Supporting Information Table S1 Metabolite markers identified in leaves of *Cirsium arvense* infected with the endophyte *C. cochlioides*

Metabolite number	Retention time	*m/z* observed ion	Ion species	Formula of ion	*m/z* calculated ion	ppm difference	*m/z* fragment ions	Formula of fragment	*m/z* calculated ion	ppm difference	Identity of metabolite
I	3.99	351.2149	M+Na	$C_{18}H_{32}O_5Na$	351.2147	0.6					9,12,13-trihydroxyoctadecadienoic acid (9,12,13-TriHODE)
	3.99	327.2152	M-H	$C_{18}H_{31}O_5$	327.2171	-5.8	171.1020 183.1387 211.1332 229.1445	$C_9H_{15}O_3$ $C_{11}H_{19}O_2$ $C_{12}H_{19}O_3$ $C_{12}H_{21}O_4$	171.1021 183.1385 211.1334 229.1440	-0.6 1.1 -0.9 2.1	
II	4.23	353.2308	M+Na	$C_{18}H_{34}O_5Na$	353.2305	1.1					9,12,13-trihydroxyoctadecenoic acid (9,12,13-TriHOME)
	4.23	329.2315	M-H*	$C_{18}H_{33}O_5$	329.2328	-3.9	171.1020 183.1387 211.1335 229.1445	$C_9H_{15}O_3$ $C_{11}H_{19}O_2$ $C_{12}H_{19}O_3$ $C_{12}H_{21}O_4$	171.1021 183.1385 211.1334 229.1440	-0.6 1.1 0.4 2.1	
III	8.52	731.4340	M+Na	$C_{39}H_{64}O_{11}Na$	731.4346	-0.8					dihydrojasmonic/octadecatrienoic acid ester of monogalactosyldiacylglycerol (MGDG dihydroJA/18:3)
	8.52	707.4334	M-H	$C_{39}H_{63}O_{11}$	707.4370	-5.1	167.1440 179.0560 211.1338 253.0925 277.2162 447.2231 513.3069	$C_{11}H_{19}O$ $C_6H_{11}O_6$ $C_{12}H_{19}O_3$ $C_9H_{17}O_8$ $C_{18}H_{29}O_2$ $C_{21}H_{35}O_{10}$ $C_{27}H_{45}O_9$	167.1436 179.0556 211.1334 253.0923 277.2168 447.2230 513.3064	2.3 2.2 1.8 0.8 -2.1 0.2 1.0	
IV	4.30	462.2852	M+H	$C_{26}H_{40}NO_6$	462.2856	-0.8	164.0712 274.1809 302.1759 320.1861	$C_9H_{10}NO_2$ $C_{17}H_{24}NO_2$ $C_{18}H_{24}NO_3$ $C_{18}H_{26}NO_4$	164.0712 274.1807 302.1756 320.1862	0.0 0.7 0.9 -0.3	unidentified metabolite
V	4.60	713.3348	M+Na	$C_{33}H_{54}O_{15}Na$	713.3360	-1.6	349.2378	$C_{21}H_{33}O_4$	349.2379	-0.2	oxophytodienoic acid ester of digalactosylmonoacylglycerol (DGMG OPDA/H)
	4.60	689.3381	M-H	$C_{33}H_{53}O_{15}$	689.3384	-0.4	165.1287 291.1958 415.1453	$C_{11}H_{17}O$ $C_{18}H_{27}O_3$ $C_{15}H_{27}O_{13}$	165.1279 291.1960 415.1452	4.8 -0.6 0.2	
VI	5.05	551.2803	M+Na	$C_{27}H_{44}O_{10}Na$	551.2832	-5.2	349.2375	$C_{21}H_{33}O_4$	349.2379	-1.1	oxophytodienoic acid ester of monogalactosylmonoacylglycerol (MGMG OPDA/H)
	5.05	527.2857	M-H	$C_{27}H_{43}O_{10}$			165.1281 181.1226 247.2067 253.0921 291.1960	$C_{11}H_{17}O$ $C_{11}H_{17}O_2$ $C_{17}H_{27}O$ $C_9H_{17}O_8$ $C_{18}H_{27}O_3$	165.1279 181.1229 247.2062 253.0923 291.1960	1.2 -1.6 0.2 -0.7 0.0	
VII	8.73	991.5542	M+Na	$C_{51}H_{84}O_{17}Na$	991.5606	-6.4					oxophytoenoic acid ester of digalactosyldiacylglycerol (DGDG dihydroOPDA/dihydroOPDA)
	8.73	967.5612	M-H*	$C_{51}H_{83}O_{17}$	967.5630	-1.8	167.1442 293.2123 397.1345	$C_{11}H_{19}O$ $C_{18}H_{29}O_3$ $C_{15}H_{25}O_{12}$	167.1436 293.2117 397.1346	3.5 0.2 -0.2	

							415.1449 691.3550	$C_{15}H_{27}O_{13}$ $C_{33}H_{55}O_{15}$	415.1452 691.3541	-0.7 1.3	
VIII	8.76	987.5350	M+Na	$C_{51}H_{82}O_{17}Na$	987.5293	5.7					oxophytodienoic acid ester of digalactosyldiacylglycerol (DGDG OPDA/OPDA)
	8.76	963.5322	M-H	$C_{51}H_{79}O_{17}$	963.5317	0.5	165.1285 291.1962 397.1346 415.1449 689.3386	$C_{11}H_{17}O$ $C_{18}H_{27}O_3$ $C_{15}H_{25}O_{12}$ $C_{15}H_{27}O_{13}$ $C_{33}H_{53}O_{15}$	165.1279 291.1960 397.1346 415.1452 689.3384	3.6 0.6 0.0 -0.7 0.2	
IX	9.78	811.4983	M+Na	$C_{45}H_{72}O_{11}Na$	811.4972	1.3					oxophytodienoic/octadecatrienoic acid esters of monogalactosyldiacylglycerol (MGDG OPDA/18:3)
	9.78	787.5012	M-H	$C_{45}H_{71}O_{11}$	787.4996	0.2	165.1282 277.2162 291.1960 527.2856	$C_{11}H_{17}O$ $C_{18}H_{29}O_2$ $C_{18}H_{27}O_3$ $C_{27}H_{43}O_{10}$	165.1279 277.2168 291.1960 527.2856	1.8 -2.1 0.0 0.0	
X	9.87	813.5162	M+Na	$C_{45}H_{74}O_{11}Na$	813.5129	4.0					oxophytodienoic/octadecadienoic acid esters of monogalactosyldiacylglycerol (MGDG OPDA/18:2)
	9.87	789.5156	M-H*	$C_{45}H_{73}O_{11}$	789.5153	0.3	279.2314 291.1961 527.2864	$C_{18}H_{31}O_2$ $C_{18}H_{27}O_3$ $C_{27}H_{43}O_{10}$	279.2314 291.1960 527.2856	0.0 0.3 1.5	

Extracts of plant tissues were analysed by UPLC-QTOFMS in +ESI and –ESI modes and fragment data were obtained using collision-induced dissociation. *, Ions corresponding to the formate adduct were also present.