

Supporting Information

Paper Spray Mass spectrometry utilizing Teslin® substrate for rapid detection of lipid metabolite changes during COVID-19 infection

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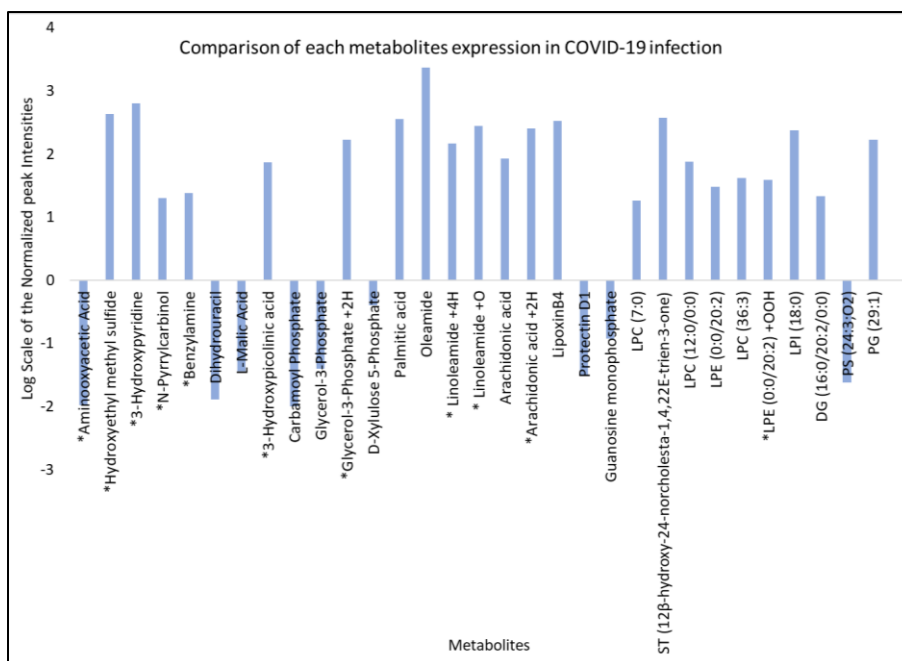
Supplementary 1

S1 -Table 1:The table indicates the metabolites and lipids annotated with the compound identification number, indicating the CAS ID, HMDB ID (Human Metabolome Database ID), and or LM ID (Lipid Maps ID) compared with the MS² analysis with relevantly.

Metabolite	CAS Registry Number	metabolites with IDs	Input m/z [M+H] ⁺	Expression during COVID-19 Infection
*Aminoxyacetic Acid	645-88-5	N/A	92.0219	Downregulated
*Hydroxyethyl methyl sulfide	5271-38-5	HMDB0032425	92.9862	Upregulated
*3-Hydroxypyridine	109-00-2	N/A	95.9931	Upregulated
*N-Pyrrylcarbinol	92776-61-9	N/A	98.0835	Upregulated
*Benzylamine	100-46-9	HMDB0033871	108.0246	Upregulated
Dihydrouracil	504-07-4	HMDB0000076	115.0417	Downregulated
L-Malic Acid	97-67-6	HMDB0000156	135.0330	Downregulated
*3-Hydroxypicolinic acid	874-24-8	HMDB0013188	140.0816	Upregulated
Carbamoyl Phosphate	590-55-6	HMDB0001096	142.0417	Downregulated
Glycerol-3-Phosphate	57-03-4	HMDB0000126	173.0878	Downregulated
*Glycerol-3-Phosphate +2H	Oxidized form 57-03-4	Oxidized form HMDB0000126	175.0003	Upregulated
D-Xylulose 5-Phosphate	4212-65-1	HMDB0000868	231.1811	Downregulated
Palmitic acid	57-10-3	HMDB0000220	257.1546	Upregulated
Oleamide	28290-77-9	HMDB0062238	282.1250	Upregulated
* Linoleamide +4H	Oxidized form 3072-13-7	Oxidized form HMDB0062656	284.0727	Upregulated
* Linoleamide +O	Oxidized form 3072-13-7	Oxidized form HMDB0062656	296.1589	Upregulated
Arachidonic acid	506-32-1	HMDB0001043	305.1701	Upregulated

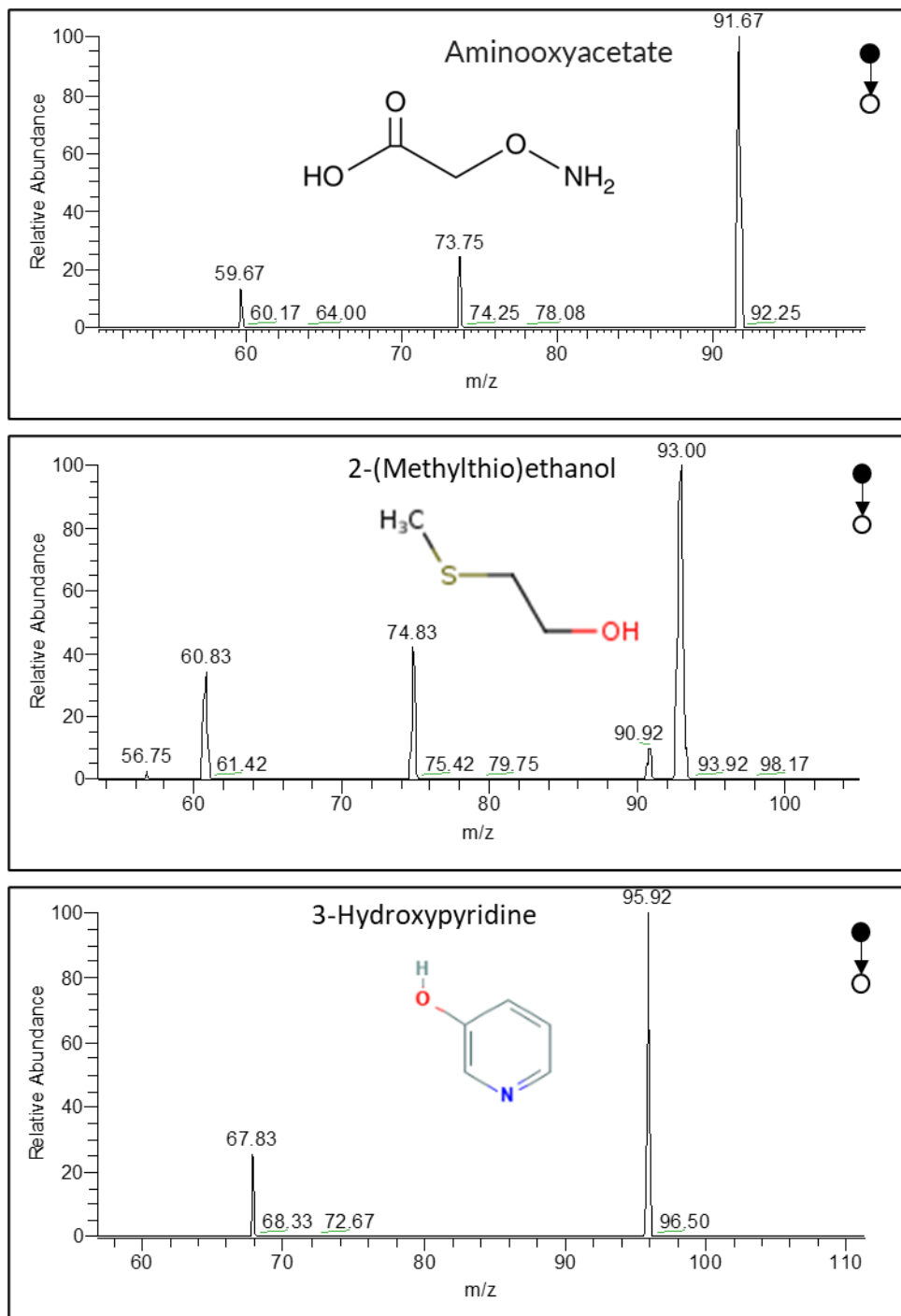
*Arachidonic acid +2H	Oxidized form 506-32-1	Oxidized form HMDB0001043	306.8391	Upregulated
LipoxinB4	98049-69-5	HMDB0005082	353.2713	Upregulated
Protectin D1	N/A	HMDB0003689	361.2896	Downregulated
Guanosine monophosphate	85-32-5	HMDB0001397	364.2175	Downregulated
LPC (7:0)	N/A	LMGP01050064 (LipidMass ID)	371.2083	Upregulated
ST (12β-hydroxy-24-norcholesta-1,4,22E-trien-3-one)	N/A	LMST01010311 (LipidMass ID)	383.1049	Upregulated
LPC (12:0/0:0)	20559-18-6	LMGP01050009	440.2593	Upregulated
LPE (0:0/20:2)	N/A	HMDB0011513	506.2025	Upregulated
LPC(19:3)	N/A	LMGP01050003	531.9127	Upregulated
*LPE (0:0/20:2) +OOH	N/A	HMDB0011513	539.1510	Upregulated
LPI (18:0)	327620-46-2	HMDB0240261	601.3094	Upregulated
DG (16:0/20:2/0:0)	N/A	LMGL02010055	622.2298	Upregulated
PS (24:3;O2)	N/A	LMGP20040006	650.0814	Downregulated
PG (29:1)	N/A	LMGP04010248	679.4269	Upregulated

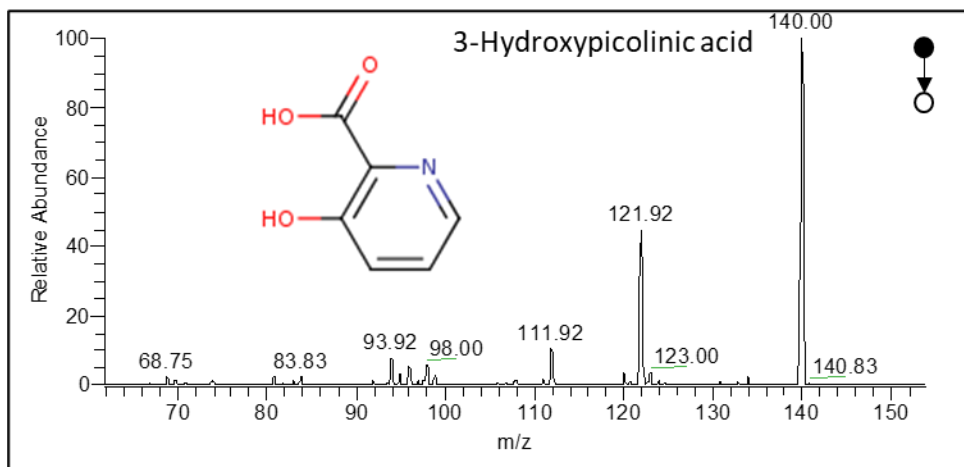
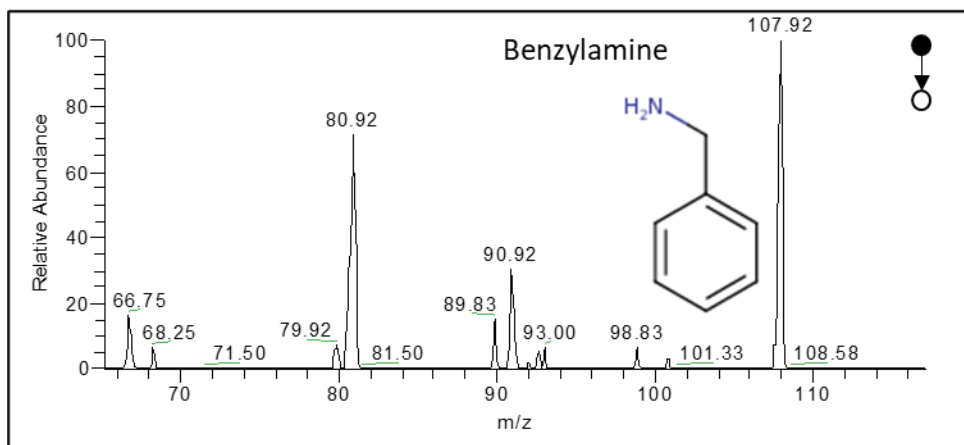
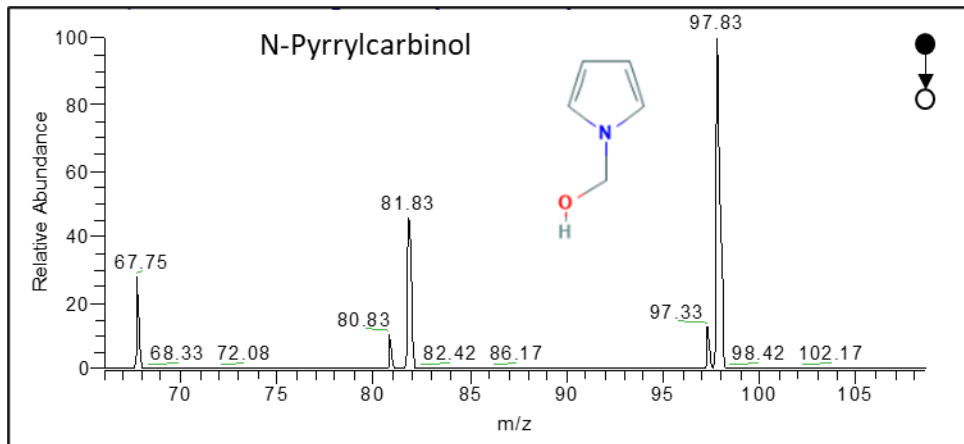
S1 Figure1- Indicates the Comparison of the Logarithmic normalized peak intensities of the COVID-19 positive samples compared with the Negative samples.

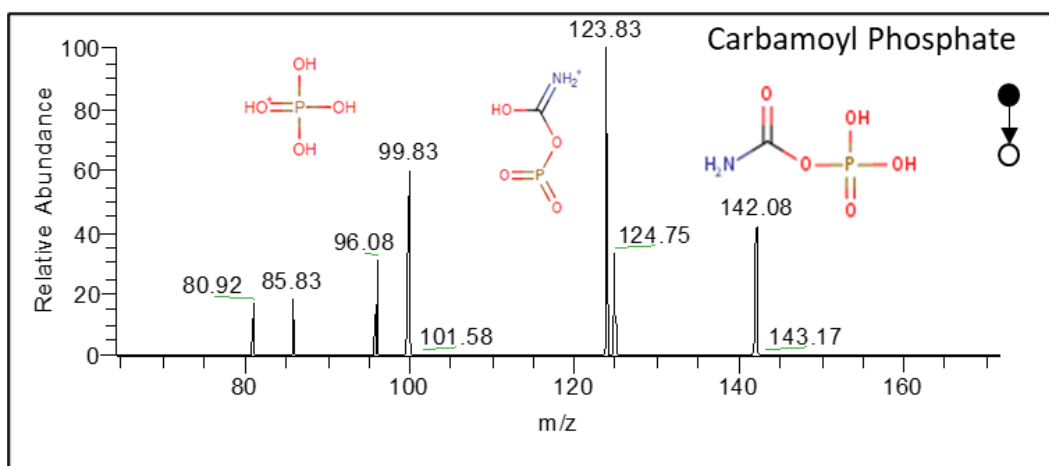
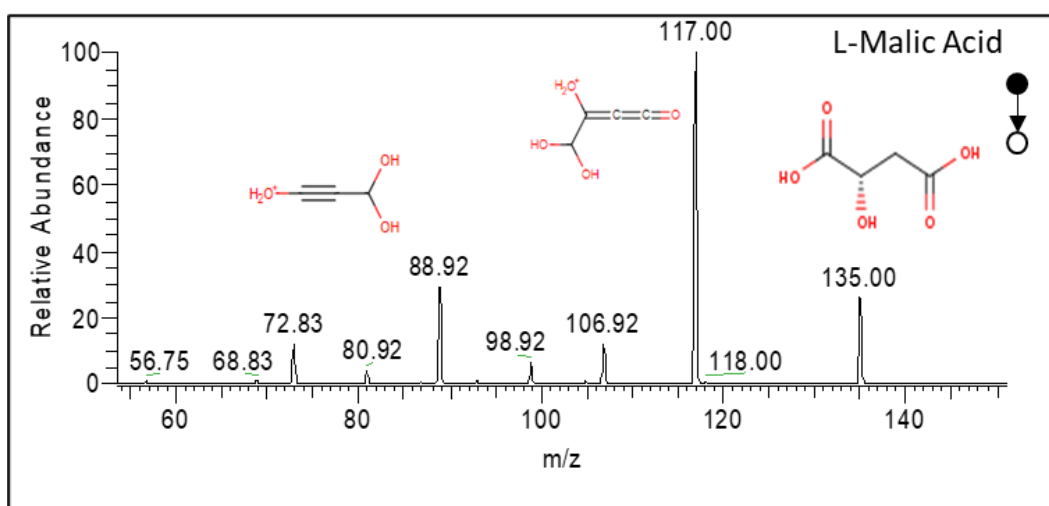
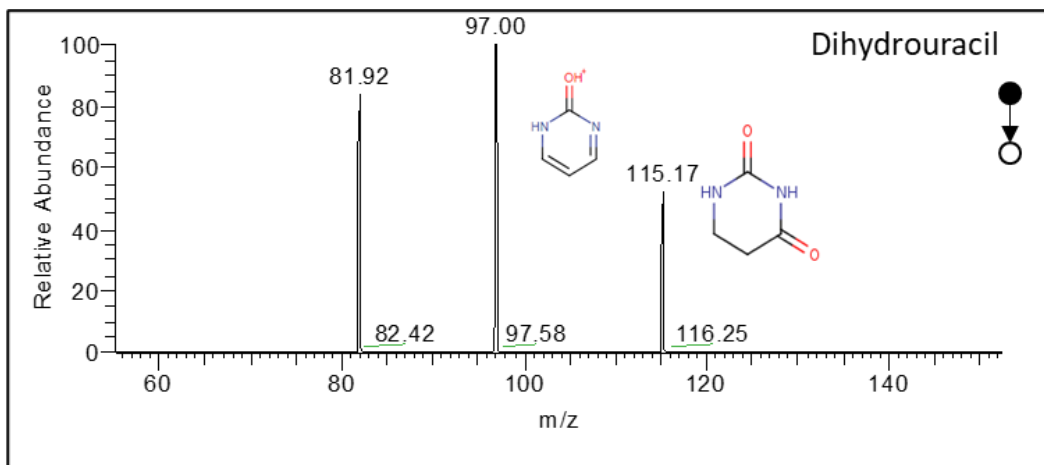


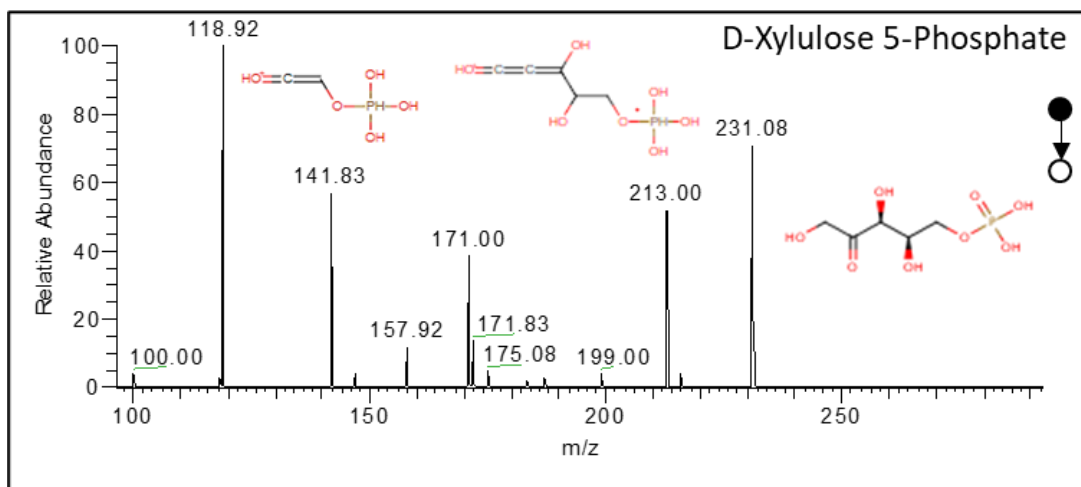
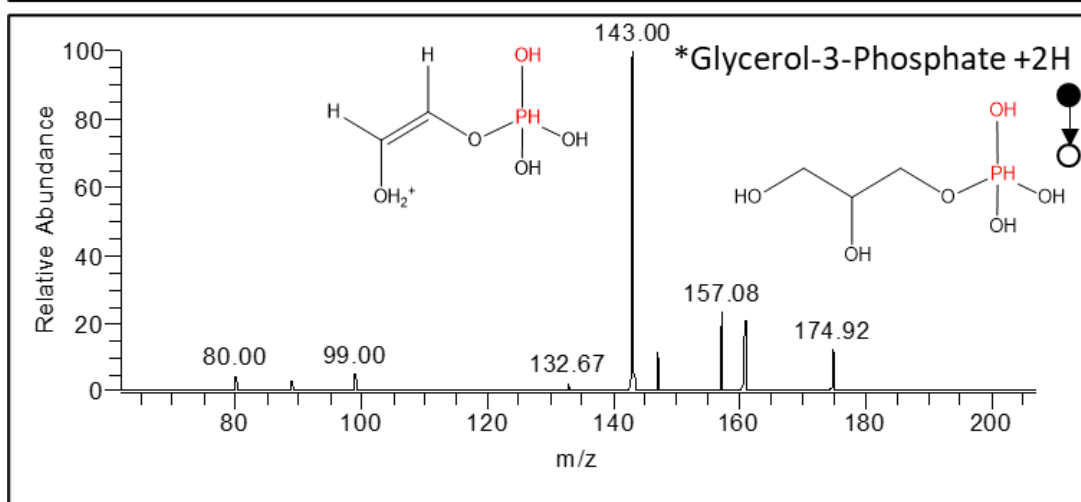
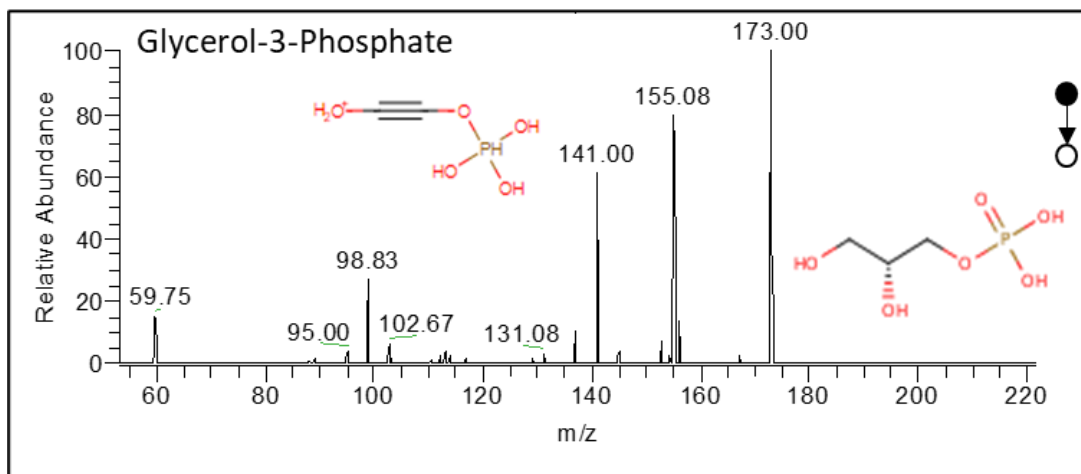
Supplementary 2

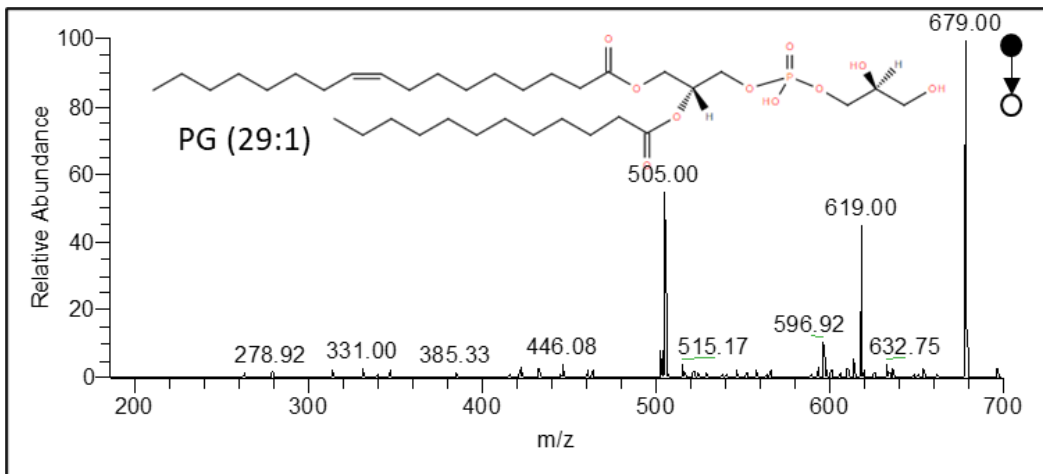
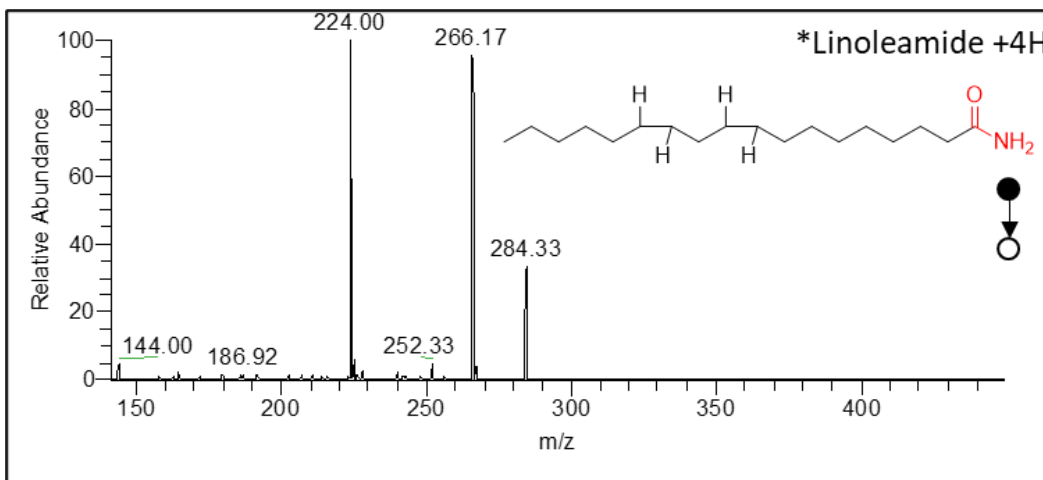
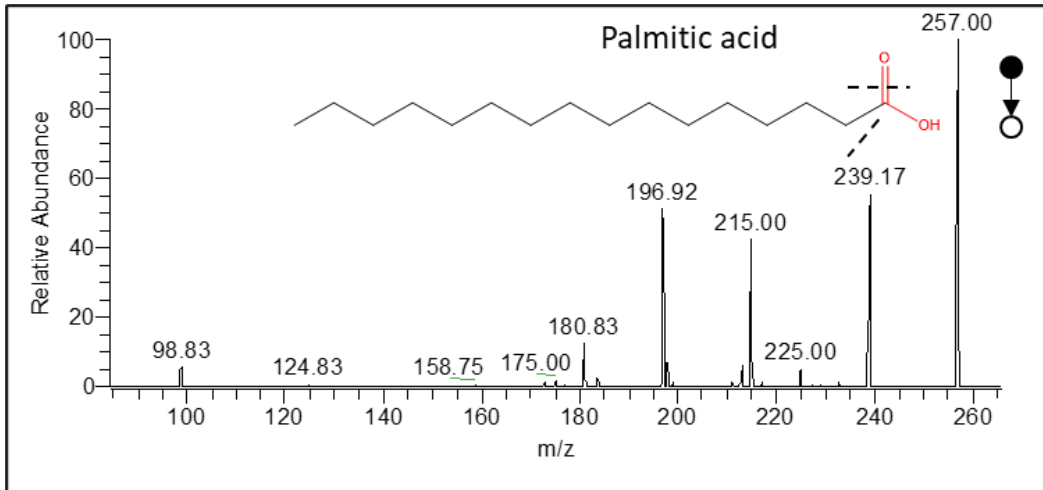
S2 Figures - All the metabolites and lipids are identified based on the MS/MS and compared with the Lipids and metabolite data bases +/- 0.5 delta value for m/z values.

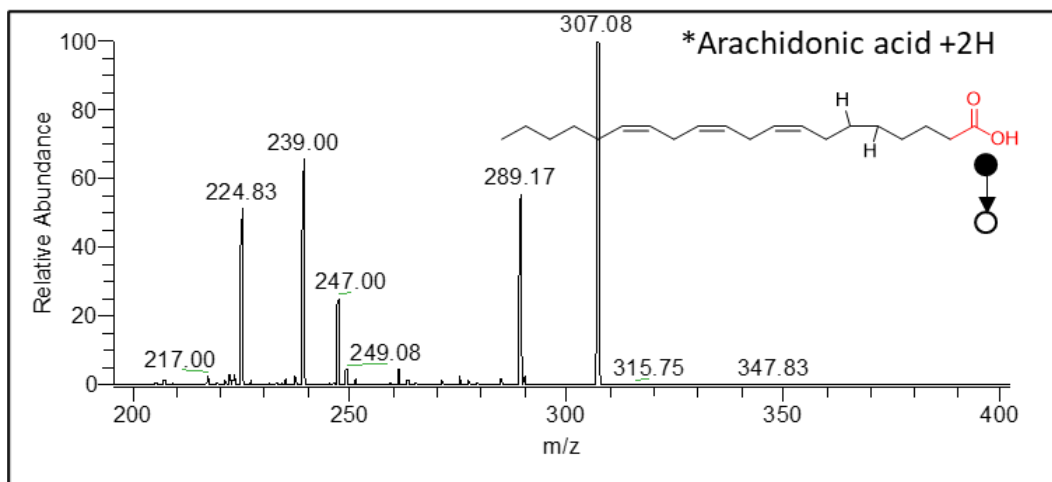
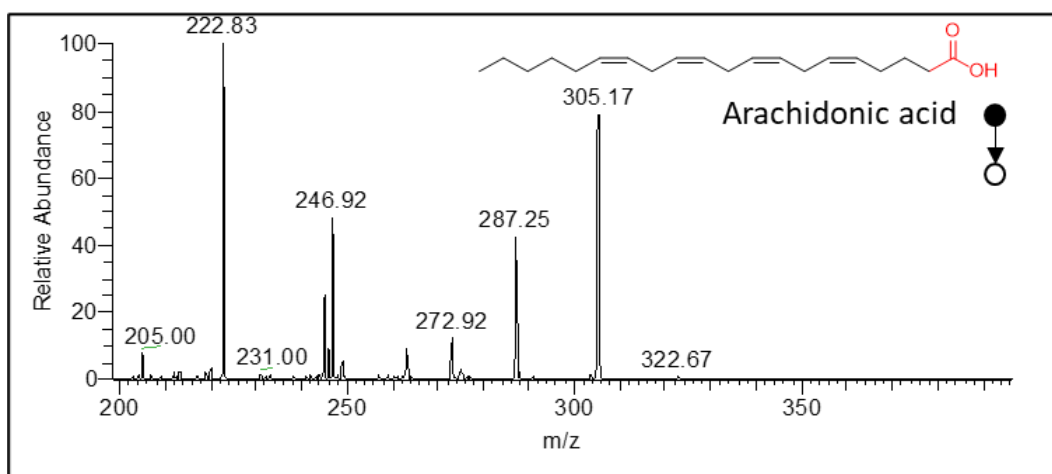
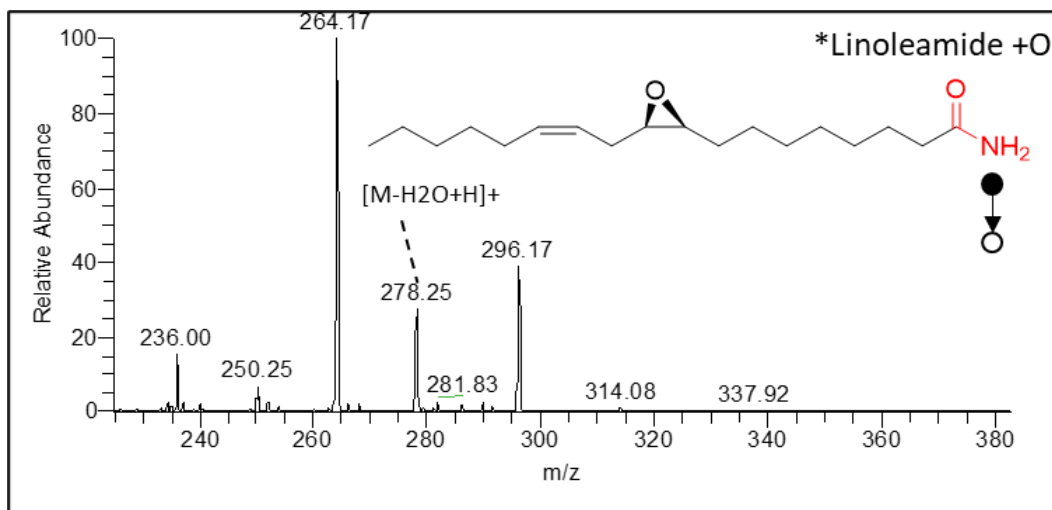


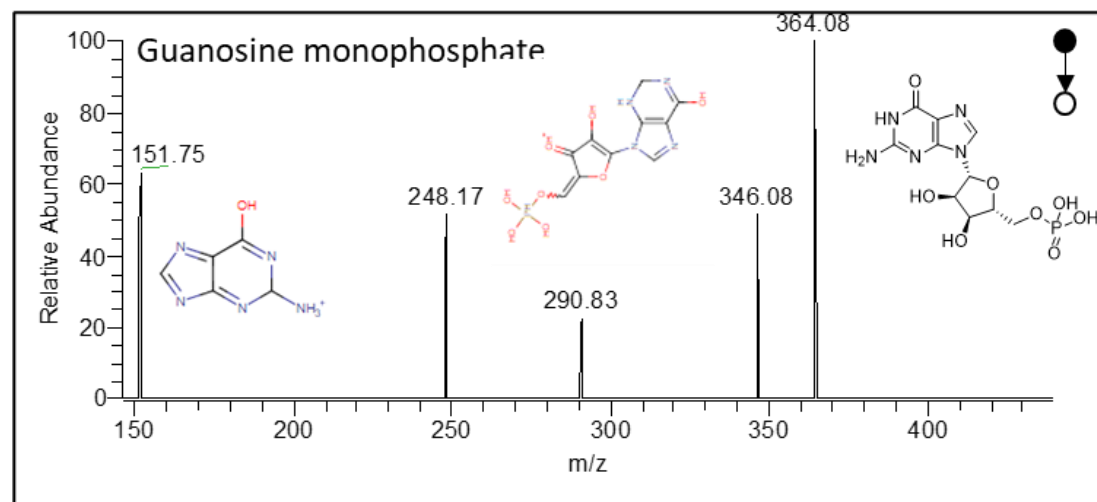
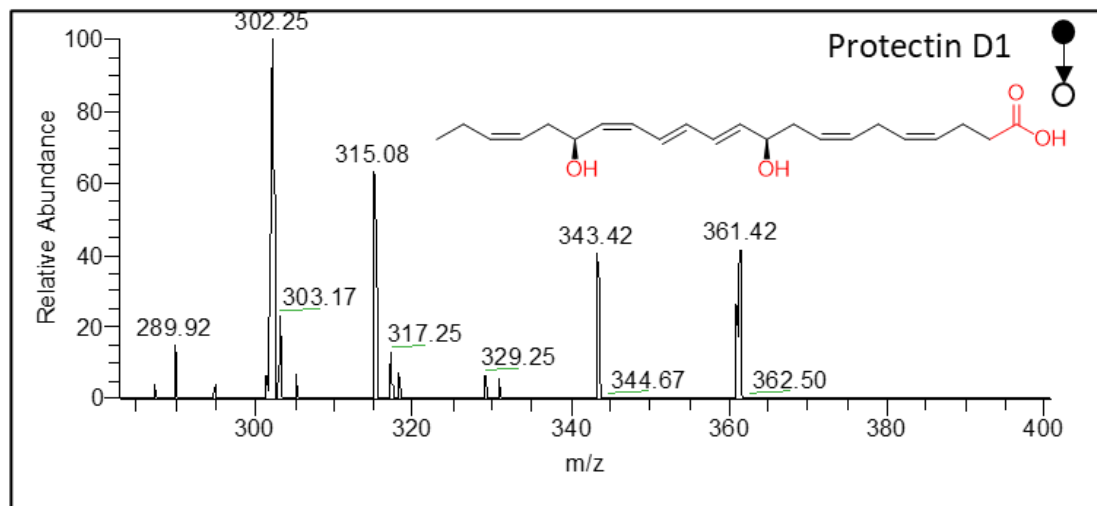
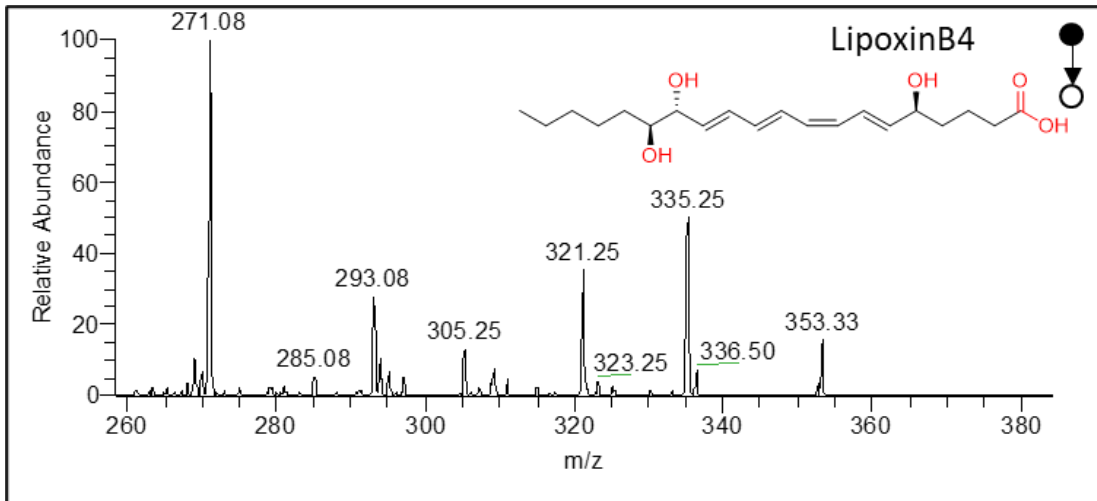


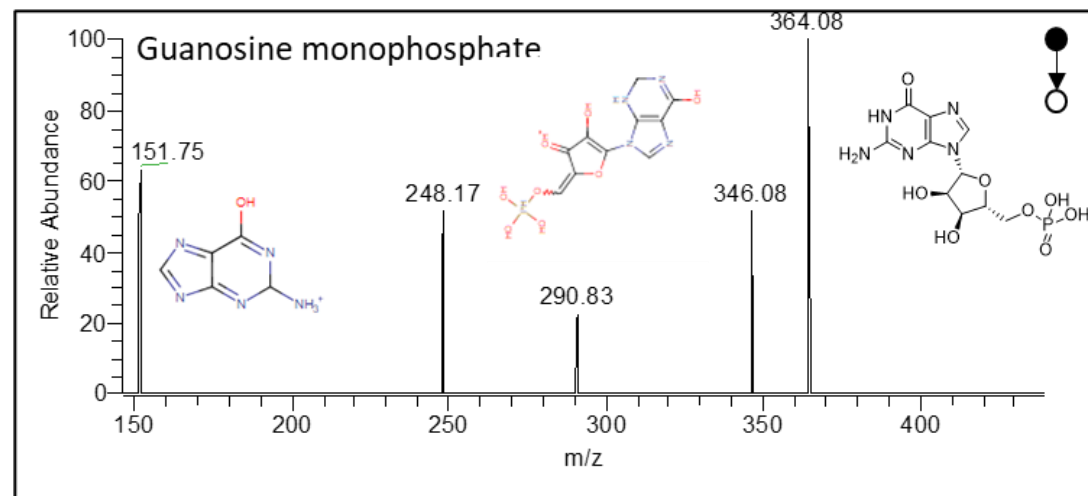
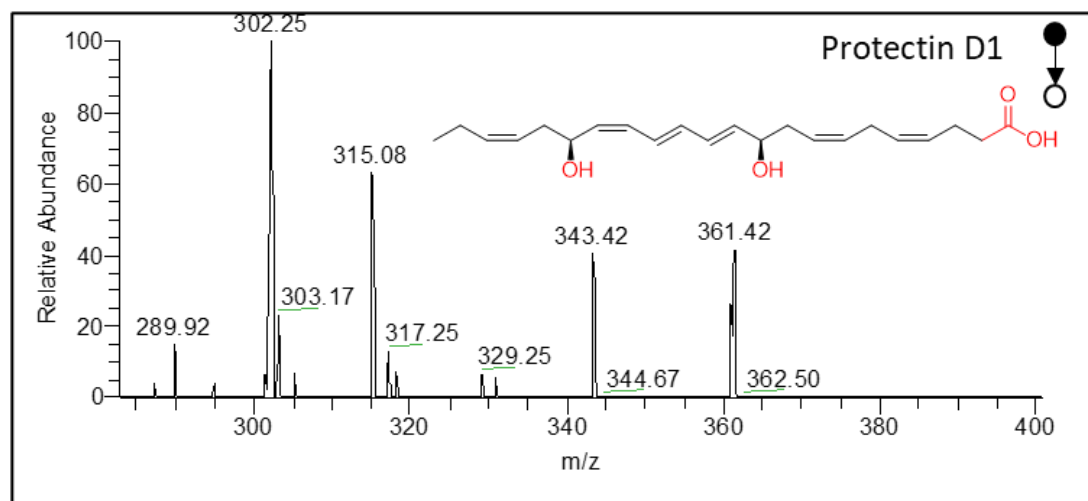
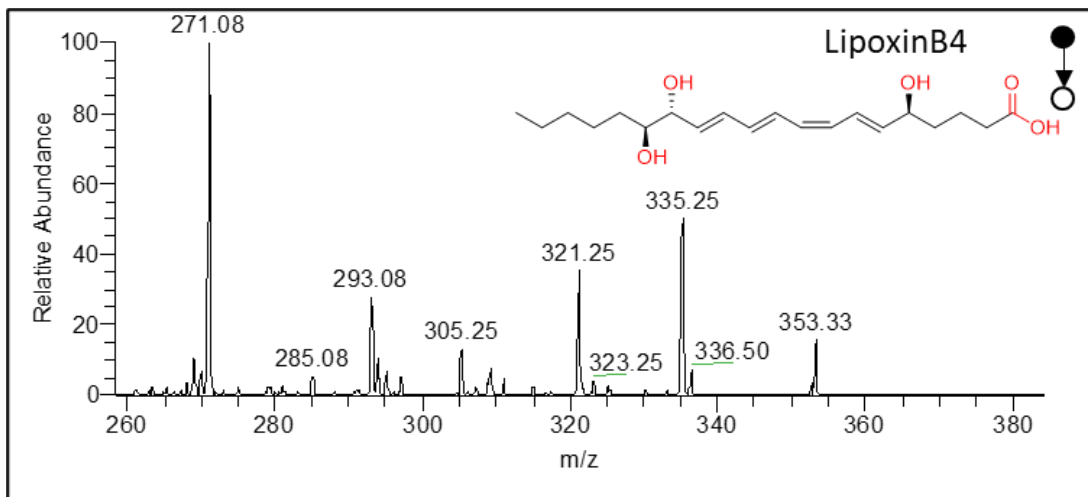


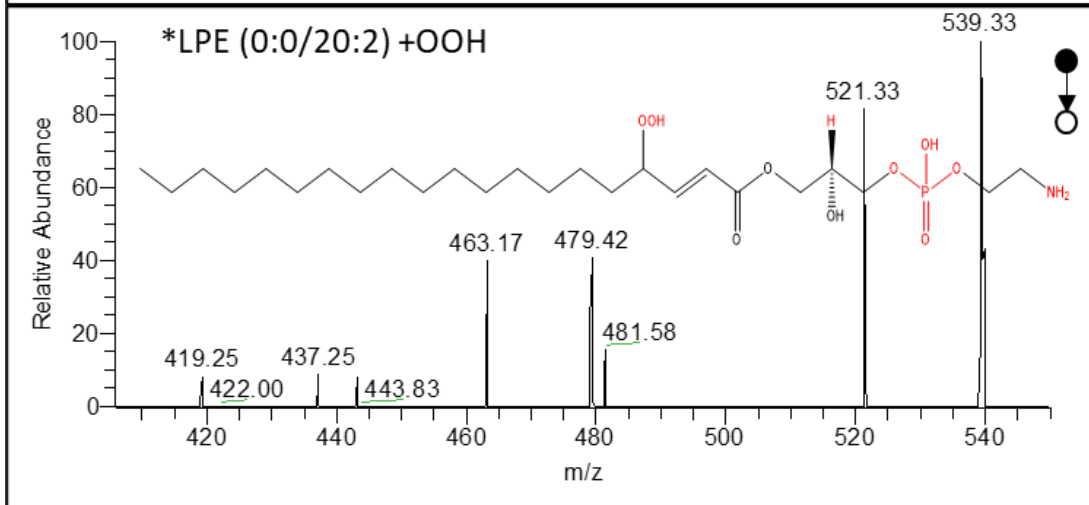
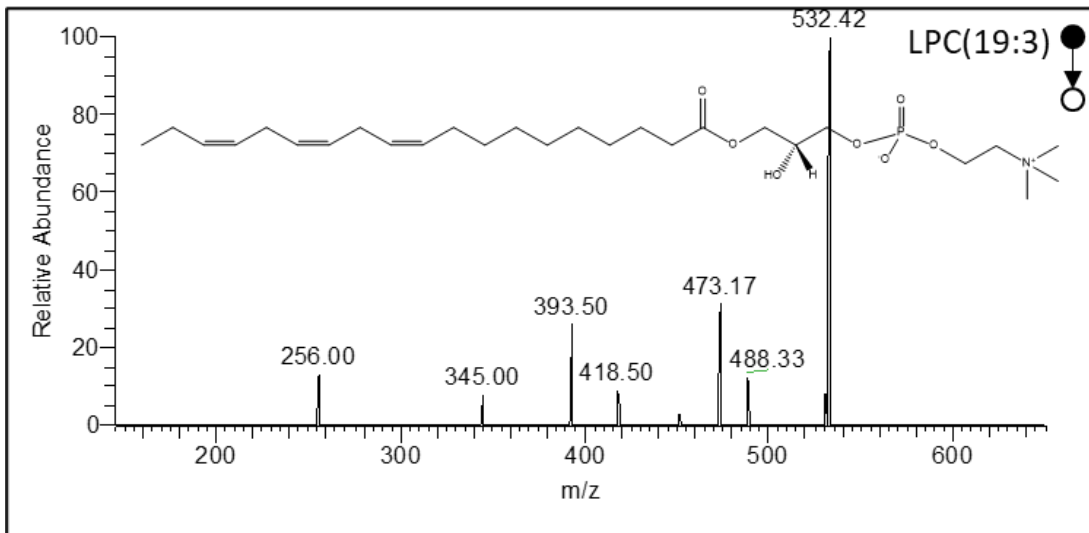
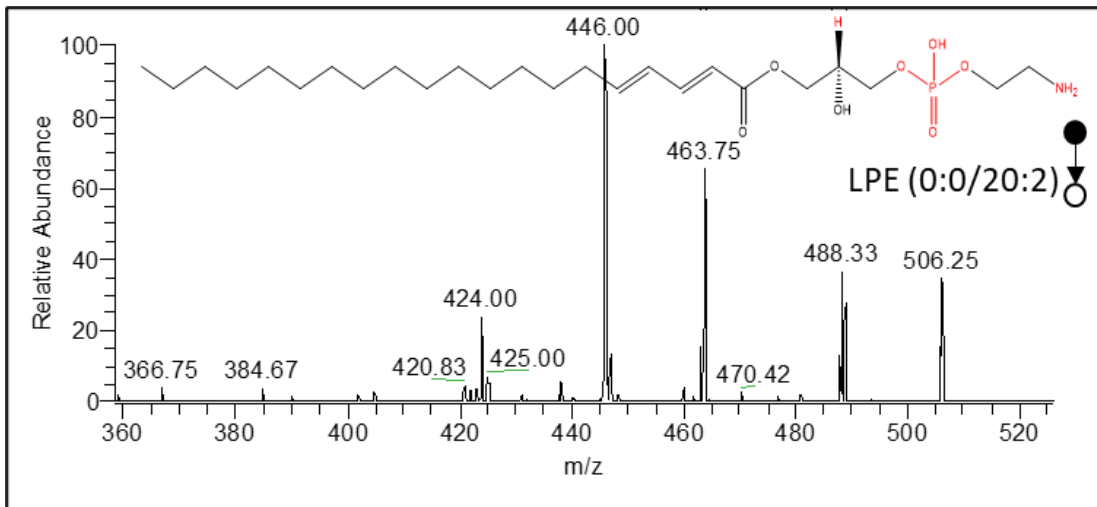


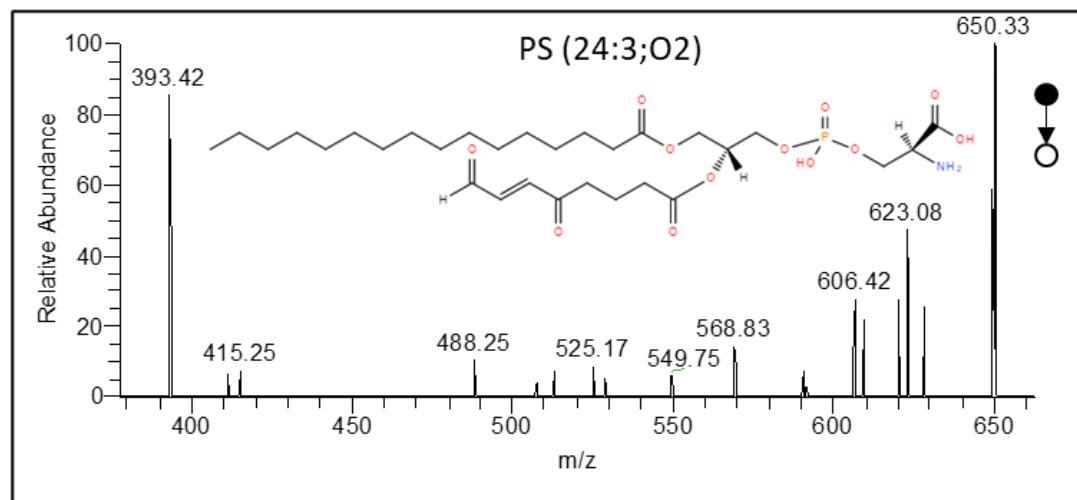
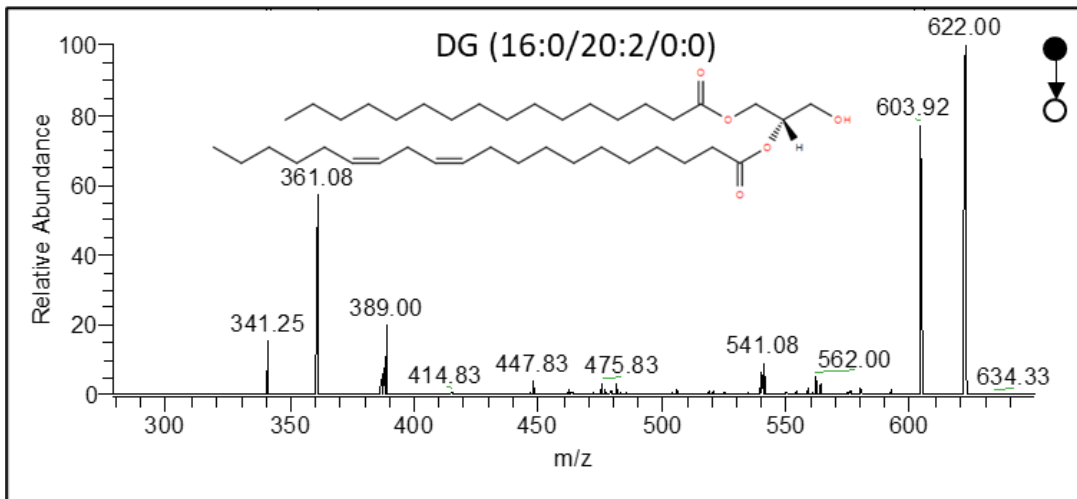
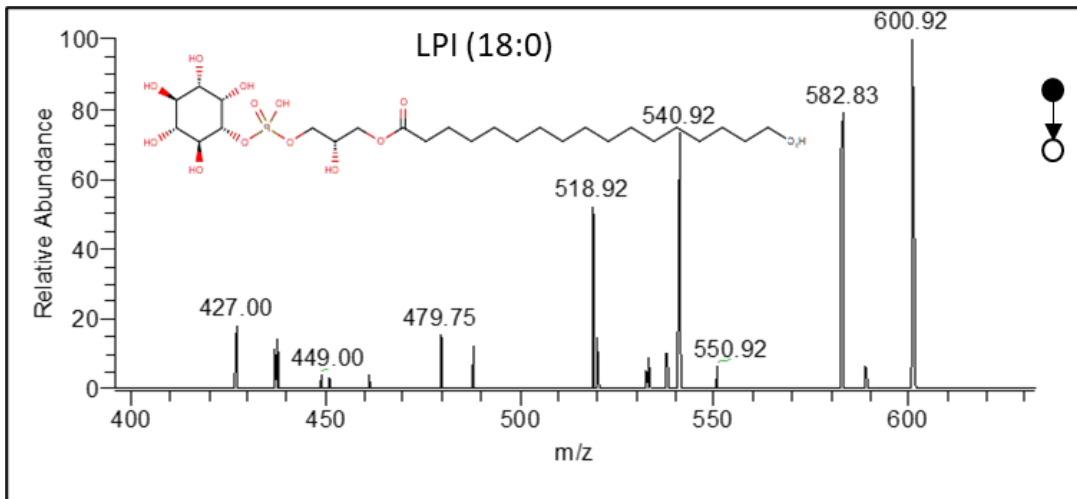












Supplementary 3

S3- Table: Indicates the metabolite IDs for the 11 peak values (m/z) that were selected and generated by the discriminant function analysis.

[M+H] +	m/z shown in the paper	Metabolite Name	CAS ID	Metabolite ID
92.0219	92	*Aminooxyacetic Acid	645-88-5	N/A
92.9862	93	*Hydroxyethyl methyl sulfide	5271-38-5	HMDB0032425
95.9931	96	*3-Hydroxypyridine	109-00-2	N/A
98.0835	98	*N-Pyrrylcarbinol	92776-61-9	N/A
108.0246	108	*Benzylamine	100-46-9	HMDB0033871
140.0816	140	*3-Hydroxypicolinic acid	874-24-8	HMDB0013188
175.0003	175	*Glycerol-3-Phosphate +2H	Oxidized form 57-03-4	Oxidized form HMDB0000126
284.0727	284	* Linoleamide +4H	Oxidized form 3072-13-7	Oxidized form HMDB0062656
296.1589	296	* Linoleamide +O	Oxidized form 3072-13-7	Oxidized form HMDB0062656
306.8391	306	*Arachidonic acid +2H	Oxidized form 506-32-1	Oxidized form HMDB0001043
539.151	539	*LPE (0:0/20:2) +OOH	N/A	HMDB0011513