_t18:1-c24:0	0.3	3	0.1	0.6	0.1	0.1	0	0.2	0.1	0.1	0.3	1	1.1	1.5
NAc_t18:1-c24:1	0.6	0.2	0	0	0.2	0	0	0	0	0	0.6	0.1	0	0
NAc_t18:1-c25:0	0	0.1	0	0	0	0	0	0	0	0.2	0.1	0	0.1	0
NAc_t18:1-c26:0	0	0.1	0	0	0	0	0	0	0	0	0.1	0	0.2	0.1
NAcH_t18:0-h22:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0	0
NAcH_t18:0-h23:0	0	0	0	0.2	0	0	0	0	0	0.2	0	0	0	0
NAcH_t18:0-h24:0	0	0	0	1.4	0	0	0	0	0	0.4	0.8	0.1	1	1.3
NAcH_t18:0-h25:0	0	0	0	0	0	0	0	0	0	0.4	0	0	0.1	0.2

Table S4. Molecular composition of C

Plant #	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Name	Sweet alyssum	Nasturtium	Spider flower	Poached egg plant	Honesty	Hollyhock	Garden balsam	Clarkia	Balloon vine	Rue	Hybrid violet	Wild strawberry	Wax begonia	Luffa
NAcH_t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.1
NAcH_t18:1-h22:0	0	0	0	0.1	0	0	0	0	0	0	0.6	0	0	0
NAcH_t18:1-h23:0	0	0	0	0.1	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1
NAcH_t18:1-h24:0	0	0.1	0	2.7	0	0	0	0	0	0.6	1.2	0.8	6.2	6.8
NAcH_t18:1-h25:0	0	0	0	0.1	0	0	0	0	0	0.3	0	0.1	0.5	0.5
NAcH_t18:1-h26:0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0.5	0.6

Table S4. Molecular composition of C

	Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
	Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
Total	Hex-GIPC	1.9	4.9	14.6	31.1	24.5	24.4	8.6	13.4	15.2	10.6	7.5	0.9	25.2	30.9
	HexN(Ac)-GIPC	98.1	95.1	85.4	68.9	75.5	75.6	91.4	86.6	84.8	89.4	92.5	99.1	74.8	69.1
	Heatmap														
Each species	H_t18:0-h16:0	0	0	0	0	0	0	0.4	0.2	0.2	0.2	0	0	0	0
	H_t18:0-h20:0	0	0	0	1.9	0	0	0	0.5	0.2	0	0.1	0	0	0
	H_t18:0-h22:0	0.2	0	0.1	2.3	0.2	0.3	0.7	0.2	0.7	0.3	0.1	0	0.7	0.4
	H_t18:0-h22:1	0	0.1	0.1	0.2	0.9	0.2	0.4	0.5	0.3	0	0.1	0	0.4	0.3
	H_t18:0-h24:0	0.1	0.1	1.3	2.4	1	0.6	0.3	0.9	3.6	0.2	1.8	0	0.6	2.8
	H_t18:0-h24:1	0.1	0.1	0.2	0.6	0.6	1	0.5	0.8	1.1	3.5	0.2	0	1	0.7
	H_t18:0-h26:0	0	0	0.1	0.4	0	0.2	0	0	0	0	0.1	0	0	0.2
	H_t18:0-h26:1	0	0	0	0	0.3	0.1	0	0	0	0	0.1	0	0	0
	H_t18:1-h16:0	0	0	0	0	0	0	0.3	0.4	0.2	0.2	0	0	0	0.4
	H_t18:1-h20:0	0	0	0	1.9	0	0.2	0.2	0.1	0.2	0	0.2	0	0.1	0.2
	H_t18:1-h22:0	0.2	0.5	2.9	4.8	1.6	2.3	2.3	3.3	0.8	0.2	0.1	0.7	11	1.8
	H_t18:1-h22:1	0	0	0	0	0	0.6	0	0	0	0	0	0	0	0
	H_t18:1-h24:0	0.3	1.3	4.3	7.5	13.2	15.1	0.6	2.6	2.8	0.3	1.7	0	6.9	14.4
	H_t18:1-h24:1	0	0	0	0	0	0.1	0	0	0	2.7	0	0	0	0.1
	H_t18:1-h26:0	0	0	0	1.6	1	0.3	0.1	0.6	0.1	0.1	0.1	0	0.1	1.1
	H_t18:0-c16:0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0.1	0.4	0	0	0	0.1	0.1	0	0	0	0	0
	H_t18:0-c22:0	0	0.1	0.2	0.6	0	0	0.1	0	0.1	0.1	0	0	0.1	0.1
	H_t18:0-c22:1	0	0	0	0	0.1	0.1	0.1	0.1	0	0	0	0	0	0
	H_t18:0-c24:0	0	0.1	0	0.4	0.2	0.1	0.1	0.3	0.7	0	0.4	0	0.1	0.8
	H_t18:0-c24:1	0	0	0	0.1	0.2	0.2	0.1	0.1	0.2	1	0.1	0	0.3	0.1
	H_t18:1-c26:0	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0
	H_t18:1-c16:0	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0.1
	H_t18:1-c20:0	0	0	0	0.5	0	0	0.1	0	0	0	0	0	0	0
	H_t18:1-c22:0	0	0	0	1.1	0.4	0.5	0.5	0.6	0.2	0	0	0.2	1.3	0.3
	H_t18:1-c22:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	0.1	0.1	0	0.8	2.1	1.8	0.1	0.8	0.8	0.1	0.2	0	1.1	2.7
	H_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0.4	0	0	0	0
	H_t18:1-c26:0	0	0	0	0.4	0.1	0.1	0	0.2	0	0	0	0	0	0.2
	HH_t18:0-h22:0	0.2	0	0	0	0	0	0	0	0.2	0	0.3	0	0.2	0
	HH_t18:0-h24:0	0.3	0	0.1	0.9	0.2	0	0.4	0	0.9	0.1	1.3	0	0.3	2.5
	HH_t18:0-h24:1	0	0.1	0.1	0.2	0.2	0	0.1	0	0.3	0.7	0	0	0	0.2
	HH_t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0.2	0	0	0

Table S4. Molecular composition of C

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
HH_t18:1-h22:0	0.1	0	0	0.2	0.3	0.1	0.1	0.2	0.5	0	0	0	0.1	0.1
HH_t18:1-h24:0	0.2	0	0.1	1.4	1.4	0.1	0.8	0.1	0.5	0.2	0.2	0	0.5	0.8
HH_t18:1-h24:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
HH_t18:1-h26:0	0	0	0	0.2	0.2	0	0	0	0.1	0	0	0	0	0.2
HH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-c24:0	0	0.2	0.1	0	0	0	0	0	0.1	0	0.1	0	0	0.2
HH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-c26:0	0	0.2	0.1	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c24:0	0	0	0	0	0.1	0	0.1	0	0.1	0	0	0	0	0
HH_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h16:0	0	0	0.2	0	0	0	0.2	0.5	0.4	0.2	0	0	0	0.5
N_t18:0-h18:0	0	0	0.2	0.1	0	0	0.2	0	0	0	0.1	0	0	0.2
N_t18:0-h20:0	0.1	0	0.1	0.8	0.1	0.2	0.2	0.2	0.1	0	1.1	0	0.2	0.1
N_t18:0-h20:1	0	0	0	1.4	0.1	0.3	0	0.6	0.2	0	0.5	0	0.2	0.5
N_t18:0-h22:0	6.1	0.5	1.8	1.7	0.4	4.9	2.8	2	2.9	0.2	0.9	1.6	1.2	1
N_t18:0-h22:1	0.8	0	0	3.1	0.9	1.8	4.3	1.4	3.1	0.2	0.4	1.7	4.7	0.8
N_t18:0-h24:0	10.4	1.2	3.2	2.1	1.7	2.9	2.6	2.5	5.9	8.5	5.2	5.1	3	9.6
N_t18:0-h24:1	1.1	0.7	0	9	5.2	3	4.4	8.6	2.6	27.8	0.9	1.3	2.8	2.5
N_t18:0-h26:0	1.5	0	0.1	0.3	0.3	0.3	0	0.4	0.2	0.1	1.9	0.6	0.2	0.4
N_t18:0-h26:1	0.1	0	0	0.7	8	0.5	0.2	0.7	0.6	0.6	0.2	1.1	1.3	0.1
N_t18:1-h16:0	0	0	0.6	0	0	0	0.5	5	4	0.2	0	0	0.1	1.7
N_t18:1-h18:0	0	0	0.8	0.1	0	0	0.5	0.4	0.1	0	0	0.3	0.1	0.5
N_t18:1-h20:0	0.1	0	0.2	5.2	0.2	1.4	0.4	1.4	1	0	0.6	0	1	0.3
N_t18:1-h22:0	4.7	4.9	8.8	8	6	10.8	29.8	17.9	13.3	0.2	0.4	7	14.6	2.3
N_t18:1-h22:1	0	0	0	0.2	0.6	5.6	0	1.7	0.9	0	0	0	0.1	0.5
N_t18:1-h24:0	5.8	9.1	14.1	10.2	18.9	15.8	27.9	17.3	26.7	3.4	2.6	2.3	15	31.4
N_t18:1-h24:1	0	0	0	0.2	0.7	0.2	0.7	0.1	0.3	17	0	0	0	0.4
N_t18:1-h26:0	0.8	0.1	0.7	2.4	5.4	2.4	0.9	2.2	1.4	0.1	0.9	0.7	0.8	1.3
N_t18:1-h26:1	0	0	0	0	0	1.3	0	0	0	0.2	0	0	0	0.1
N_t18:0-c16:0	0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0	0.1
N_t18:0-c18:0	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1
N_t18:0-c20:0	0	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0
N_t18:0-c20:1	0	0	0	0.4	0	0.1	0	0.1	0	0	0.1	0	0.1	0.1
N_t18:0-c22:0	0.8	0.1	0.4	0.4	0.1	1.4	0.6	0.4	0.6	0	0.1	0.4	0.4	0.3
N_t18:0-c22:1	0.1	0	0	0.4	0.2	0.5	0.6	0.2	0.5	0	0.1	0.3	1.1	0.2
N_t18:0-c24:0	1.9	0.3	0.7	0.6	0.2	0.7	0.6	0.3	0.9	1.6	1.2	1.1	0.8	2.3

Table S4. Molecular composition of C

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
N_t18:0-c24:1	0.3	0.1	0	2.6	1.3	0.7	1.3	2.1	0.7	4.4	0.1	0.3	0.4	0.7
N_t18:0-c26:0	0.3	0	0	0.1	0	0.1	0	0.1	0.1	0	0.2	0.1	0	0.1
N_t18:0-c26:1	0	0	0	0.1	2	0.1	0	0.1	0.1	0.1	0	0.2	0.3	0
N_t18:1-c16:0	0	0	0.1	0	0	0	0.1	0.9	0.9	0	0	0	0	0.2
N_t18:1-c18:0	0	0	0.1	0	0	0	0.1	0.1	0	0	0	0	0	0.1
N_t18:1-c20:0	0	0	0	1.1	0	0.4	0.1	0.3	0.1	0	0.1	0	0.1	0
N_t18:1-c22:0	1.2	0.8	1.8	2.1	1.6	2.8	5.7	5	2.3	0	0	1.5	1.7	0.5
N_t18:1-c22:1	0	0	0	0.1	0.1	0.8	0	0.2	0.1	0	0	0	0	0.1
N_t18:1-c24:0	1.1	2.1	4.1	2.2	2.7	1.9	4.2	3.3	4	0.8	0.4	0.3	2.4	5.2
N_t18:1-c24:1	0	0	0	0	0.1	0	0.2	0	0.1	4	0	0	0	0.1
N_t18:1-c26:0	0.2	0	0.2	0.7	0.7	0.6	0.2	0.3	0.2	0	0.2	0.1	0.1	0.2
N_t18:1-c26:1	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0
NH_t18:0-h22:0	2.1	0.4	0.2	0	0.3	0.3	0	0	0.5	0.1	2.5	0	0	0
NH_t18:0-h22:1	0	0	0	0	0	0	0.1	0.3	0.6	0	0	0	0	0
NH_t18:0-h23:0	0.4	0.2	0.5	0	0.1	0.2	0	0	0	0	2.6	1.2	0.1	0
NH_t18:0-h24:0	23.5	3.5	2.4	0.7	1.2	2	0.1	0	0.5	3.3	25.4	3.9	1	1
NH_t18:0-h24:1	0.1	0.1	0	1	0	0.1	0	0.1	0	1.5	0.3	0	0	0.5
NH_t18:0-h25:0	0.8	0.3	1.1	0	0.1	0.1	0	0	0	0	5.4	1.1	0.1	0
NH_t18:0-h25:1	0	2.9	0.6	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-h26:0	1.8	0.1	0.2	0	0.6	0.3	0	0	0	0	9.9	1	0.2	0
NH_t18:0-h26:1	0.3	0.4	0.1	0	1.4	0.1	0	0	0	0.1	0.2	0	0.1	0
NH_t18:1-h22:0	1	4	0.1	0.9	1.4	1	0.1	0.2	2	0.2	0.4	1.1	0.2	0
NH_t18:1-h23:0	0.5	1.7	0.7	0.3	0.3	0.2	0	0.2	0.5	0	0.4	0.7	0.2	0.1
NH_t18:1-h24:0	13.4	24.9	6	3.3	6.9	3.7	0.3	1	4.5	2.3	7.7	2	1	1.8
NH_t18:1-h24:1	0	0	0	0	0.1	0	0	0	0	1.6	0	0	0	0
NH_t18:1-h25:0	0.5	2.1	2.1	0.3	0.6	0.2	0	0.1	0.4	0	2.1	2.3	0.2	0.1
NH_t18:1-h25:1	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0
NH_t18:1-h26:0	2.4	0.8	0.4	0.2	2.8	1.9	0	0	0.1	0	1.8	0	0.1	0.1
NH_t18:1-h26:1	0	0	0	0	0	0.2	0	0	0	0.1	0.1	0	0	0
NH_t18:0-c22:0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0	0
NH_t18:0-c24:0	2.2	0.1	0.2	0	0.1	0.2	0	0	0	0.1	1.9	0	0.1	0.1
NH_t18:0-c24:1	0	0	0	0.1	0	0	0	0	0	0.1	0	0	0	0
NH_t18:0-c25:0	0	0	0.1	0	0	0	0	0	0	0	0.3	0	0	0
NH_t18:0-c25:1	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0.1	0	0	0	0	0	0	0	0	0	0.7	0	0	0
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S4. Molecular composition of C

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
NH_t18:1-c22:0	0.1	0.4	0	0.1	0.1	0.1	0	0	0.1	0	0	0	0	0
NH_t18:1-c23:0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0	0
NH_t18:1-c24:0	1	0.1	0.1	0.2	0.4	0.1	0	0	0.3	0.1	0.6	0.1	0	0.1
NH_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NH_t18:1-c25:0	0	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0
NH_t18:1-c26:0	0.2	0	0	0	0.1	0.2	0	0	0	0	0.2	0	0	0
NAc_t18:0-h22:0	0.4	0.4	0.2	0.3	0	0.2	0.1	0.4	0	0.1	0.4	0.7	0.6	0
NAc_t18:0-h22:1	0.1	1.5	0.9	0	0.1	0.1	0	0	0	0	0	0.8	0.2	0
NAc_t18:0-h23:0	0.2	0	0.3	0	0	0	0	0.3	0	0.1	0.1	0	0.2	0
NAc_t18:0-h24:0	2	0.4	0.6	1	0	0.3	0.1	0.7	0.3	0.4	1.1	4.9	3.8	0.3
NAc_t18:0-h24:1	0.1	6.3	3.3	0	0.2	0.1	0	0.1	0	0.7	0.2	6	0.3	0
NAc_t18:0-h25:0	0.1	0	0.1	0	0	0	0	0.2	0	0	0.1	0.9	1	0
NAc_t18:0-h25:1	0.1	0.2	0.2	0	0	0	0	0	0	0.1	0	1.3	0.1	0
NAc_t18:0-h26:0	0.1	0	0	0.2	0	0	0	0	0	0	0.4	0.6	0.4	0
NAc_t18:1-h22:0	0.3	1.5	0.9	0.7	0.1	0.3	0.2	1.8	0.2	0.5	0	1.9	0.6	0
NAc_t18:1-h23:0	0.1	0.5	1.2	0	0	0	0.1	1.2	0	0.6	0	1.2	0.6	0
NAc_t18:1-h24:0	2.2	3.1	3.3	0.9	0.3	0.6	0.2	1.4	0.2	0.8	0.2	6	3.8	0.6
NAc_t18:1-h24:1	0	0	0	0	0	0	0	0	0	2.5	0	0	0	0
NAc_t18:1-h25:0	0.2	0.1	0.1	0.4	0	0	0	0.2	0	0.1	0	1.3	0.9	0
NAc_t18:1-h26:0	0.1	0.1	0.2	0	0.1	0.1	0	0	0	0.2	0	0	0.5	0
NAc_t18:0-c22:0	0.1	0.1	0	0	0	0	0	0.1	0	0	0.1	0.1	0.2	0
NAc_t18:0-c22:1	0	0.3	0.3	0	0	0	0	0	0	0	0	0.2	0.1	0
NAc_t18:0-c23:0	0	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0
NAc_t18:0-c24:0	0.3	0.1	0.1	0.2	0	0	0	0.1	0.1	0.1	0.1	0.9	1.1	0.1
NAc_t18:0-c24:1	0	1.6	0.5	0	0	0	0	0	0	0.1	0	1.2	0.1	0
NAc_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.1	0
NAc_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0
NAc_t18:0-c26:0	0	0	0	0.1	0	0	0	0	0	0	0.1	0.1	0.1	0
NAc_t18:1-c22:0	0.1	0.4	0.1	0.2	0	0	0	0.4	0	0.1	0	0.4	0.1	0
NAc_t18:1-c23:0	0	0.1	0.1	0	0	0	0	0.3	0	0.2	0	0.2	0.1	0
NAc_t18:1-c24:0	0.4	0.9	0.4	0.2	0.1	0.1	0.1	0.4	0	0.2	0	0.7	1.1	0.1
NAc_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0.3	0	0	0	0
NAc_t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.2	0
NAc_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NAcH_t18:0-h22:0	0.1	0.1	0.1	0	0	0	0	0	0	0	0.4	1.7	0	0
NAcH_t18:0-h23:0	0.1	0	0	0	0	0	0	0	0	0	0.3	2	0.2	0
NAcH_t18:0-h24:0	0.6	0.8	1.3	0	0	0	0	0	0	0.3	3.1	12.7	0.8	0
NAcH_t18:0-h25:0	0.2	0	0.1	0	0	0	0	0	0	0	0.2	0.9	0.1	0

Table S4. Molecular composition of C

Plant #	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Name	Sensitive plant	Soybean	Lotus japonicus	Drummond's phlox	Fairy primrose	Balloon flower	Sunflower	Carrot	Pincushion flower	Alpine forget-me-not	Tweedia	Lisianthus	Snapdragon	Scarlet sage
NAcH_t18:0-h26:0	0.1	0	0	0	0	0	0	0	0	0	1	0	0.2	0
NAcH_t18:1-h22:0	0	1.1	0.1	0	0	0.1	0	0	0	0	0.1	1.2	0.3	0
NAcH_t18:1-h23:0	0.1	0.2	0.2	0	0	0	0.1	0	0	0	0.1	2.5	0.1	0
NAcH_t18:1-h24:0	0.4	9.7	2.1	0.5	0.2	0	0.2	0	0	0.2	0.3	5.6	0.6	0
NAcH_t18:1-h25:0	0.5	0.6	0.5	0	0	0	0	0	0	0	0	1.4	0	0
NAcH_t18:1-h26:0	0.1	0.2	0.1	0	0	0	0	0	0	0	0	1	0.2	0

Table S4. Molecular composition of C

	Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
	Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
Total	Hex-GIPC	42.1	0.8	1.9	25.8	30.6	0.5	3.7	23.9	3.6	5.3	0	0	0	0
	HexN(Ac)-GIPC	57.9	99.2	98.1	74.2	69.4	99.5	96.3	76.1	96.4	94.7	100	100	100	100
	Heatmap														
Each species	H_t18:0-h16:0	0	0	0	3.4	0.1	0	0	0	0	0	0	0	0	0
	H_t18:0-h20:0	0.4	0	0	0.1	0	0	0	0.1	0	0	0	0	0	0
	H_t18:0-h22:0	14.5	0	0	0.4	0.1	0	0.1	2.3	0.2	0.2	0	0	0	0
	H_t18:0-h22:1	0.2	0	0	0.2	0.3	0	0.1	0.1	0.2	0.2	0	0	0	0
	H_t18:0-h24:0	8.9	0.1	0	2.7	1.4	0	0.1	3.8	0.2	0.3	0	0	0	0
	H_t18:0-h24:1	1	0.1	0	0.6	0.9	0	0.3	0.1	0.3	0.2	0	0	0	0
	H_t18:0-h26:0	0.2	0	0	0.1	0	0	0	0	0	0	0	0	0	0
	H_t18:0-h26:1	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0
	H_t18:1-h16:0	0	0	0	2	0.9	0	0	0	0	0	0	0	0	0
	H_t18:1-h20:0	0	0	0	0.2	0.3	0	0	0.1	0	0	0	0	0	0
	H_t18:1-h22:0	4.5	0.2	0	1.8	2.4	0.1	0.1	5.2	0.9	1.1	0	0	0	0
	H_t18:1-h22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-h24:0	3.5	0.1	0	8.1	14.6	0.3	1.5	4.8	0.4	0.3	0	0	0	0
	H_t18:1-h24:1	0	0	0	0.4	0	0	0	0	0	0	0	0	0	0
	H_t18:1-h26:0	0.6	0	0	0.4	0.1	0	0	0.1	0	0	0	0	0	0
	H_t18:0-c16:0	0	0	0	0.8	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c22:0	2.9	0	0.2	0.1	0	0	0	0.6	0	0	0	0	0	0
	H_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:0-c24:0	1.5	0	0.3	0.6	0.4	0	0	0.8	0	0	0	0	0	0
	H_t18:0-c24:1	0.1	0	0	0.1	0.2	0	0.1	0	0	0.1	0	0	0	0
	H_t18:1-c26:0	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c16:0	0	0	0	0.3	0.2	0	0	0	0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c22:0	1	0	0	0.4	0.5	0	0	0.9	0.2	0.2	0	0	0	0
	H_t18:1-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c24:0	1	0	0	1.2	2.5	0.1	0.2	0.8	0.1	0.1	0	0	0	0
	H_t18:1-c24:1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
	H_t18:1-c26:0	0.2	0	0	0.1	0	0	0	0	0	0	0	0	0	0
	HH_t18:0-h22:0	0.1	0	0	0	0	0	0	0.1	0	0.3	0	0	0	0
	HH_t18:0-h24:0	0.7	0.1	0	0.6	0.7	0	0.3	2.1	0.1	0.7	0	0	0	0
	HH_t18:0-h24:1	0	0	0	0.3	0.5	0	0.2	0.1	0	0.3	0	0	0	0
	HH_t18:0-h26:0	0.1	0	0	0	0	0	0	0.1	0	0	0	0	0	0

Table S4. Molecular composition of C

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
HH_t18:1-h22:0	0.1	0	0	0.1	0.2	0	0	0.1	0.5	0.2	0	0	0	0
HH_t18:1-h24:0	0.2	0	0	0.3	2.9	0	0.6	1.1	0.4	0.8	0	0	0	0
HH_t18:1-h24:1	0	0	0	0.1	0	0	0	0	0	0	0	0	0	0
HH_t18:1-h26:0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0
HH_t18:0-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-c24:0	0	0	0	0.1	0.1	0	0	0.2	0	0	0	0	0	0
HH_t18:0-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c22:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c24:0	0	0	0	0	0.2	0	0	0.1	0	0.1	0	0	0	0
HH_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HH_t18:1-c26:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N_t18:0-h16:0	0	0.1	0	5.9	0.4	0.2	0.1	0	0.1	0.1	0	0	0	0
N_t18:0-h18:0	0	0	0	0.3	0.2	0	0	0.1	0	0	0.7	0	0	0
N_t18:0-h20:0	0	0.2	0	0.1	0	0.4	0.1	0.5	0.4	0.1	0.5	0	0.1	0
N_t18:0-h20:1	0	0.1	0	0.3	0.1	0.7	0.1	0.1	0.8	0.3	0	0	0	0
N_t18:0-h22:0	0.7	9.7	0.8	1.9	0.4	4	0.3	8	3.7	6.9	3	0.2	1.4	1.4
N_t18:0-h22:1	1.2	1.4	0	0.4	0.3	5.4	0.6	0.2	2.9	2.9	0	0.3	0	0.8
N_t18:0-h24:0	2.5	14.7	4.2	7.2	2.1	3.4	1.7	8.5	6.5	5.3	8.4	0.2	1.8	4
N_t18:0-h24:1	7	4	0	0.4	0	2.6	4.8	1.7	6.5	3.3	2.3	0.2	2.6	2.5
N_t18:0-h26:0	0.2	1.9	0.6	0.6	0.1	0.1	0	0.2	0.9	0.3	0	0	0	0.4
N_t18:0-h26:1	0.6	0.4	0	0.5	1.1	0.7	0	0.2	3.7	0.2	0	0	0	0.9
N_t18:1-h16:0	0	0.1	0.1	3.3	0.8	1.2	0.3	0	0.1	0.1	0	0	0	0
N_t18:1-h18:0	0	0.1	0	0.4	1.3	0.1	0.1	0.2	0	0.1	0	0	0	0
N_t18:1-h20:0	0.1	0.1	0.1	0.4	0.1	1.7	0.1	0.3	0.6	0.9	0.4	0	0	0
N_t18:1-h22:0	4.9	6.7	15	3.4	3.4	16.3	2.5	7.3	13.9	13.4	0.8	0.3	0.4	2.7
N_t18:1-h22:1	0	0	0	0.1	1.5	0	0	0	0	0.2	0	0	0	0
N_t18:1-h24:0	16.9	14	17.1	14.7	20.7	14.1	9.7	9	26.4	13.2	2.6	0.2	1.9	3.9
N_t18:1-h24:1	0	0	0	1.3	0.7	0	0.2	0	0	2.9	1	0	0.2	0
N_t18:1-h26:0	1.7	2.4	2.7	1.1	0.8	0.5	0.8	0.4	5.2	1.6	0	0	0	0.6
N_t18:1-h26:1	0	0	0	0	0	0	0	0	0	0.2	0	0	0	0
N_t18:0-c16:0	0	0	0	1.4	0.1	0	0	0	0	0	0	0	0	0
N_t18:0-c18:0	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0.1	0
N_t18:0-c20:0	0	0	0	0	0	0.1	0	0.1	0.1	0	0.1	0	0.1	0
N_t18:0-c20:1	0	0	0	0.1	0	0.2	0	0	0.2	0.1	0	0	0	0
N_t18:0-c22:0	0.1	1.8	0.2	0.3	0.1	0.7	0	1.3	0.6	1.1	0.7	0.1	0.1	0.1
N_t18:0-c22:1	0.3	0.2	0	0.1	0.1	0.9	0.2	0	0.5	0.6	0	0.1	0	0.2
N_t18:0-c24:0	0.7	1.9	0.8	1.3	0.5	0.7	0.2	1	0.9	1	2.1	0.1	0.2	0.7

Table S4. Molecular composition of C

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
N_t18:0-c24:1	0.8	1.1	0	0.1	0	0.4	1.2	0.2	1.5	0.5	0.5	0	0.1	0.4
N_t18:0-c26:0	0	0.4	0.1	0.1	0	0	0	0.1	0.1	0	0	0	0	0.1
N_t18:0-c26:1	0.1	0.1	0	0.1	0.1	0.1	0	0.1	0.7	0	0	0	0	0.2
N_t18:1-c16:0	0	0	0	0.6	0.2	0.3	0.1	0	0	0	0	0	0	0
N_t18:1-c18:0	0	0	0	0.1	0.3	0	0	0	0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0.1	0	0.2	0	0.1	0.1	0.2	0.1	0	0	0
N_t18:1-c22:0	1	1.2	3.6	0.6	0.9	3.4	0.3	1.6	2.7	2.7	0.2	0	0	0.5
N_t18:1-c22:1	0	0	0	0	0.2	0	0	0	0	0	0	0	0	0
N_t18:1-c24:0	2.7	4.2	4.9	3.9	3.5	3.5	2.9	1.9	5.1	3	0.8	0.1	0.1	0.8
N_t18:1-c24:1	0	0	0	0.3	0.1	0	0	0	0	0.7	0.3	0	0	0
N_t18:1-c26:0	0.4	0.5	0.4	0.2	0.1	0.1	0.1	0.1	1.1	0.2	0	0	0	0.1
N_t18:1-c26:1	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0
NH_t18:0-h22:0	0	0.9	0	0	0	1	0.3	0	0.1	0.3	3.1	2	2.3	3.2
NH_t18:0-h22:1	0.1	0	0	0.1	0	0	0	0.1	0.2	0.4	0	0	0.1	0
NH_t18:0-h23:0	0	0.1	0	0	0.1	0.3	0.2	0.1	0	0.4	3.4	2.1	1.8	2.4
NH_t18:0-h24:0	0.1	2.6	0.2	0.1	1	2.3	4.6	1.1	0.2	1.9	41.4	4.9	23.1	13.3
NH_t18:0-h24:1	0.2	0.4	0.9	0.1	0	0	0	0	0	0.5	1.2	0	1	0
NH_t18:0-h25:0	0	0.3	0.1	0	0	0.2	0.3	0.1	0	0.1	2.5	0.6	1.8	1.7
NH_t18:0-h25:1	0	0	0.1	0	0	0	0	0	0	0	1.5	0	0.4	0
NH_t18:0-h26:0	0	0.4	0	0	0.1	0.1	0.2	0.1	0	0	1.6	0.3	0.6	1.3
NH_t18:0-h26:1	0	0.1	0.1	0	0	0.2	0.6	0	0	0	0	0	0.3	0.6
NH_t18:1-h22:0	0	0.9	0.1	0	0.1	1.4	1.2	0.1	0.1	1	0	4.6	0.3	3.3
NH_t18:1-h23:0	0	0.2	0	0	0.2	0.6	3.2	0	0	1.6	1.4	8.7	0.5	2
NH_t18:1-h24:0	0.5	2.4	0.7	0.2	3.4	4.3	43.1	0.7	0.6	7.5	5.1	20.2	8.4	10
NH_t18:1-h24:1	0	0	0	0	0.1	0	0.1	0	0	0.1	0	0	0.4	0
NH_t18:1-h25:0	0	0.4	0.1	0	0.1	0.9	2.3	0.1	0	0.3	1.4	1.6	0.9	1.8
NH_t18:1-h25:1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0
NH_t18:1-h26:0	0	0.9	0	0	0.1	0.6	2.6	0.1	0	0.1	0	0.5	0.2	0.6
NH_t18:1-h26:1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0
NH_t18:0-c22:0	0	0	0	0	0	0.1	0	0	0	0	0.1	0	2.6	1.1
NH_t18:0-c22:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c23:0	0	0	0	0	0	0	0	0	0	0	0.3	0	1	0.7
NH_t18:0-c24:0	0	0.2	0	0	0.1	0.2	0	0	0	0.2	2.8	0.3	10.8	5
NH_t18:0-c24:1	0	0	0.1	0	0	0	0	0	0	0	0	0	0.6	0
NH_t18:0-c25:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.4	0.5
NH_t18:0-c25:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NH_t18:0-c26:0	0	0	0	0	0	0	0	0	0	0	0.1	0	0.8	0.5
NH_t18:0-c26:1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.2

Table S4. Molecular composition of C

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
NH_t18:1-c22:0	0	0.1	0	0	0	0.1	0.1	0	0	0.1	0	0.4	0.8	0.1
NH_t18:1-c23:0	0	0	0	0	0	0	0.1	0	0	0.1	0.1	0.4	0.3	0
NH_t18:1-c24:0	0	0	0.1	0	0.2	0.4	1.1	0	0	0.4	0.1	0.3	5.1	0.3
NH_t18:1-c24:1	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0
NH_t18:1-c25:0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0
NH_t18:1-c26:0	0	0.1	0	0	0	0	0.1	0	0	0	0	0	0.3	0
NAc_t18:0-h22:0	0.8	1.3	0.3	0.8	0.2	2	0.1	1	0.8	1.7	0.7	1.4	0.1	1
NAc_t18:0-h22:1	0.1	0.1	1.6	0.1	0.1	0.3	0.1	0.5	0	0.1	0	1.1	0	0.4
NAc_t18:0-h23:0	0.5	0.2	0.1	0.4	0.2	0.2	0	0.2	0	0.7	0	0.4	0.4	0.6
NAc_t18:0-h24:0	1.4	6.5	0.9	3.6	1.4	1.4	0.3	3	1.6	1.4	1.2	2.6	4	2.4
NAc_t18:0-h24:1	0.6	0.6	8.9	0.9	1	0.7	1.6	2.4	0.4	0	0	4.3	2.3	1
NAc_t18:0-h25:0	0	0.5	0.1	0.3	0.1	0	0	0.1	0	0.1	0	0.4	0.2	0.2
NAc_t18:0-h25:1	0	0	0.6	0	0.2	0.1	0.1	0.1	0	0.1	0	1	0	0.3
NAc_t18:0-h26:0	0.2	0.2	0	0.7	0.1	0	0	0.1	0.2	0	0	0	0.2	0
NAc_t18:1-h22:0	0.6	0.9	1.6	1.1	1.4	6.3	0.3	2	1.3	2.8	0	1.1	0.1	4
NAc_t18:1-h23:0	2.1	0.4	2	0.8	1.7	0.9	0.1	2.1	0.3	1.4	0	1.8	0.1	1.1
NAc_t18:1-h24:0	5	6.1	8.9	4.4	9.1	4.1	2	9	2.8	1.7	0	4.3	2.3	5.3
NAc_t18:1-h24:1	0	0	0	2.1	0	0	0	0	0	2	0	0	0.1	0
NAc_t18:1-h25:0	0.5	0.3	0.6	1.4	1.4	0.2	0.1	0.1	0	0.2	0	1	0	0.8
NAc_t18:1-h26:0	0.6	0.6	0.5	0.7	0.3	0.3	0	0.1	0.6	0.2	0	0	0	0.4
NAc_t18:0-c22:0	0.2	0.3	0	0.1	0	0.2	0	0.1	0.1	0.2	0.1	0.2	0.2	0.3
NAc_t18:0-c22:1	0	0	0.4	0	0	0.1	0	0.1	0	0	0	0.3	0	0.1
NAc_t18:0-c23:0	0.1	0.1	0	0	0	0	0	0	0	0.1	0	0.1	0.2	0.1
NAc_t18:0-c24:0	0.2	1.1	0.2	0.9	0.3	0.2	0.1	0.8	0.4	0.3	0.3	0.8	0.8	0.4
NAc_t18:0-c24:1	0.1	0.1	2	0.3	0.1	0.1	0.3	0.7	0.1	0	0	0.9	0.5	0.3
NAc_t18:0-c25:0	0	0.1	0	0	0	0	0	0	0	0	0	0.1	0.2	0.1
NAc_t18:0-c25:1	0	0	0.1	0	0	0	0	0	0	0	0	0.2	0	0.1
NAc_t18:0-c26:0	0	0.1	0	0.1	0	0	0	0	0	0	0	0	0.1	0
NAc_t18:1-c22:0	0.1	0.3	0.5	0.2	0.2	0.9	0.1	0.4	0.3	0.3	0	0.2	0	1
NAc_t18:1-c23:0	0.4	0	0.4	0.2	0.3	0.2	0	0.3	0.1	0.4	0	0.2	0	0.2
NAc_t18:1-c24:0	0.6	0.8	1.7	0.5	2.1	1	0.4	1.9	0.4	0.3	0	1.2	0.5	1.4
NAc_t18:1-c24:1	0	0	0	0.2	0	0	0	0	0	0.5	0	0	0	0
NAc_t18:1-c25:0	0.1	0.1	0.1	0.3	0.3	0	0	0	0	0	0	0.1	0	0.2
NAc_t18:1-c26:0	0.1	0.2	0.1	0.1	0	0	0	0	0.1	0	0	0	0	0.1
NAcH_t18:0-h22:0	0	0.1	0	0	0	0.7	0	0.1	0	0	0	1.8	0	1.6
NAcH_t18:0-h23:0	0	0	0	0	0	0.2	0	0.1	0	0.1	0	2.3	0	0.3
NAcH_t18:0-h24:0	0	0.3	0	0	0.2	1.1	0.3	1.7	0	0.4	1.9	6	4.9	2.3
NAcH_t18:0-h25:0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.3	0.3

Table S4. Molecular composition of C

Plant #	43	44	45	46	47	48	49	50	51	52	53	54	55	56
Name	Garden verbena	Bentham's tobacco	Tomato	Chinese delphinium	Hybrid columbine	California poppy	Fringed pink	Four o'clock flower	Cockscomb	Kochia	Asparagus	Leek	Hare's-tail grass	Oat
NAcH_t18:0-h26:0	0	0	0	0	0	0	0	0	0	0	0	0.2	0	0.3
NAcH_t18:1-h22:0	0	0.1	0	0	0.1	0.7	0	0.2	0	0.1	0	1.1	0.1	0.4
NAcH_t18:1-h23:0	0	0.1	0	0	0	0.3	0.1	0.1	0	0.2	0	5.8	0	1.1
NAcH_t18:1-h24:0	0.2	0.4	0.1	0	1.6	1.3	3.3	2.6	0.3	1.5	0.8	8.2	1.5	2.6
NAcH_t18:1-h25:0	0	0	0	0	0	0.1	0.1	0.1	0	0	0	0.6	0.1	0
NAcH_t18:1-h26:0	0	0.1	0	0	0	0	0.1	0.1	0	0	0	0.2	0.1	0

Table S4. Molecular composition of C

	Plant #	57	58	59	60	61
	Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
Total	Hex-GIPC	0	0	0	0	0
	HexN(Ac)-GIPC	100	100	100	100	100
	Heatmap					
Each species	H_t18:0-h16:0	0	0	0	0	0
	H_t18:0-h20:0	0	0	0	0	0
	H_t18:0-h22:0	0	0	0	0	0
	H_t18:0-h22:1	0	0	0	0	0
	H_t18:0-h24:0	0	0	0	0	0
	H_t18:0-h24:1	0	0	0	0	0
	H_t18:0-h26:0	0	0	0	0	0
	H_t18:0-h26:1	0	0	0	0	0
	H_t18:1-h16:0	0	0	0	0	0
	H_t18:1-h20:0	0	0	0	0	0
	H_t18:1-h22:0	0	0	0	0	0
	H_t18:1-h22:1	0	0	0	0	0
	H_t18:1-h24:0	0	0	0	0	0
	H_t18:1-h24:1	0	0	0	0	0
	H_t18:1-h26:0	0	0	0	0	0
	H_t18:0-c16:0	0	0	0	0	0
	H_t18:0-c20:0	0	0	0	0	0
	H_t18:0-c22:0	0	0	0	0	0
	H_t18:0-c22:1	0	0	0	0	0
	H_t18:0-c24:0	0	0	0	0	0
	H_t18:0-c24:1	0	0	0	0	0
	H_t18:1-c26:0	0	0	0	0	0
	H_t18:1-c26:1	0	0	0	0	0
	H_t18:1-c16:0	0	0	0	0	0
	H_t18:1-c20:0	0	0	0	0	0
	H_t18:1-c22:0	0	0	0	0	0
	H_t18:1-c22:1	0	0	0	0	0
	H_t18:1-c24:0	0	0	0	0	0
	H_t18:1-c24:1	0	0	0	0	0
	H_t18:1-c26:0	0	0	0	0	0
	HH_t18:0-h22:0	0	0	0	0	0
	HH_t18:0-h24:0	0	0	0	0	0
	HH_t18:0-h24:1	0	0	0	0	0
	HH_t18:0-h26:0	0	0	0	0	0

Table S4. Molecular composition of C

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
HH_t18:1-h22:0	0	0	0	0	0
HH_t18:1-h24:0	0	0	0	0	0
HH_t18:1-h24:1	0	0	0	0	0
HH_t18:1-h26:0	0	0	0	0	0
HH_t18:0-c22:0	0	0	0	0	0
HH_t18:0-c24:0	0	0	0	0	0
HH_t18:0-c24:1	0	0	0	0	0
HH_t18:0-c26:0	0	0	0	0	0
HH_t18:1-c22:0	0	0	0	0	0
HH_t18:1-c24:0	0	0	0	0	0
HH_t18:1-c24:1	0	0	0	0	0
HH_t18:1-c26:0	0	0	0	0	0
N_t18:0-h16:0	0	0	0	0	0
N_t18:0-h18:0	0	0	0	0	0
N_t18:0-h20:0	1	0	1	0	0
N_t18:0-h20:1	0	0	0	0	0
N_t18:0-h22:0	2.7	1	0.4	0.2	0
N_t18:0-h22:1	0	0	0	0	0
N_t18:0-h24:0	10.9	2.7	0.9	1.3	0
N_t18:0-h24:1	3.9	2.2	0	0	0
N_t18:0-h26:0	0	0	0	0.2	0
N_t18:0-h26:1	0	0	0	0	0
N_t18:1-h16:0	0	0	0	0	0
N_t18:1-h18:0	0	0	0	0	0
N_t18:1-h20:0	0	0	0	0	0
N_t18:1-h22:0	0.7	0	0	0	0
N_t18:1-h22:1	0	0	0	0	0
N_t18:1-h24:0	0.8	0.3	0	0	0
N_t18:1-h24:1	2.4	0	0	0	0
N_t18:1-h26:0	0	0	0	0	0
N_t18:1-h26:1	0	0	0	0	0
N_t18:0-c16:0	0	0	0	0	0
N_t18:0-c18:0	0	0	0	0	0
N_t18:0-c20:0	0.2	0	0.2	0	0
N_t18:0-c20:1	0	0	0	0	0
N_t18:0-c22:0	0.5	0.3	0.1	0	0
N_t18:0-c22:1	0	0	0	0	0
N_t18:0-c24:0	2.2	0.5	0.1	0.1	0

Table S4. Molecular composition of C

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
N_t18:0-c24:1	1.1	0.4	0	0	0
N_t18:0-c26:0	0	0	0	0	0
N_t18:0-c26:1	0	0	0	0	0
N_t18:1-c16:0	0	0	0	0	0
N_t18:1-c18:0	0	0	0	0	0
N_t18:1-c20:0	0	0	0	0	0
N_t18:1-c22:0	0.2	0	0	0	0
N_t18:1-c22:1	0	0	0	0	0
N_t18:1-c24:0	0.2	0.1	0	0	0
N_t18:1-c24:1	0.7	0	0	0	0
N_t18:1-c26:0	0	0	0	0	0
N_t18:1-c26:1	0	0	0	0	0
NH_t18:0-h22:0	0	0.7	5.5	1.7	0
NH_t18:0-h22:1	0	0	0	0	0
NH_t18:0-h23:0	0	5.6	2.1	2.1	0
NH_t18:0-h24:0	26.6	40.2	52.6	49.1	0
NH_t18:0-h24:1	1.3	3.2	0	0	3.9
NH_t18:0-h25:0	1.8	5	3.9	3.3	12
NH_t18:0-h25:1	1.2	4.3	0	0	2.5
NH_t18:0-h26:0	1.3	1.9	2.5	6.4	9.5
NH_t18:0-h26:1	0	3.6	0	0.1	1
NH_t18:1-h22:0	0	0	0	0	0
NH_t18:1-h23:0	0.8	0	0	0.1	0.9
NH_t18:1-h24:0	8.7	2.1	0.6	1	6.4
NH_t18:1-h24:1	0	0	0	0	0
NH_t18:1-h25:0	0	0	0	0.1	0.8
NH_t18:1-h25:1	0	0	0	0	0.7
NH_t18:1-h26:0	0	0	0	0.1	0
NH_t18:1-h26:1	0	0	0	0	0
NH_t18:0-c22:0	0	0.3	2.2	0.5	5.5
NH_t18:0-c22:1	0	0	0	0	0
NH_t18:0-c23:0	0	1.8	0.7	0.7	4.5
NH_t18:0-c24:0	8.3	12.2	18.6	16	32.4
NH_t18:0-c24:1	0.5	1	0	0	1.4
NH_t18:0-c25:0	0.7	1.7	1.4	1.3	3.8
NH_t18:0-c25:1	0.4	1.3	0	0	0.9
NH_t18:0-c26:0	0.5	0.6	0.7	2.2	3
NH_t18:0-c26:1	0	1.3	0	0	0.4

Table S4. Molecular composition of C

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
NH_t18:1-c22:0	0	0	0	0	0
NH_t18:1-c23:0	0	0	0	0	0
NH_t18:1-c24:0	0.4	0	0	0	0.1
NH_t18:1-c24:1	0	0	0	0	0
NH_t18:1-c25:0	0	0	0	0	0
NH_t18:1-c26:0	0	0	0	0	0
NAc_t18:0-h22:0	1.6	0	0	0.2	0
NAc_t18:0-h22:1	0	0	0	0	0
NAc_t18:0-h23:0	1.1	0	0	0.1	0
NAc_t18:0-h24:0	2.3	0.9	0.6	3.2	1.5
NAc_t18:0-h24:1	1.7	0	0	0.2	0
NAc_t18:0-h25:0	0	0	0	0.1	0
NAc_t18:0-h25:1	0	0	0	0	0
NAc_t18:0-h26:0	0	0	0	0.4	0
NAc_t18:1-h22:0	0	0	0	0	0
NAc_t18:1-h23:0	0	0	0	0	0
NAc_t18:1-h24:0	1.7	0	0	0.2	0
NAc_t18:1-h24:1	0	0	0	0	0
NAc_t18:1-h25:0	0	0	0	0	0
NAc_t18:1-h26:0	0	0	0	0	0
NAc_t18:0-c22:0	0.4	0	0	0.1	0
NAc_t18:0-c22:1	0	0	0	0	0
NAc_t18:0-c23:0	0.2	0	0	0	0
NAc_t18:0-c24:0	0.4	0.1	0.1	0.5	0.2
NAc_t18:0-c24:1	0.3	0	0	0.1	0
NAc_t18:0-c25:0	0	0	0	0	0
NAc_t18:0-c25:1	0	0	0	0	0
NAc_t18:0-c26:0	0	0	0	0.1	0
NAc_t18:1-c22:0	0	0	0	0	0
NAc_t18:1-c23:0	0	0	0	0	0
NAc_t18:1-c24:0	0.2	0	0	0	0
NAc_t18:1-c24:1	0	0	0	0	0
NAc_t18:1-c25:0	0	0	0	0	0
NAc_t18:1-c26:0	0	0	0	0	0
NAcH_t18:0-h22:0	2.2	0	0.6	0.6	0.9
NAcH_t18:0-h23:0	1.3	0	0.8	0.1	1
NAcH_t18:0-h24:0	4.6	4.5	2.3	5.9	5.7
NAcH_t18:0-h25:0	0	0	0	0.3	0

Table S4. Molecular composition of C

Plant #	57	58	59	60	61
Name	Brachypodium	Rice	Maize	Wheat	Kentucky bluegrass
NAcH_t18:0-h26:0	0	0	0	0.6	0
NAcH_t18:1-h22:0	0	0	0	0	0
NAcH_t18:1-h23:0	0	0	0	0	0
NAcH_t18:1-h24:0	2.1	0	0	0.2	0.6
NAcH_t18:1-h25:0	0	0	0	0	0
NAcH_t18:1-h26:0	0	0	0	0	0