

Table S1: Statistical and chemical data of differential features

| Name | Peak (rt_m/z or n) | ESI ^a | p-value ^b | FDR | Molecular Formula | Mass Error |
|-------------------------------------|--------------------|------------------|----------------------|----------|-------------------|------------|
| PS(19:0) | 0.47_539.3224n | + | 8.82E-13 | 5.75E-12 | C25H50NO9P | 0.20 |
| PI(P-16:0/22:6) | 0.47_930.5470m/z | + | 3.89E-12 | 1.60E-11 | C47H79O12P | 0.40 |
| OHODiA-PC | 0.50_692.4100m/z | + | 4.63E-14 | 5.50E-13 | C34H62NO11P | -4.82 |
| PS(17:2/19:1) | 0.48_824.4872m/z | + | 5.88E-13 | 4.16E-12 | C42H76NO10P | 4.32 |
| OxPC 38:4+4O(1Cyc) | 0.48_912.5366m/z | + | 9.33E-13 | 5.93E-12 | C46H84NO12P | 0.42 |
| PS(14:1/20:5) | 0.45_751.4436n | + | 1.90E-12 | 9.38E-12 | C40H66NO10P | 1.51 |
| PS(18:1/18:0) | 0.48_828.5141m/z | + | 2.99E-14 | 3.87E-13 | C42H80NO10P | -1.34 |
| DG(18:3/20:5/0:0) | 0.79_675.4359m/z | + | 1.03E-21 | 1.12E-19 | C41H64O5 | -4.13 |
| PA(O-20:0/18:4) | 3.80_675.5109m/z | + | 2.54E-13 | 2.07E-12 | C41H75O7P | -0.39 |
| PE-Cer(d14:1/20:1(2OH)) | 3.82_639.4884m/z | + | 1.48E-09 | 4.21E-09 | C36H71N2O7P | 3.54 |
| PA 39:6 | 3.10_773.4482m/z | + | 8.34E-14 | 9.01E-13 | C42H71O8P | -4.91 |
| PE-Cer(d16:2/18:1) | 3.80_657.4981m/z | + | 1.67E-11 | 6.13E-11 | C36H69N2O6P | 2.28 |
| PE(16:0/22:6) | 2.93_728.5032m/z | + | 5.47E-19 | 1.46E-17 | C43H74NO8P | 2.45 |
| SM d31:5 | 3.80_675.4461m/z | + | 6.85E-20 | 2.33E-18 | C36H65N2O6P | -1.81 |
| FAHFA 26:1 | 5.44_459.3264m/z | - | 1.54E-09 | 1.54E-09 | C26H48O4 | 4.06 |
| 8-hydroxy-3-oxohexadecadienoic acid | 0.86_263.1661m/z | - | 2.99E-08 | 2.99E-08 | C16H26O4 | 2.85 |
| PC 28:5e | 12.33_634.4246m/z | - | 8.95E-08 | 8.95E-08 | C36H64NO7P | 0.64 |
| PE 26:5e | 1.96_564.3475m/z | - | 1.62E-07 | 1.62E-07 | C31H54NO7P | 2.57 |
| DGTS 21:2 | 16.41_534.3790m/z | - | 6.00E-08 | 6.00E-08 | C31H55NO7 | -1.78 |
| PG 46:1 | 15.30_961.7078m/z | - | 1.67E-09 | 1.67E-09 | C52H101O10P | -4.01 |
| PG 48:1 | 15.75_989.7448m/z | - | 3.00E-08 | 3.00E-08 | C54H105O10P | 2.16 |
| PA(20:1/15:0) | 4.38_723.4724m/z | - | 4.59E-09 | 4.59E-09 | C38H73O8P | -1.85 |
| PG(18:2/16:0) | 4.38_781.4776m/z | - | 4.07E-08 | 4.07E-08 | C40H75O10P | -2.07 |
| PI(12:0/17:0) | 3.80_768.4817n | - | 2.16E-15 | 2.16E-15 | C38H73O13P | 3.61 |
| PA(17:0/18:1) | 3.80_723.4714m/z | - | 8.45E-21 | 8.45E-21 | C38H73O8P | -3.40 |
| GlcADG 30:0 | 3.66_737.4829m/z | - | 1.58E-13 | 1.58E-13 | C39H72O11 | 1.01 |

a) Electrospray Ionization, positive or negative mode. b) FDR adjusted