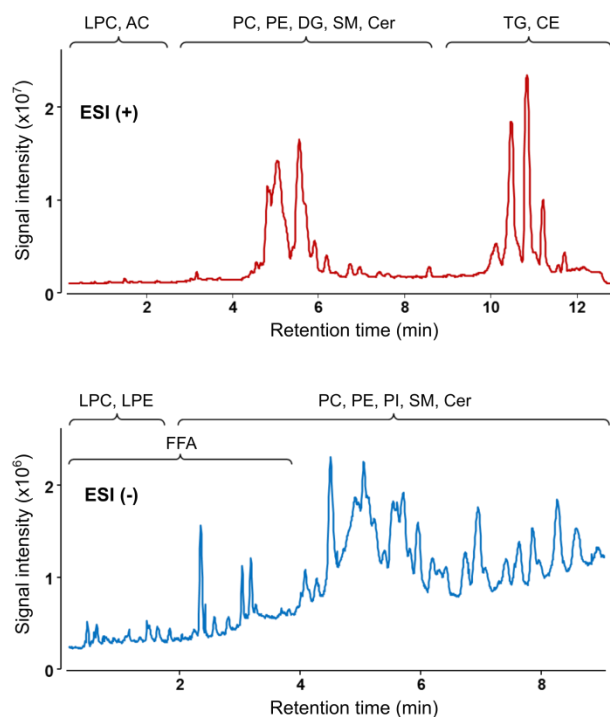


Metabolomic characteristics of cholesterol-induced non-obese nonalcoholic fatty liver disease in mice

Lan N. Tu¹, Megan R. Showalter², Tomas Cajka², Sili Fan², Viju V. Pillai¹, Oliver Fiehn^{2,3}, Vimal Selvaraj^{1,§}

Supplementary Information

A LIVER



B PLASMA

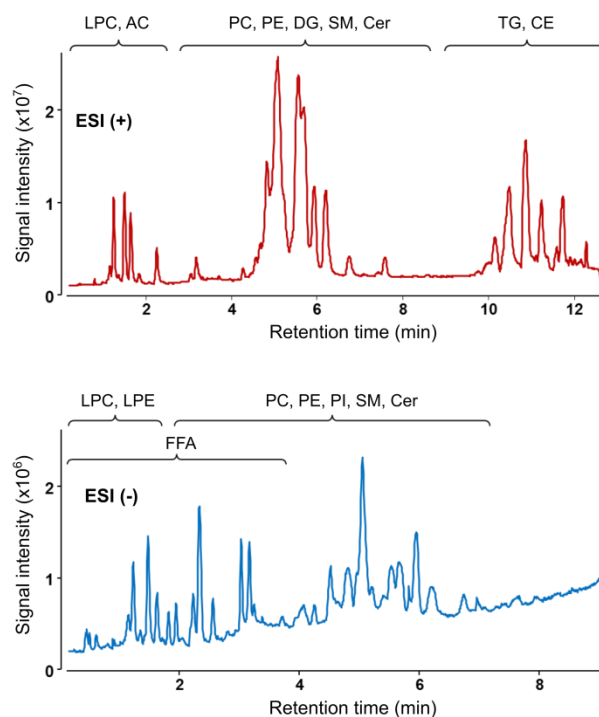


Figure S1. Representative total ion chromatograms for plasma and liver lipids. Quality control check of all samples showed that sample injection was not overloading the columns. Elution of particular lipid classes for each electrospray ionization (ESI) mode was highlighted by retention time ranges. Data from a representative liver (A) and plasma (B) sample from an animal fed with HFHCC diet were shown. The followings are indicated: acylcarnitines (AC), cholesteryl esters (CE), diacylglycerols (DG), triacylglycerols (TG), lysophosphatidylcholines (LPC), lysophosphatidylethanolamines (LPE), phosphatidylcholines (PC), phosphatidylethanolamines (PE), ceramides (Cer), sphingomyelins (SM), free fatty acids (FFA), phosphatidylinositols (PI).

Table S1. Total levels of different lipid classes in livers of male and female mice after HFHCC diet.

| Lipid class | Male (n=3) | Female (n=3) | P value |
|-------------|---------------------------------|------------------|---------|
| | Peak height (x10 ³) | | |
| Cholesterol | 1975.2 ± 167.7 | 2351.2 ± 90.5 | 0.120 |
| FFA | 2605.5 ± 383.8 | 1492.1 ± 463.0 | 0.138 |
| DG | 862.4 ± 59.3 | 823.4 ± 169.9 | 0.839 |
| TG | 26955.6 ± 3563.1 | 30267.4 ± 2858.8 | 0.500 |
| Cer | 1493.0 ± 275.6 | 703.4 ± 88.9 | 0.053 |
| SM | 3076.4 ± 413.6 | 2823.6 ± 244.8 | 0.627 |
| PC | 52959.3 ± 2618.3 | 49369.1 ± 1120.6 | 0.276 |
| PE | 3898.1 ± 307.4 | 3040.6 ± 225.1 | 0.088 |
| LPC | 1086.6 ± 46.5 | 799.6 ± 101.7 | 0.062 |
| LPE | 20.8 ± 2.6 | 11.6 ± 3.3 | 0.095 |

Table S2. Total levels of different lipid classes in plasma of male and female mice after HFHCC diet.

| Lipid class | Male (n=3) | Female (n=3) | P value |
|-------------|---------------------------------|------------------|---------|
| | Peak height (x10 ³) | | |
| Cholesterol | 2966.8 ± 128.3 | 2773.6 ± 116.8 | 0.328 |
| FFA | 1148.1 ± 213.4 | 1097.0 ± 112.9 | 0.843 |
| DG | 21.5 ± 6.6 | 15.4 ± 5.8 | 0.529 |
| TG | 5013.9 ± 1488.0 | 6004.5 ± 2805.5 | 0.771 |
| Cer | 288.0 ± 67.2 | 202.7 ± 9.3 | 0.277 |
| SM | 3686.4 ± 746.7 | 2785.7 ± 150.9 | 0.303 |
| PC | 52833.8 ± 5080.1 | 45293.3 ± 1828.8 | 0.235 |
| PE | 157.1 ± 30.1 | 116.8 ± 8.3 | 0.266 |
| LPC | 19235.0 ± 2149.8 | 16505.5 ± 982.8 | 0.312 |
| LPE | 26.1 ± 4.3 | 21.2 ± 0.7 | 0.327 |