

THE ALSPAC STUDY

Mother based Metabolomics results

**Prepared by
The ALSPAC Study Team**

Documentation summarising the data available and the variable names.

Last updated for version 3a of the RELEASE file.

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Introduction

This documentation gives a summary of the variables available from the metabolomics assays performed using high-throughput proton (^1H) Nuclear magnetic resonance (NMR) on EDTA-plasma samples. These assays were performed in collaboration with Professor Mika Ala-Korpela and his lab in Finland.

^1H NMR measurements were acquired for three molecular windows: lipoprotein lipids (LIPO), low molecular-weight metabolites (LMWM) and lipid extracts (LIPID). The LIPO and LMWM windows were acquired at 500 MHz on native plasma and the LIPID window was acquired at 600 MHz on lipid-extracted plasma samples. The LIPO acquisition used the Bruker noesyprsat pulse sequence with an automatically calibrated 90° pulse, mixing time of 10 ms and an irradiation field of 25 Hz to suppress the water peak. The LMWM window was acquired using a Bruker CPMG pulse sequence with water suppression, and the LIPID window with a standard 1D sequence. Full experimental details for sample preparation, NMR analysis, and data processing/quantitation are provided in the following publications.

- Soininen et al. High-throughput serum NMR metabonomics for cost-effective holistic studies on systemic metabolism. *Analyst*, 2009; 134: 1781–1785
[<http://pubs.rsc.org/en/content/articlepdf/2009/an/b910205a>]
- Inouye *et al.* Metabonomic, transcriptomic, and genomic variation of a population cohort. *Mol.Syst. Biol* 2010; 6: 401.
[<http://msb.embopress.org/content/msb/6/1/441.full.pdf>]
- Kettunen J et al. Genome-wide association study identifies multiple loci influencing human serum metabolite levels. *Nature Genetics* 2012; 44: 2012 269.
[<http://www.nature.com/ng/journal/v44/n3/full/ng.1073.html>]

Note that samples from both Focus on Mother clinics (FOM1 and FOM2) were fasting.

Data are available for 4368 mothers at FOM1 and 2793 mothers at FOM2. Table 1 provides a list of all variable names and labels which may assist users who will be making formal data requests. Distributions of variables as received from the lab (prior to ALSPAC labelling) are shown in Appendix 1.

Also note that pyruvate, glycerol and glycine measures are unreliable in EDTA-plasma due to interference by EDTA.

Important Note for all data users:

Please be aware that some women may appear in the release file more than once. This is due to the way in which women were originally enrolled into the study and were assigned IDs. ALSPAC started by enrolling pregnant women and the main study ID is a pregnancy based ID. Therefore if a women enrolled with two different pregnancies (both having an expected delivery date within the recruitment period (April 1991-December 1992)), she will have two separate IDs to uniquely identify these women and their pregnancies. An indicator variable has been included in the file, called *mult_mum* to identify these women. **If you are carrying out mother based research that does not require you to consider repeat pregnancies for which we have data then please select *mult_mum* = 0 to remove the duplicate entries. This will keep one pregnancy and drop the other.** If you are matching the data included in this file to child based data or have been provided with a dataset that includes the children of the ASLAPC pregnancies, as well as the mother-based data, you need not do anything as each pregnancy (and hence each child from a separate pregnancy) has a unique identifier and a mothers' data has been included/repeated here for each of her pregnancies where appropriate.

mult_mum Entry is a duplicate - Remove if only looking at Mothers

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | 0 No | 4895 | 97.0 | 97.0 | 97.0 |
| | 1 Yes | 151 | 3.0 | 3.0 | 100.0 |
| | Total | 5046 | 100.0 | 100.0 | |

Version History:

Release file version 1: Created February 2014

Release file version 2a: Released May 2018

Details of additions/correction to version 2a from previous release file:

- Previously-embargoed FOM2 metabolomics data has now been added.
- Additional multiple pregnancies missed during the creation of release version 1 have now been added.
- Data from Mothers of triplets/quadruplets has been coded as -11 for confidentiality reasons.

Release file version 3a: Released March 2019

Details of additions/correction to version 3a from previous release file:

- Sphingomyelin data for FOM1 and FOM2 has now been added.
- Some variable labels have also been updated (e.g., replacing 'lipds' with 'lipids').

Table 1: Variable names and labels

| Variable Name | Variable Label |
|----------------|--|
| XXLVLDLP_FOM1 | Concentration of chylomicrons and extremely large VLDL particles (mol/l): FOM1 |
| XXLVLDLL_FOM1 | Total lipids in chylomicrons and extremely large VLDL (mmol/l): FOM1 |
| XXLVLDLPL_FOM1 | Phospholipids in chylomicrons and extremely large VLDL (mmol/l): FOM1 |
| XXLVLDLC_FOM1 | Total cholesterol in chylomicrons and extremely large VLDL (mmol/l): FOM1 |
| XXLVLDLCE_FOM1 | Cholesterol esters in chylomicrons and extremely large VLDL (mmol/l): FOM1 |
| XXLVLDLFC_FOM1 | Free cholesterol in chylomicrons and extremely large VLDL (mmol/l): FOM1 |
| XXLVLDLTG_FOM1 | Triglycerides in chylomicrons and extremely large VLDL (mmol/l): FOM1 |
| XLVLDLP_FOM1 | Concentration of very large VLDL particles (mol/l): FOM1 |
| XLVLDLL_FOM1 | Total lipids in very large VLDL (mmol/l): FOM1 |
| XLVLDLPL_FOM1 | Phospholipids in very large VLDL (mmol/l): FOM1 |
| XLVLDLC_FOM1 | Total cholesterol in very large VLDL (mmol/l): FOM1 |
| XLVLDLCE_FOM1 | Cholesterol esters in very large VLDL (mmol/l): FOM1 |
| XLVLDLFC_FOM1 | Free cholesterol in very large VLDL (mmol/l): FOM1 |
| XLVLDLTG_FOM1 | Triglycerides in very large VLDL (mmol/l): FOM1 |
| LVLDLP_FOM1 | Concentration of large VLDL particles (mol/l): FOM1 |
| LVLDLL_FOM1 | Total lipids in large VLDL (mmol/l): FOM1 |
| LVLDLPL_FOM1 | Phospholipids in large VLDL (mmol/l): FOM1 |
| LVLDLC_FOM1 | Total cholesterol in large VLDL (mmol/l): FOM1 |
| LVLDLCE_FOM1 | Cholesterol esters in large VLDL (mmol/l): FOM1 |
| LVLDLFC_FOM1 | Free cholesterol in large VLDL (mmol/l): FOM1 |
| LVLDLTG_FOM1 | Triglycerides in large VLDL (mmol/l): FOM1 |
| MVLDLP_FOM1 | Concentration of medium VLDL particles (mol/l): FOM1 |
| MVLDLL_FOM1 | Total lipids in medium VLDL (mmol/l): FOM1 |
| MVLDLPL_FOM1 | Phospholipids in medium VLDL (mmol/l): FOM1 |
| MVLDLC_FOM1 | Total cholesterol in medium VLDL (mmol/l): FOM1 |
| MVLDLCE_FOM1 | Cholesterol esters in medium VLDL (mmol/l): FOM1 |
| MVLDLFC_FOM1 | Free cholesterol in medium VLDL (mmol/l): FOM1 |
| MVLDLTG_FOM1 | Triglycerides in medium VLDL (mmol/l): FOM1 |
| SVLDLP_FOM1 | Concentration of small VLDL particles (mol/l): FOM1 |
| SVLDLL_FOM1 | Total lipids in small VLDL (mmol/l): FOM1 |
| SVLDLPL_FOM1 | Phospholipids in small VLDL (mmol/l): FOM1 |
| SVLDLC_FOM1 | Total cholesterol in small VLDL (mmol/l): FOM1 |
| SVLDLCE_FOM1 | Cholesterol esters in small VLDL (mmol/l): FOM1 |
| SVLDLFC_FOM1 | Free cholesterol in small VLDL (mmol/l): FOM1 |
| SVLDLTG_FOM1 | Triglycerides in small VLDL (mmol/l): FOM1 |
| XSVLDLP_FOM1 | Concentration of very small VLDL particles (mol/l): FOM1 |
| XSVLDLL_FOM1 | Total lipids in very small VLDL (mmol/l): FOM1 |
| XSVLDLPL_FOM1 | Phospholipids in very small VLDL (mmol/l): FOM1 |
| XSVLDLC_FOM1 | Total cholesterol in very small VLDL (mmol/l): FOM1 |
| XSVLDLCE_FOM1 | Cholesterol esters in very small VLDL (mmol/l): FOM1 |
| XSVLDLFC_FOM1 | Free cholesterol in very small VLDL (mmol/l): FOM1 |
| XSVLDLTG_FOM1 | Triglycerides in very small VLDL (mmol/l): FOM1 |

| | |
|---------------------------|---|
| IDL _P _FOM1 | Concentration of IDL particles (mol/l): FOM1 |
| IDL _L _FOM1 | Total lipids in IDL (mmol/l): FOM1 |
| IDL _{PL} _FOM1 | Phospholipids in IDL (mmol/l): FOM1 |
| IDL _C _FOM1 | Total cholesterol in IDL (mmol/l): FOM1 |
| IDL _{CE} _FOM1 | Cholesterol esters in IDL (mmol/l): FOM1 |
| IDL _{FC} _FOM1 | Free cholesterol in IDL (mmol/l): FOM1 |
| IDL _{TG} _FOM1 | Triglycerides in IDL (mmol/l): FOM1 |
| LLDL _P _FOM1 | Concentration of large LDL particles (mol/l): FOM1 |
| LLDL _L _FOM1 | Total lipids in large LDL (mmol/l): FOM1 |
| LLDL _{PL} _FOM1 | Phospholipids in large LDL (mmol/l): FOM1 |
| LLDL _C _FOM1 | Total cholesterol in large LDL (mmol/l): FOM1 |
| LLDL _{CE} _FOM1 | Cholesterol esters in large LDL (mmol/l): FOM1 |
| LLDL _{FC} _FOM1 | Free cholesterol in large LDL (mmol/l): FOM1 |
| LLDL _{TG} _FOM1 | Triglycerides in large LDL (mmol/l): FOM1 |
| MLDL _P _FOM1 | Concentration of medium LDL particles (mol/l): FOM1 |
| MLDL _L _FOM1 | Total lipids in medium LDL (mmol/l): FOM1 |
| MLDL _{PL} _FOM1 | Phospholipids in medium LDL (mmol/l): FOM1 |
| MLDL _C _FOM1 | Total cholesterol in medium LDL (mmol/l): FOM1 |
| MLDL _{CE} _FOM1 | Cholesterol esters in medium LDL (mmol/l): FOM1 |
| MLDL _{FC} _FOM1 | Free cholesterol in medium LDL (mmol/l): FOM1 |
| MLDL _{TG} _FOM1 | Triglycerides in medium LDL (mmol/l): FOM1 |
| SLDL _P _FOM1 | Concentration of small LDL particles (mol/l): FOM1 |
| SLDL _L _FOM1 | Total lipids in small LDL (mmol/l): FOM1 |
| SLDL _{PL} _FOM1 | Phospholipids in small LDL (mmol/l): FOM1 |
| SLDL _C _FOM1 | Total cholesterol in small LDL (mmol/l): FOM1 |
| SLDL _{CE} _FOM1 | Cholesterol esters in small LDL (mmol/l): FOM1 |
| SLDL _{FC} _FOM1 | Free cholesterol in small LDL (mmol/l): FOM1 |
| SLDL _{TG} _FOM1 | Triglycerides in small LDL (mmol/l): FOM1 |
| XLHDL _P _FOM1 | Concentration of very large HDL particles (mol/l): FOM1 |
| XLHDL _L _FOM1 | Total lipids in very large HDL (mmol/l): FOM1 |
| XLHDL _{PL} _FOM1 | Phospholipids in very large HDL (mmol/l): FOM1 |
| XLHDL _C _FOM1 | Total cholesterol in very large HDL (mmol/l): FOM1 |
| XLHDL _{CE} _FOM1 | Cholesterol esters in very large HDL (mmol/l): FOM1 |
| XLHDL _{FC} _FOM1 | Free cholesterol in very large HDL (mmol/l): FOM1 |
| XLHDL _{TG} _FOM1 | Triglycerides in very large HDL (mmol/l): FOM1 |
| LHDL _P _FOM1 | Concentration of large HDL particles (mol/l): FOM1 |
| LHDL _L _FOM1 | Total lipids in large HDL (mmol/l): FOM1 |
| LHDL _{PL} _FOM1 | Phospholipids in large HDL (mmol/l): FOM1 |
| LHDL _C _FOM1 | Total cholesterol in large HDL (mmol/l): FOM1 |
| LHDL _{CE} _FOM1 | Cholesterol esters in large HDL (mmol/l): FOM1 |
| LHDL _{FC} _FOM1 | Free cholesterol in large HDL (mmol/l): FOM1 |
| LHDL _{TG} _FOM1 | Triglycerides in large HDL (mmol/l): FOM1 |
| MHDL _P _FOM1 | Concentration of medium HDL particles (mol/l): FOM1 |
| MHDL _L _FOM1 | Total lipids in medium HDL (mmol/l): FOM1 |
| MHDL _{PL} _FOM1 | Phospholipids in medium HDL (mmol/l): FOM1 |

| | |
|------------------|---|
| MHDL_C_FOM1 | Total cholesterol in medium HDL (mmol/l): FOM1 |
| MHDLCE_FOM1 | Cholesterol esters in medium HDL (mmol/l): FOM1 |
| MHDLFC_FOM1 | Free cholesterol in medium HDL (mmol/l): FOM1 |
| MHDLTG_FOM1 | Triglycerides in medium HDL (mmol/l): FOM1 |
| SHDLP_FOM1 | Concentration of small HDL particles (mol/l): FOM1 |
| SHDLL_FOM1 | Total lipids in small HDL (mmol/l): FOM1 |
| SHDLPL_FOM1 | Phospholipids in small HDL (mmol/l): FOM1 |
| SHDL_C_FOM1 | Total cholesterol in small HDL (mmol/l): FOM1 |
| SHDLCE_FOM1 | Cholesterol esters in small HDL (mmol/l): FOM1 |
| SHDLFC_FOM1 | Free cholesterol in small HDL (mmol/l): FOM1 |
| SHDLTG_FOM1 | Triglycerides in small HDL (mmol/l): FOM1 |
| XXLVLDLPL_P_FOM1 | Phospholipids to total lipids ratio in chylomicrons and XXL VLDL (%): FOM1 |
| XXLVLDL_C_P_FOM1 | Total cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): FOM1 |
| XXLVLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in chylomicrons and XXL VLDL (%): FOM1 |
| XXLVLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): FOM1 |
| XXLVLDLTG_P_FOM1 | Triglycerides to total lipids ratio in chylomicrons and XXL VLDL (%): FOM1 |
| XLVLDLPL_P_FOM1 | Phospholipids to total lipids ratio in very large VLDL (%): FOM1 |
| XLVLDL_C_P_FOM1 | Total cholesterol to total lipids ratio in very large VLDL (%): FOM1 |
| XLVLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in very large VLDL (%): FOM1 |
| XLVLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in very large VLDL (%): FOM1 |
| XLVLDLTG_P_FOM1 | Triglycerides to total lipids ratio in very large VLDL (%): FOM1 |
| LVLDLPL_P_FOM1 | Phospholipids to total lipids ratio in large VLDL (%): FOM1 |
| LVLDL_C_P_FOM1 | Total cholesterol to total lipids ratio in large VLDL (%): FOM1 |
| LVLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in large VLDL (%): FOM1 |
| LVLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in large VLDL (%): FOM1 |
| LVLDLTG_P_FOM1 | Triglycerides to total lipids ratio in large VLDL (%): FOM1 |
| MVLDLPL_P_FOM1 | Phospholipids to total lipids ratio in medium VLDL (%): FOM1 |
| MVLDL_C_P_FOM1 | Total cholesterol to total lipids ratio in medium VLDL (%): FOM1 |
| MVLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in medium VLDL (%): FOM1 |
| MVLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in medium VLDL (%): FOM1 |
| MVLDLTG_P_FOM1 | Triglycerides to total lipids ratio in medium VLDL (%): FOM1 |
| SVLDLPL_P_FOM1 | Phospholipids to total lipids ratio in small VLDL (%): FOM1 |
| SVLDL_C_P_FOM1 | Total cholesterol to total lipids ratio in small VLDL (%): FOM1 |
| SVLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in small VLDL (%): FOM1 |
| SVLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in small VLDL (%): FOM1 |
| SVLDLTG_P_FOM1 | Triglycerides to total lipids ratio in small VLDL (%): FOM1 |
| XSVLDLPL_P_FOM1 | Phospholipids to total lipids ratio in very small VLDL (%): FOM1 |
| XSVLDL_C_P_FOM1 | Total cholesterol to total lipids ratio in very small VLDL (%): FOM1 |
| XSVLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in very small VLDL (%): FOM1 |
| XSVLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in very small VLDL (%): FOM1 |
| XSVLDLTG_P_FOM1 | Triglycerides to total lipids ratio in very small VLDL (%): FOM1 |
| IDLPL_P_FOM1 | Phospholipids to total lipids ratio in IDL (%): FOM1 |
| IDL_C_P_FOM1 | Total cholesterol to total lipids ratio in IDL (%): FOM1 |
| IDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in IDL (%): FOM1 |
| IDLFC_P_FOM1 | Free cholesterol to total lipids ratio in IDL (%): FOM1 |

| | |
|----------------|--|
| IDLTG_P_FOM1 | Triglycerides to total lipids ratio in IDL (%): FOM1 |
| LLDLPL_P_FOM1 | Phospholipids to total lipids ratio in large LDL (%): FOM1 |
| LLDLC_P_FOM1 | Total cholesterol to total lipids ratio in large LDL (%): FOM1 |
| LLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in large LDL (%): FOM1 |
| LLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in large LDL (%): FOM1 |
| LLDLTG_P_FOM1 | Triglycerides to total lipids ratio in large LDL (%): FOM1 |
| MLDLPL_P_FOM1 | Phospholipids to total lipids ratio in medium LDL (%): FOM1 |
| MLDLC_P_FOM1 | Total cholesterol to total lipids ratio in medium LDL (%): FOM1 |
| MLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in medium LDL (%): FOM1 |
| MLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in medium LDL (%): FOM1 |
| MLDLTG_P_FOM1 | Triglycerides to total lipids ratio in medium LDL (%): FOM1 |
| SLDLPL_P_FOM1 | Phospholipids to total lipids ratio in small LDL (%): FOM1 |
| SLDLC_P_FOM1 | Total cholesterol to total lipids ratio in small LDL (%): FOM1 |
| SLDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in small LDL (%): FOM1 |
| SLDLFC_P_FOM1 | Free cholesterol to total lipids ratio in small LDL (%): FOM1 |
| SLDLTG_P_FOM1 | Triglycerides to total lipids ratio in small LDL (%): FOM1 |
| XLHDLPL_P_FOM1 | Phospholipids to total lipids ratio in very large HDL (%): FOM1 |
| XLHDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in very large HDL (%): FOM1 |
| XLHDLFC_P_FOM1 | Free cholesterol to total lipids ratio in very large HDL (%): FOM1 |
| XLHDLTG_P_FOM1 | Triglycerides to total lipids ratio in very large HDL (%): FOM1 |
| LHDLPL_P_FOM1 | Phospholipids to total lipids ratio in large HDL (%): FOM1 |
| LHDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in large HDL (%): FOM1 |
| LHDLFC_P_FOM1 | Free cholesterol to total lipids ratio in large HDL (%): FOM1 |
| LHDLTG_P_FOM1 | Triglycerides to total lipids ratio in large HDL (%): FOM1 |
| MHDLPL_P_FOM1 | Phospholipids to total lipids ratio in medium HDL (%): FOM1 |
| MHDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in medium HDL (%): FOM1 |
| MHDLFC_P_FOM1 | Free cholesterol to total lipids ratio in medium HDL (%): FOM1 |
| MHDLTG_P_FOM1 | Triglycerides to total lipids ratio in medium HDL (%): FOM1 |
| SHDLPL_P_FOM1 | Phospholipids to total lipids ratio in small HDL (%): FOM1 |
| SHDLCE_P_FOM1 | Cholesterol esters to total lipids ratio in small HDL (%): FOM1 |
| SHDLFC_P_FOM1 | Free cholesterol to total lipids ratio in small HDL (%): FOM1 |
| SHDLTG_P_FOM1 | Triglycerides to total lipids ratio in small HDL (%): FOM1 |
| VLDLD_FOM1 | Mean diameter for VLDL particles (nm): FOM1 |
| LDLD_FOM1 | Mean diameter for LDL particles (nm): FOM1 |
| HDLD_FOM1 | Mean diameter for HDL particles (nm): FOM1 |
| SerumC_FOM1 | Serum total cholesterol (mmol/l): FOM1 |
| VLDLC_FOM1 | Total cholesterol in VLDL (mmol/l): FOM1 |
| RemnantC_FOM1 | Remnant cholesterol (non-HDL, non-LDL -cholesterol) (mmol/l): FOM1 |
| LDLC_FOM1 | Total cholesterol in LDL (mmol/l): FOM1 |
| HDLC_FOM1 | Total cholesterol in HDL (mmol/l): FOM1 |
| HDL2C_FOM1 | Total cholesterol in HDL2 (mmol/l): FOM1 |

| | |
|----------------|--|
| HDL3C_FOM1 | Total cholesterol in HDL3 (mmol/l): FOM1 |
| EstC_FOM1 | Esterified cholesterol (mmol/l): FOM1 |
| FreeC_FOM1 | Free cholesterol (mmol/l): FOM1 |
| SerumTG_FOM1 | Serum total triglycerides (mmol/l): FOM1 |
| VLDLTG_FOM1 | Triglycerides in VLDL (mmol/l): FOM1 |
| LDLTG_FOM1 | Triglycerides in LDL (mmol/l): FOM1 |
| HDLTG_FOM1 | Triglycerides in HDL (mmol/l): FOM1 |
| DAG_FOM1 | Diacylglycerol (mmol/l): FOM1 |
| DAGTG_FOM1 | Ratio of diacylglycerol to triglycerides: FOM1 |
| TotPG_FOM1 | Total phosphoglycerides (mmol/l): FOM1 |
| TGPG_FOM1 | Ratio of triglycerides to phosphoglycerides: FOM1 |
| PC_FOM1 | Phosphatidylcholine and other cholines (mmol/l): FOM1 |
| TotCho_FOM1 | Total cholines (mmol/l): FOM1 |
| ApoA1_FOM1 | Apolipoprotein A-I (g/l): FOM1 |
| ApoB_FOM1 | Apolipoprotein B (g/l): FOM1 |
| ApoBApoA1_FOM1 | Ratio of apolipoprotein B to apolipoprotein A-I: FOM1 |
| TotFA_FOM1 | Total fatty acids (mmol/l): FOM1 |
| FALen_FOM1 | Estimated description of fatty acid chain length, not actual carbon number: FOM1 |
| UnsatDeg_FOM1 | Estimated degree of unsaturation: FOM1 |
| DHA_FOM1 | 22:6, docosahexaenoic acid (mmol/l): FOM1 |
| LA_FOM1 | 18:2, linoleic acid (mmol/l): FOM1 |
| CLA_FOM1 | Conjugated linoleic acid (mmol/l): FOM1 |
| FAw3_FOM1 | Omega-3 fatty acids (mmol/l): FOM1 |
| FAw6_FOM1 | Omega-6 fatty acids (mmol/l): FOM1 |
| PUFA_FOM1 | Polyunsaturated fatty acids (mmol/l): FOM1 |
| MUFA_FOM1 | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): FOM1 |
| SFA_FOM1 | Saturated fatty acids (mmol/l): FOM1 |
| DHAFA_FOM1 | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): FOM1 |
| LAFA_FOM1 | Ratio of 18:2 linoleic acid to total fatty acids (%): FOM1 |
| CLAFA_FOM1 | Ratio of conjugated linoleic acid to total fatty acids (%): FOM1 |
| FAw3FA_FOM1 | Ratio of omega-3 fatty acids to total fatty acids (%): FOM1 |
| FAw6FA_FOM1 | Ratio of omega-6 fatty acids to total fatty acids (%): FOM1 |
| PUFAFA_FOM1 | Ratio of polyunsaturated fatty acids to total fatty acids (%): FOM1 |
| MUFAFA_FOM1 | Ratio of monounsaturated fatty acids to total fatty acids (%): FOM1 |
| SFAFA_FOM1 | Ratio of saturated fatty acids to total fatty acids (%): FOM1 |
| Glc_FOM1 | Glucose (mmol/l): FOM1 |
| Lac_FOM1 | Lactate (mmol/l): FOM1 |
| Pyr_FOM1 | Pyruvate (mmol/l): FOM1 |
| Cit_FOM1 | Citrate (mmol/l): FOM1 |
| Ala_FOM1 | Alanine (mmol/l): FOM1 |
| Gln_FOM1 | Glutamine (mmol/l): FOM1 |
| His_FOM1 | Histidine (mmol/l): FOM1 |
| Ile_FOM1 | Isoleucine (mmol/l): FOM1 |
| Leu_FOM1 | Leucine (mmol/l): FOM1 |
| Val_FOM1 | Valine (mmol/l): FOM1 |

| | |
|----------------|--|
| Phe_FOM1 | Phenylalanine (mmol/l): FOM1 |
| Tyr_FOM1 | Tyrosine (mmol/l): FOM1 |
| Ace_FOM1 | Acetate (mmol/l): FOM1 |
| AcAce_FOM1 | Acetoacetate (mmol/l): FOM1 |
| bOHBut_FOM1 | 3-hydroxybutyrate (mmol/l): FOM1 |
| Crea_FOM1 | Creatinine (mmol/l): FOM1 |
| Alb_FOM1 | Albumin (signal area): FOM1 |
| Gp_FOM1 | Glycoprotein acetyls, mainly α 1-acid glycoprotein (mmol/l): FOM1 |
| Sphingo_FOM1 | Sphingomyelins (mmol/l): FOM1 |
| XXLVLDLP_FOM2 | Concentration of chylomicrons and extremely large VLDL particles (mol/l): FOM2 |
| XXLVLDLL_FOM2 | Total lipids in chylomicrons and extremely large VLDL (mmol/l): FOM2 |
| XXLVLDLPL_FOM2 | Phospholipids in chylomicrons and extremely large VLDL (mmol/l): FOM2 |
| XXLVLDLC_FOM2 | Total cholesterol in chylomicrons and extremely large VLDL (mmol/l): FOM2 |
| XXLVLDLCE_FOM2 | Cholesterol esters in chylomicrons and extremely large VLDL (mmol/l): FOM2 |
| XXLVLDLFC_FOM2 | Free cholesterol in chylomicrons and extremely large VLDL (mmol/l): FOM2 |
| XXLVLDLTG_FOM2 | Triglycerides in chylomicrons and extremely large VLDL (mmol/l): FOM2 |
| XLVLDLP_FOM2 | Concentration of very large VLDL particles (mol/l): FOM2 |
| XLVLDLL_FOM2 | Total lipids in very large VLDL (mmol/l): FOM2 |
| XLVLDLPL_FOM2 | Phospholipids in very large VLDL (mmol/l): FOM2 |
| XLVLDLC_FOM2 | Total cholesterol in very large VLDL (mmol/l): FOM2 |
| XLVLDLCE_FOM2 | Cholesterol esters in very large VLDL (mmol/l): FOM2 |
| XLVLDLFC_FOM2 | Free cholesterol in very large VLDL (mmol/l): FOM2 |
| XLVLDLTG_FOM2 | Triglycerides in very large VLDL (mmol/l): FOM2 |
| LVLDLP_FOM2 | Concentration of large VLDL particles (mol/l): FOM2 |
| LVLDLL_FOM2 | Total lipids in large VLDL (mmol/l): FOM2 |
| LVLDLPL_FOM2 | Phospholipids in large VLDL (mmol/l): FOM2 |
| LVLDLC_FOM2 | Total cholesterol in large VLDL (mmol/l): FOM2 |
| LVLDLCE_FOM2 | Cholesterol esters in large VLDL (mmol/l): FOM2 |
| LVLDLFC_FOM2 | Free cholesterol in large VLDL (mmol/l): FOM2 |
| LVLDLTG_FOM2 | Triglycerides in large VLDL (mmol/l): FOM2 |
| MVLDLP_FOM2 | Concentration of medium VLDL particles (mol/l): FOM2 |
| MVLDLL_FOM2 | Total lipids in medium VLDL (mmol/l): FOM2 |
| MVLDLPL_FOM2 | Phospholipids in medium VLDL (mmol/l): FOM2 |
| MVLDLC_FOM2 | Total cholesterol in medium VLDL (mmol/l): FOM2 |
| MVLDLCE_FOM2 | Cholesterol esters in medium VLDL (mmol/l): FOM2 |
| MVLDLFC_FOM2 | Free cholesterol in medium VLDL (mmol/l): FOM2 |
| MVLDLTG_FOM2 | Triglycerides in medium VLDL (mmol/l): FOM2 |
| SVLDLP_FOM2 | Concentration of small VLDL particles (mol/l): FOM2 |
| SVLDLL_FOM2 | Total lipids in small VLDL (mmol/l): FOM2 |
| SVLDLPL_FOM2 | Phospholipids in small VLDL (mmol/l): FOM2 |
| SVLDLC_FOM2 | Total cholesterol in small VLDL (mmol/l): FOM2 |
| SVLDLCE_FOM2 | Cholesterol esters in small VLDL (mmol/l): FOM2 |
| SVLDLFC_FOM2 | Free cholesterol in small VLDL (mmol/l): FOM2 |
| SVLDLTG_FOM2 | Triglycerides in small VLDL (mmol/l): FOM2 |
| XSVLDLP_FOM2 | Concentration of very small VLDL particles (mol/l): FOM2 |

| | |
|---------------|---|
| XSVLDLL_FOM2 | Total lipids in very small VLDL (mmol/l): FOM2 |
| XSVLDLPL_FOM2 | Phospholipids in very small VLDL (mmol/l): FOM2 |
| XSVLDLC_FOM2 | Total cholesterol in very small VLDL (mmol/l): FOM2 |
| XSVLDLCE_FOM2 | Cholesterol esters in very small VLDL (mmol/l): FOM2 |
| XSVLDLFC_FOM2 | Free cholesterol in very small VLDL (mmol/l): FOM2 |
| XSVDLTG_FOM2 | Triglycerides in very small VLDL (mmol/l): FOM2 |
| IDL_P_FOM2 | Concentration of IDL particles (mol/l): FOM2 |
| IDL_FOM2 | Total lipids in IDL (mmol/l): FOM2 |
| IDLPL_FOM2 | Phospholipids in IDL (mmol/l): FOM2 |
| IDLC_FOM2 | Total cholesterol in IDL (mmol/l): FOM2 |
| IDLCE_FOM2 | Cholesterol esters in IDL (mmol/l): FOM2 |
| IDLFC_FOM2 | Free cholesterol in IDL (mmol/l): FOM2 |
| IDLTG_FOM2 | Triglycerides in IDL (mmol/l): FOM2 |
| LLDLP_FOM2 | Concentration of large LDL particles (mol/l): FOM2 |
| LLDLL_FOM2 | Total lipids in large LDL (mmol/l): FOM2 |
| LLDLPL_FOM2 | Phospholipids in large LDL (mmol/l): FOM2 |
| LLDLC_FOM2 | Total cholesterol in large LDL (mmol/l): FOM2 |
| LLDLCE_FOM2 | Cholesterol esters in large LDL (mmol/l): FOM2 |
| LLDLFC_FOM2 | Free cholesterol in large LDL (mmol/l): FOM2 |
| LLDLTG_FOM2 | Triglycerides in large LDL (mmol/l): FOM2 |
| MLDLP_FOM2 | Concentration of medium LDL particles (mol/l): FOM2 |
| MLDLL_FOM2 | Total lipids in medium LDL (mmol/l): FOM2 |
| MLDLPL_FOM2 | Phospholipids in medium LDL (mmol/l): FOM2 |
| MLDLC_FOM2 | Total cholesterol in medium LDL (mmol/l): FOM2 |
| MLDLCE_FOM2 | Cholesterol esters in medium LDL (mmol/l): FOM2 |
| MLDLFC_FOM2 | Free cholesterol in medium LDL (mmol/l): FOM2 |
| MLDLTG_FOM2 | Triglycerides in medium LDL (mmol/l): FOM2 |
| SLDLP_FOM2 | Concentration of small LDL particles (mol/l): FOM2 |
| SLDLL_FOM2 | Total lipids in small LDL (mmol/l): FOM2 |
| SLDLPL_FOM2 | Phospholipids in small LDL (mmol/l): FOM2 |
| SLDLC_FOM2 | Total cholesterol in small LDL (mmol/l): FOM2 |
| SLDLCE_FOM2 | Cholesterol esters in small LDL (mmol/l): FOM2 |
| SLDLFC_FOM2 | Free cholesterol in small LDL (mmol/l): FOM2 |
| SLDLTG_FOM2 | Triglycerides in small LDL (mmol/l): FOM2 |
| XLHDLP_FOM2 | Concentration of very large HDL particles (mol/l): FOM2 |
| XLHDLL_FOM2 | Total lipids in very large HDL (mmol/l): FOM2 |
| XLHDLPL_FOM2 | Phospholipids in very large HDL (mmol/l): FOM2 |
| XLHDL_C_FOM2 | Total cholesterol in very large HDL (mmol/l): FOM2 |
| XLHDLCE_FOM2 | Cholesterol esters in very large HDL (mmol/l): FOM2 |
| XLHDLFC_FOM2 | Free cholesterol in very large HDL (mmol/l): FOM2 |
| XLHDLTG_FOM2 | Triglycerides in very large HDL (mmol/l): FOM2 |
| LHDLP_FOM2 | Concentration of large HDL particles (mol/l): FOM2 |
| LHDLL_FOM2 | Total lipids in large HDL (mmol/l): FOM2 |
| LHDLPL_FOM2 | Phospholipids in large HDL (mmol/l): FOM2 |
| LHDL_C_FOM2 | Total cholesterol in large HDL (mmol/l): FOM2 |

| | |
|------------------|---|
| LHDLCE_FOM2 | Cholesterol esters in large HDL (mmol/l): FOM2 |
| LHDLFC_FOM2 | Free cholesterol in large HDL (mmol/l): FOM2 |
| LHDLTG_FOM2 | Triglycerides in large HDL (mmol/l): FOM2 |
| MHDLP_FOM2 | Concentration of medium HDL particles (mol/l): FOM2 |
| MHDLL_FOM2 | Total lipids in medium HDL (mmol/l): FOM2 |
| MHDLPL_FOM2 | Phospholipids in medium HDL (mmol/l): FOM2 |
| MHDL_C_FOM2 | Total cholesterol in medium HDL (mmol/l): FOM2 |
| MHDLCE_FOM2 | Cholesterol esters in medium HDL (mmol/l): FOM2 |
| MHDLFC_FOM2 | Free cholesterol in medium HDL (mmol/l): FOM2 |
| MHDLTG_FOM2 | Triglycerides in medium HDL (mmol/l): FOM2 |
| SHDLP_FOM2 | Concentration of small HDL particles (mol/l): FOM2 |
| SHDLL_FOM2 | Total lipids in small HDL (mmol/l): FOM2 |
| SHDLPL_FOM2 | Phospholipids in small HDL (mmol/l): FOM2 |
| SHDL_C_FOM2 | Total cholesterol in small HDL (mmol/l): FOM2 |
| SHDLCE_FOM2 | Cholesterol esters in small HDL (mmol/l): FOM2 |
| SHDLFC_FOM2 | Free cholesterol in small HDL (mmol/l): FOM2 |
| SHDLTG_FOM2 | Triglycerides in small HDL (mmol/l): FOM2 |
| XXLVLDLPL_P_FOM2 | Phospholipids to total lipids ratio in chylomicrons and XXL VLDL (%): FOM2 |
| XXLVLDLC_P_FOM2 | Total cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): FOM2 |
| XXLVLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in chylomicrons and XXL VLDL (%): FOM2 |
| XXLVLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in chylomicrons and XXL VLDL (%): FOM2 |
| XXLVLDLTG_P_FOM2 | Triglycerides to total lipids ratio in chylomicrons and XXL VLDL (%): FOM2 |
| XLVLDLPL_P_FOM2 | Phospholipids to total lipids ratio in very large VLDL (%): FOM2 |
| XLVLDLC_P_FOM2 | Total cholesterol to total lipids ratio in very large VLDL (%): FOM2 |
| XLVLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in very large VLDL (%): FOM2 |
| XLVLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in very large VLDL (%): FOM2 |
| XLVLDLTG_P_FOM2 | Triglycerides to total lipids ratio in very large VLDL (%): FOM2 |
| LVLDLPL_P_FOM2 | Phospholipids to total lipids ratio in large VLDL (%): FOM2 |
| LVLDLC_P_FOM2 | Total cholesterol to total lipids ratio in large VLDL (%): FOM2 |
| LVLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in large VLDL (%): FOM2 |
| LVLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in large VLDL (%): FOM2 |
| LVLDLTG_P_FOM2 | Triglycerides to total lipids ratio in large VLDL (%): FOM2 |
| MVLDLPL_P_FOM2 | Phospholipids to total lipids ratio in medium VLDL (%): FOM2 |
| MVLDLC_P_FOM2 | Total cholesterol to total lipids ratio in medium VLDL (%): FOM2 |
| MVLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in medium VLDL (%): FOM2 |
| MVLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in medium VLDL (%): FOM2 |
| MVLDLTG_P_FOM2 | Triglycerides to total lipids ratio in medium VLDL (%): FOM2 |
| SVLDLPL_P_FOM2 | Phospholipids to total lipids ratio in small VLDL (%): FOM2 |
| SVLDLC_P_FOM2 | Total cholesterol to total lipids ratio in small VLDL (%): FOM2 |
| SVLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in small VLDL (%): FOM2 |
| SVLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in small VLDL (%): FOM2 |
| SVLDLTG_P_FOM2 | Triglycerides to total lipids ratio in small VLDL (%): FOM2 |
| XSVLDLPL_P_FOM2 | Phospholipids to total lipids ratio in very small VLDL (%): FOM2 |
| XSVLDLC_P_FOM2 | Total cholesterol to total lipids ratio in very small VLDL (%): FOM2 |
| XSVLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in very small VLDL (%): FOM2 |

| | |
|-----------------|--|
| XSVLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in very small VLDL (%): FOM2 |
| XSVDLTG_P_FOM2 | Triglycerides to total lipids ratio in very small VLDL (%): FOM2 |
| IDLPL_P_FOM2 | Phospholipids to total lipids ratio in IDL (%): FOM2 |
| IDLC_P_FOM2 | Total cholesterol to total lipids ratio in IDL (%): FOM2 |
| IDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in IDL (%): FOM2 |
| IDLFC_P_FOM2 | Free cholesterol to total lipids ratio in IDL (%): FOM2 |
| IDLTG_P_FOM2 | Triglycerides to total lipids ratio in IDL (%): FOM2 |
| LLDLPL_P_FOM2 | Phospholipids to total lipids ratio in large LDL (%): FOM2 |
| LLDLC_P_FOM2 | Total cholesterol to total lipids ratio in large LDL (%): FOM2 |
| LLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in large LDL (%): FOM2 |
| LLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in large LDL (%): FOM2 |
| LLDLTG_P_FOM2 | Triglycerides to total lipids ratio in large LDL (%): FOM2 |
| MLDLPL_P_FOM2 | Phospholipids to total lipids ratio in medium LDL (%): FOM2 |
| MLDLC_P_FOM2 | Total cholesterol to total lipids ratio in medium LDL (%): FOM2 |
| MLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in medium LDL (%): FOM2 |
| MLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in medium LDL (%): FOM2 |
| MLDLTG_P_FOM2 | Triglycerides to total lipids ratio in medium LDL (%): FOM2 |
| SLDLPL_P_FOM2 | Phospholipids to total lipids ratio in small LDL (%): FOM2 |
| SLDLC_P_FOM2 | Total cholesterol to total lipids ratio in small LDL (%): FOM2 |
| SLDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in small LDL (%): FOM2 |
| SLDLFC_P_FOM2 | Free cholesterol to total lipids ratio in small LDL (%): FOM2 |
| SLDLTG_P_FOM2 | Triglycerides to total lipids ratio in small LDL (%): FOM2 |
| XLHDLPL_P_FOM2 | Phospholipids to total lipids ratio in very large HDL (%): FOM2 |
| XLHDLCL_P_FOM2 | Total cholesterol to total lipids ratio in very large HDL (%): FOM2 |
| XLHDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in very large HDL (%): FOM2 |
| XLHDLFC_P_FOM2 | Free cholesterol to total lipids ratio in very large HDL (%): FOM2 |
| XLHDLTG_P_FOM2 | Triglycerides to total lipids ratio in very large HDL (%): FOM2 |
| LHDLPL_P_FOM2 | Phospholipids to total lipids ratio in large HDL (%): FOM2 |
| LHDLCL_P_FOM2 | Total cholesterol to total lipids ratio in large HDL (%): FOM2 |
| LHDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in large HDL (%): FOM2 |
| LHDLFC_P_FOM2 | Free cholesterol to total lipids ratio in large HDL (%): FOM2 |
| LHDLTG_P_FOM2 | Triglycerides to total lipids ratio in large HDL (%): FOM2 |
| MHDLPL_P_FOM2 | Phospholipids to total lipids ratio in medium HDL (%): FOM2 |
| MHDLCL_P_FOM2 | Total cholesterol to total lipids ratio in medium HDL (%): FOM2 |
| MHDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in medium HDL (%): FOM2 |
| MHDLFC_P_FOM2 | Free cholesterol to total lipids ratio in medium HDL (%): FOM2 |
| MHDLTG_P_FOM2 | Triglycerides to total lipids ratio in medium HDL (%): FOM2 |
| SHDLPL_P_FOM2 | Phospholipids to total lipids ratio in small HDL (%): FOM2 |
| SHDLCL_P_FOM2 | Total cholesterol to total lipids ratio in small HDL (%): FOM2 |
| SHDLCE_P_FOM2 | Cholesterol esters to total lipids ratio in small HDL (%): FOM2 |
| SHDLFC_P_FOM2 | Free cholesterol to total lipids ratio in small HDL (%): FOM2 |
| SHDLTG_P_FOM2 | Triglycerides to total lipids ratio in small HDL (%): FOM2 |
| VLDDL_FOM2 | Mean diameter for VLDL particles (nm): FOM2 |
| LDLD_FOM2 | Mean diameter for LDL particles (nm): FOM2 |
| HDLD_FOM2 | Mean diameter for HDL particles (nm): FOM2 |

| | |
|----------------|--|
| SerumC_FOM2 | Serum total cholesterol (mmol/l): FOM2 |
| VLDLC_FOM2 | Total cholesterol in VLDL (mmol/l): FOM2 |
| RemnantC_FOM2 | Remnant cholesterol (non-HDL & non-LDL-cholesterol) (mmol/l): FOM2 |
| LDLC_FOM2 | Total cholesterol in LDL (mmol/l): FOM2 |
| HDLC_FOM2 | Total cholesterol in HDL (mmol/l): FOM2 |
| HDL2C_FOM2 | Total cholesterol in HDL2 (mmol/l): FOM2 |
| HDL3C_FOM2 | Total cholesterol in HDL3 (mmol/l): FOM2 |
| EstC_FOM2 | Esterified cholesterol (mmol/l): FOM2 |
| FreeC_FOM2 | Free cholesterol (mmol/l): FOM2 |
| SerumTG_FOM2 | Serum total triglycerides (mmol/l): FOM2 |
| VLDLTG_FOM2 | Triglycerides in VLDL (mmol/l): FOM2 |
| LDLTG_FOM2 | Triglycerides in LDL (mmol/l): FOM2 |
| HDLTG_FOM2 | Triglycerides in HDL (mmol/l): FOM2 |
| DAG_FOM2 | Diacylglycerol (mmol/l): FOM2 |
| DAGTG_FOM2 | Ratio of diacylglycerol to triglycerides: FOM2 |
| TotPG_FOM2 | Total phosphoglycerides (mmol/l): FOM2 |
| TGPG_FOM2 | Ratio of triglycerides to phosphoglycerides: FOM2 |
| PC_FOM2 | Phosphatidylcholine and other cholines (mmol/l): FOM2 |
| TotCho_FOM2 | Total cholines (mmol/l): FOM2 |
| ApoA1_FOM2 | Apolipoprotein A-I (g/l): FOM2 |
| ApoB_FOM2 | Apolipoprotein B (g/l): FOM2 |
| ApoBApoA1_FOM2 | Ratio of apolipoprotein B to apolipoprotein A-I: FOM2 |
| TotFA_FOM2 | Total fatty acids (mmol/l): FOM2 |
| FALen_FOM2 | Estimated description of fatty acid chain length (not actual carbon no.): FOM2 |
| UnsatDeg_FOM2 | Estimated degree of unsaturation: FOM2 |
| DHA_FOM2 | 22:6, docosahexaenoic acid (mmol/l): FOM2 |
| LA_FOM2 | 18:2, linoleic acid (mmol/l): FOM2 |
| CLA_FOM2 | Conjugated linoleic acid (mmol/l): FOM2 |
| FAw3_FOM2 | Omega-3 fatty acids (mmol/l): FOM2 |
| FAw6_FOM2 | Omega-6 fatty acids (mmol/l): FOM2 |
| PUFA_FOM2 | Polyunsaturated fatty acids (mmol/l): FOM2 |
| MUFA_FOM2 | Monounsaturated fatty acids; 16:1, 18:1 (mmol/l): FOM2 |
| SFA_FOM2 | Saturated fatty acids (mmol/l): FOM2 |
| DHAFA_FOM2 | Ratio of 22:6 docosahexaenoic acid to total fatty acids (%): FOM2 |
| LAFA_FOM2 | Ratio of 18:2 linoleic acid to total fatty acids (%): FOM2 |
| CLAFA_FOM2 | Ratio of conjugated linoleic acid to total fatty acids (%): FOM2 |
| FAw3FA_FOM2 | Ratio of omega-3 fatty acids to total fatty acids (%): FOM2 |
| FAw6FA_FOM2 | Ratio of omega-6 fatty acids to total fatty acids (%): FOM2 |
| PUFAFA_FOM2 | Ratio of polyunsaturated fatty acids to total fatty acids (%): FOM2 |
| MUFAFA_FOM2 | Ratio of monounsaturated fatty acids to total fatty acids (%): FOM2 |
| SFAFA_FOM2 | Ratio of saturated fatty acids to total fatty acids (%): FOM2 |
| Glc_FOM2 | Glucose (mmol/l): FOM2 |
| Lac_FOM2 | Lactate (mmol/l): FOM2 |
| Pyr_FOM2 | Pyruvate (mmol/l): FOM2 |
| Cit_FOM2 | Citrate (mmol/l): FOM2 |

| | |
|--------------|--|
| Ala_FOM2 | Alanine (mmol/l): FOM2 |
| Gln_FOM2 | Glutamine (mmol/l): FOM2 |
| His_FOM2 | Histidine (mmol/l): FOM2 |
| Ile_FOM2 | Isoleucine (mmol/l): FOM2 |
| Leu_FOM2 | Leucine (mmol/l): FOM2 |
| Val_FOM2 | Valine (mmol/l): FOM2 |
| Phe_FOM2 | Phenylalanine (mmol/l): FOM2 |
| Tyr_FOM2 | Tyrosine (mmol/l): FOM2 |
| Ace_FOM2 | Acetate (mmol/l): FOM2 |
| AcAce_FOM2 | Acetoacetate (mmol/l): FOM2 |
| bOHBut_FOM2 | 3-hydroxybutyrate (mmol/l): FOM2 |
| Crea_FOM2 | Creatinine (mmol/l): FOM2 |
| Alb_FOM2 | Albumin (signal area): FOM2 |
| Gp_FOM2 | Glycoprotein acetyls, mainly a1-acid glycoprotein (mmol/l): FOM2 |
| Sphingo_FOM2 | Sphingomyelins (mmol/l): FOM2 |

ALSPAC M1&M2

Metabolic measures
January 23, 2014



Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting)



ALSPAC M1 (N=4530)



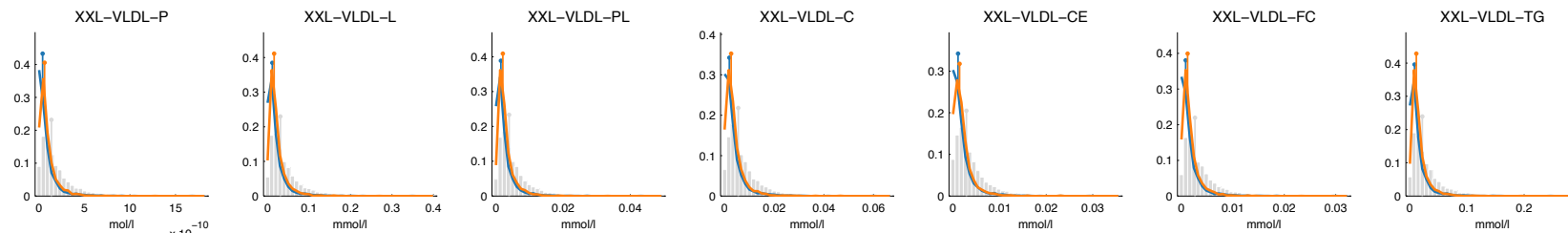
ALSPAC M2 (N=2795)

median

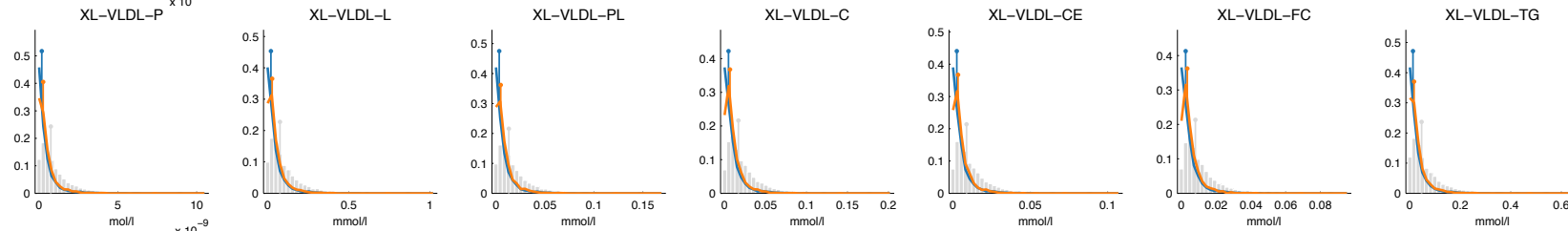
Distributions

Lipoprotein subclasses

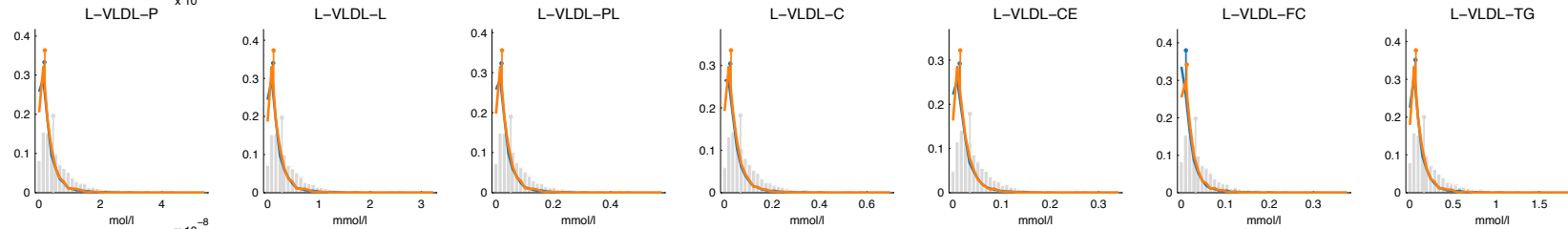
XXL-VLDL



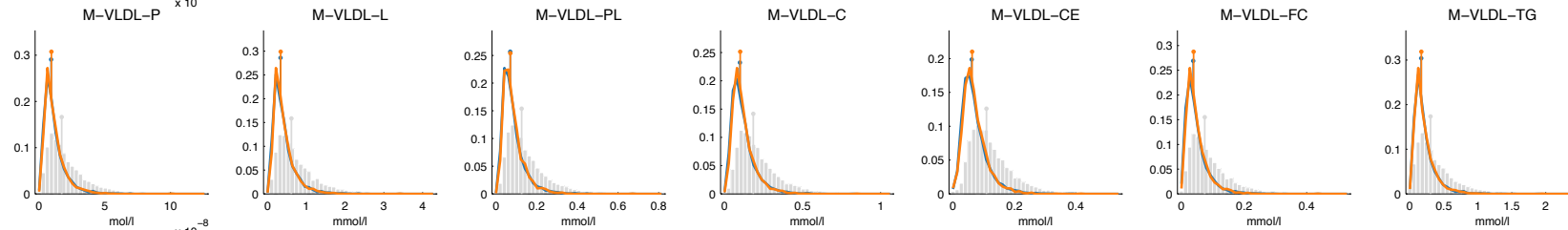
XL-VLDL



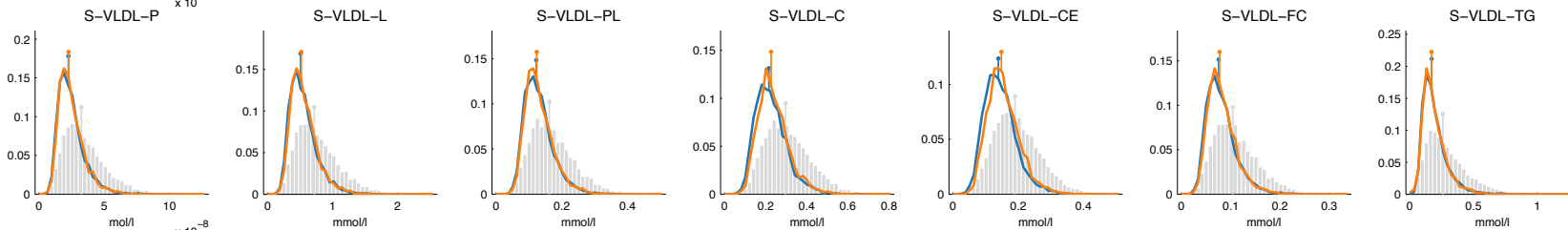
L-VLDL



M-VLDL



S-VLDL



ALSPAC M1&M2

Metabolic measures
January 23, 2014



Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting)



ALSPAC M1 (N=4530)

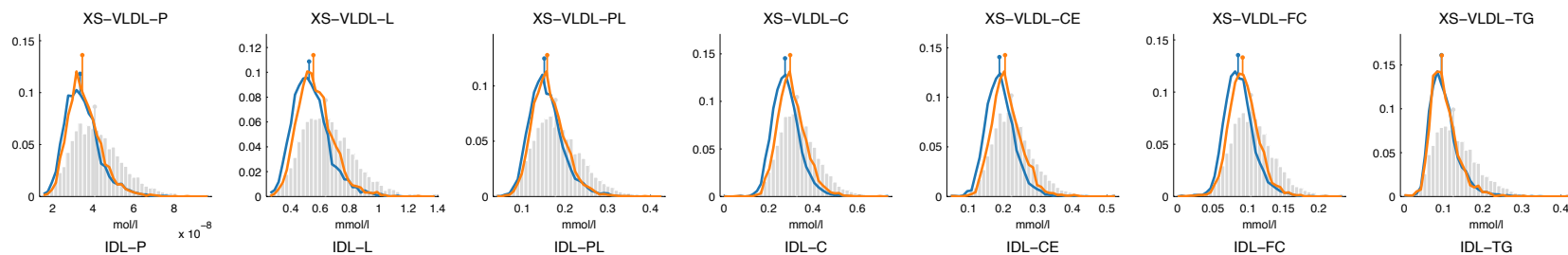


ALSPAC M2 (N=2795)

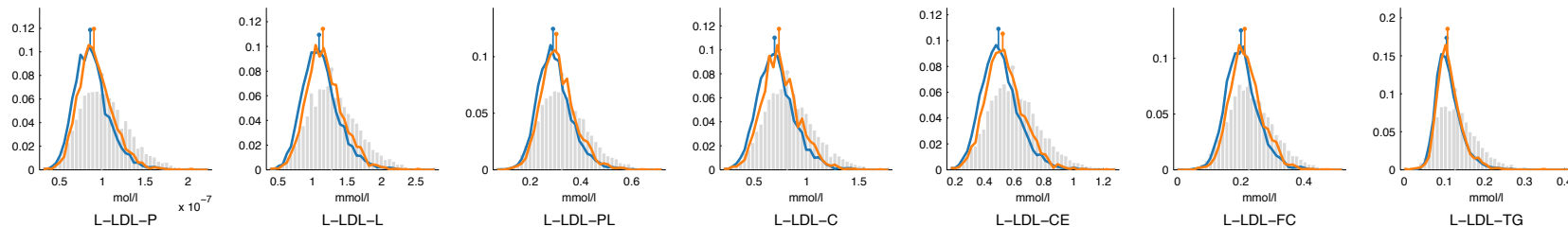
median

Distributions

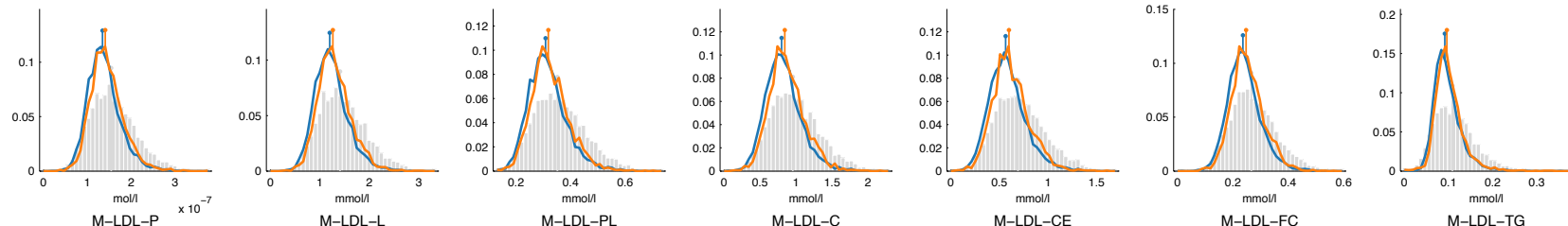
XS-VLDL



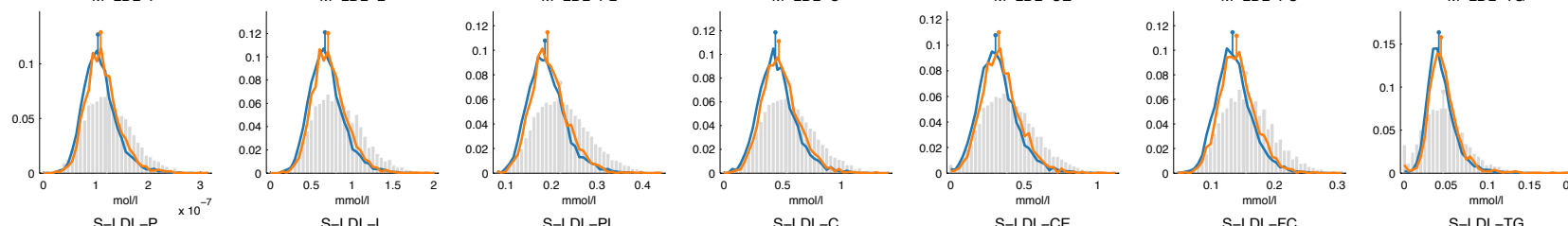
IDL



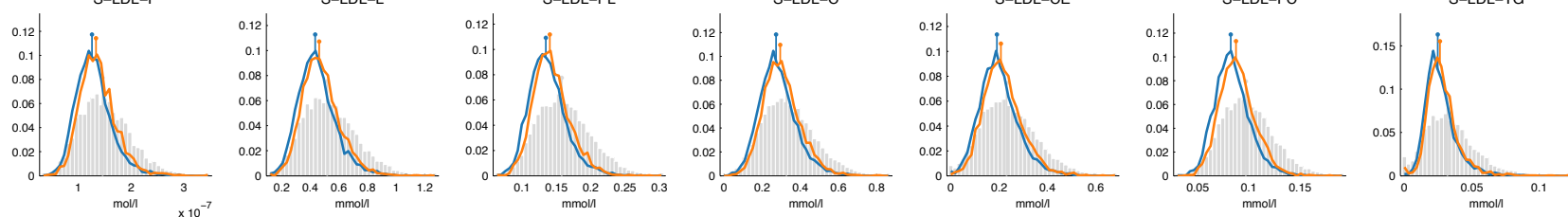
L-LDL



M-LDL



S-LDL



ALSPAC M1&M2

Metabolic measures
January 23, 2014

Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting)



ALSPAC M1 (N=4530)

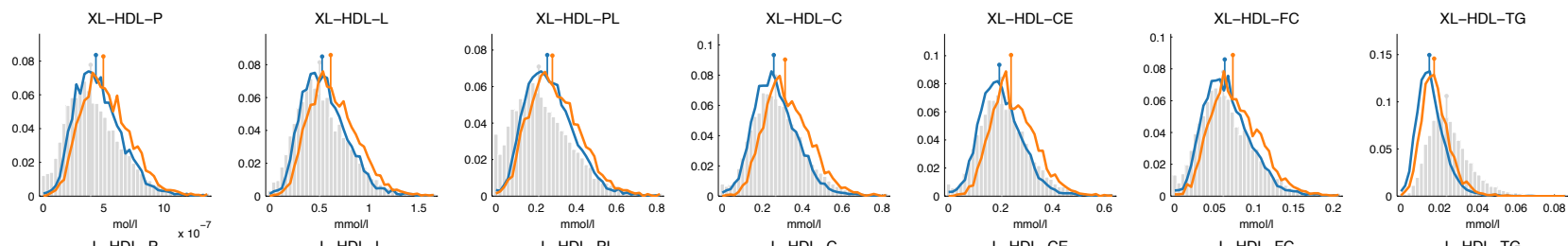


ALSPAC M2 (N=2795)

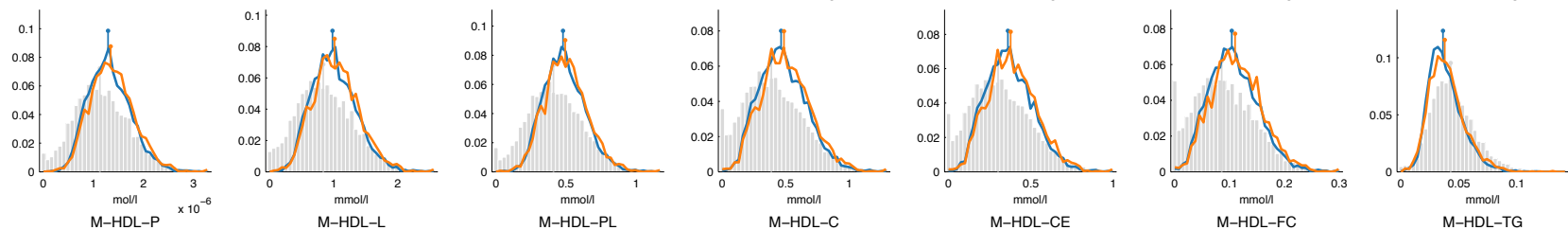
median

Distributions

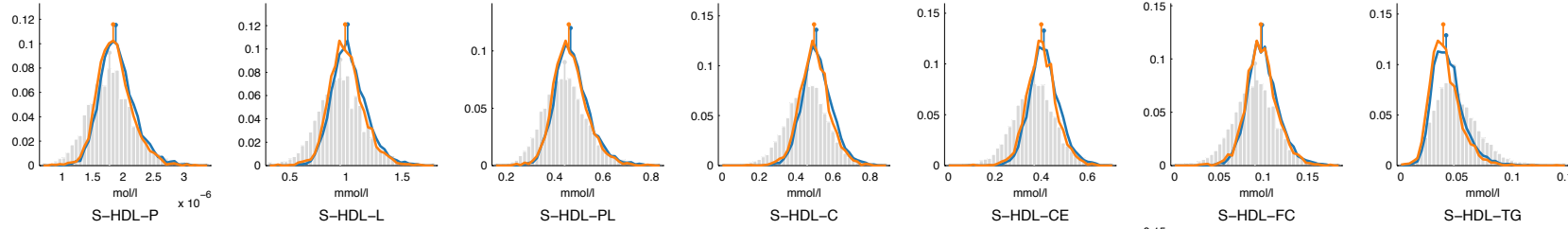
XL-HDL



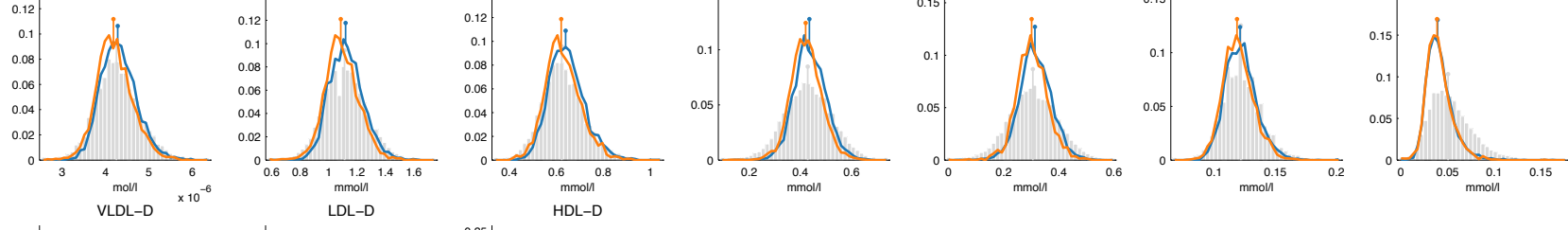
L-HDL



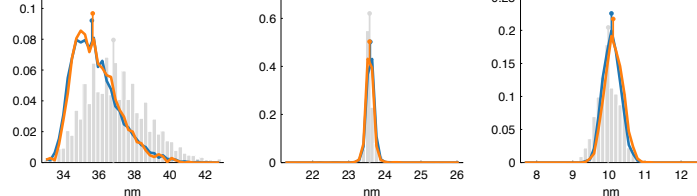
M-HDL



S-HDL



Lipoprotein
particle size



ALSPAC M1&M2

Metabolic measures
January 23, 2014



Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting)



ALSPAC M1 (N=4530)

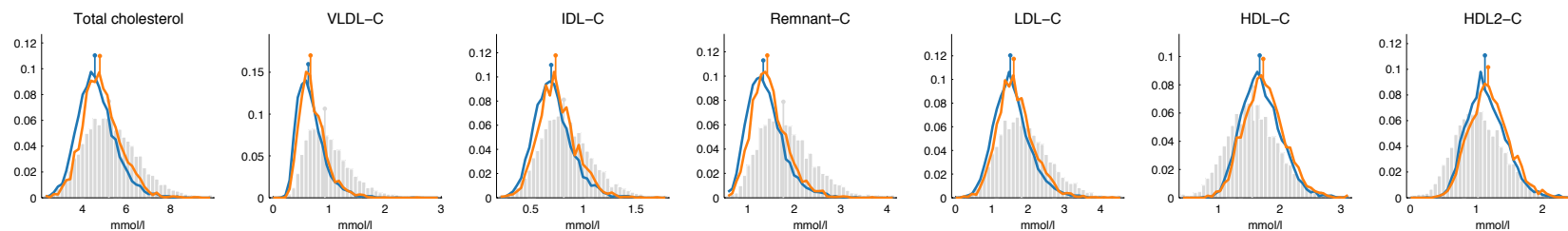


ALSPAC M2 (N=2795)

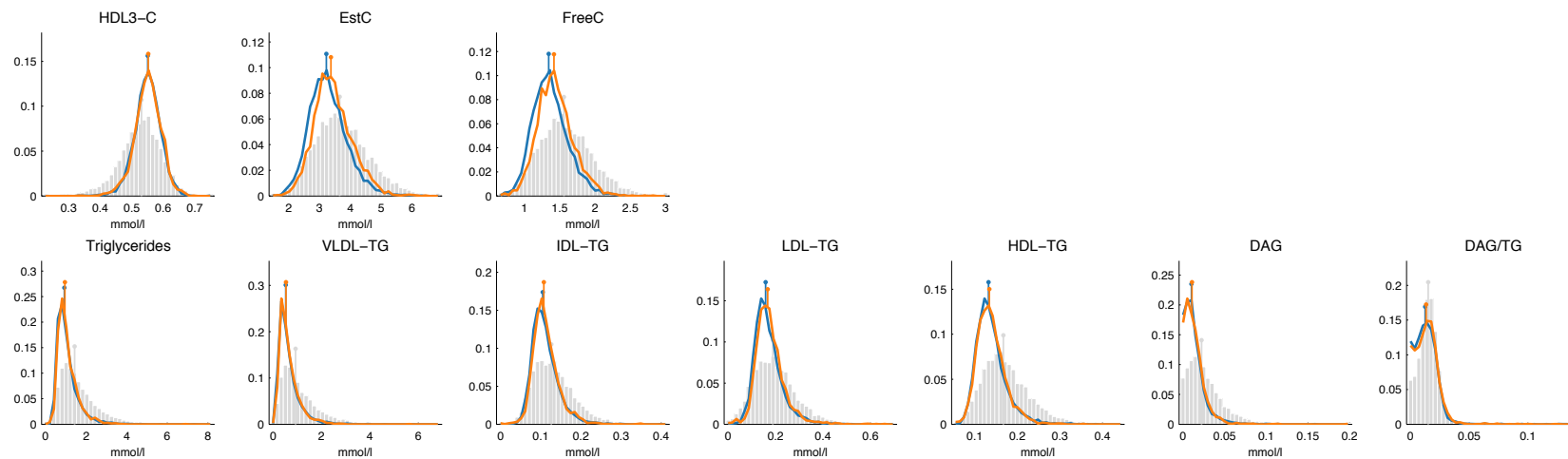
median

Distributions

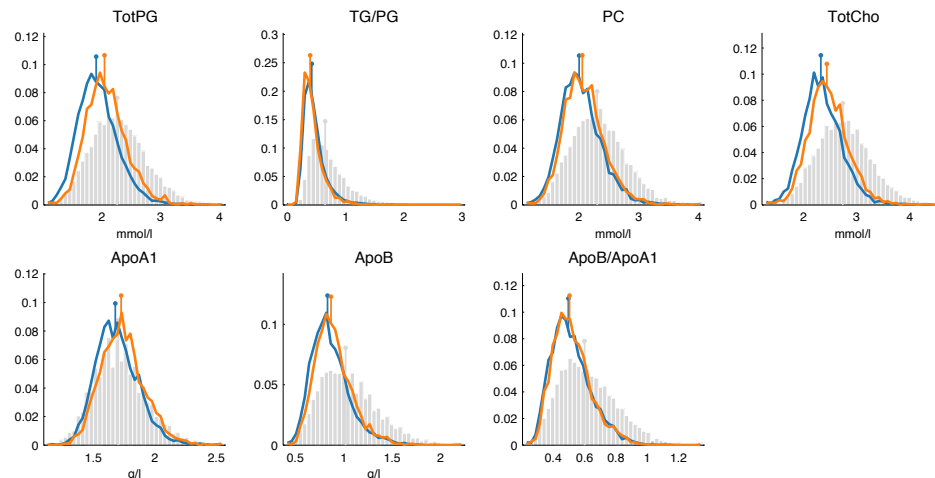
Cholesterol



Glycerides and phospholipids



Apolipoproteins



ALSPAC M1&M2

Metabolic measures
January 23, 2014

 Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting)



ALSPAC M1 (N=4530)

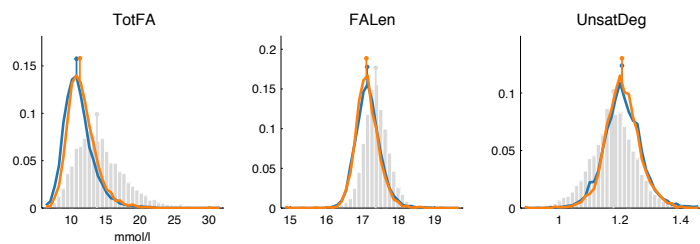


ALSPAC M2 (N=2795)

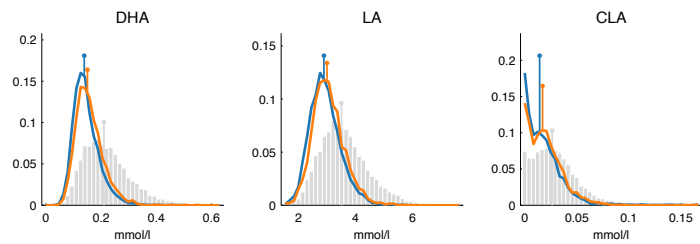
 median

Distributions

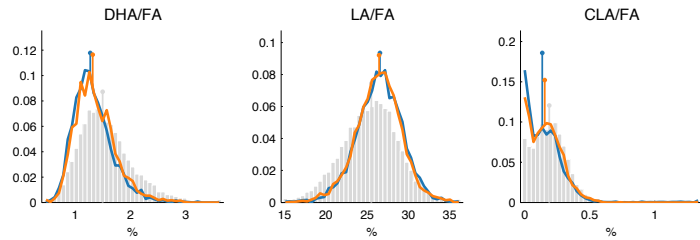
Total fatty acids
and saturation
measures



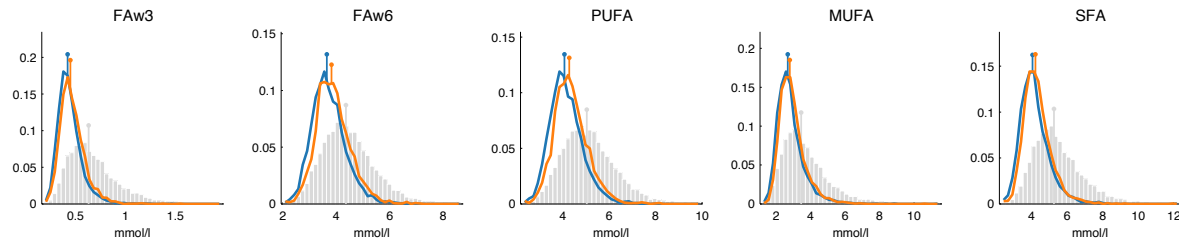
Fatty acids



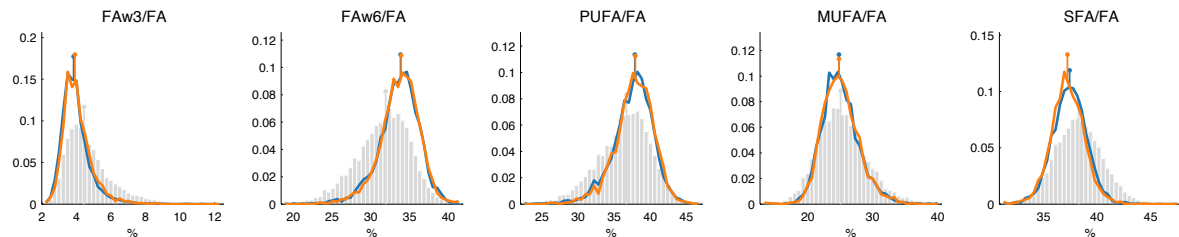
Fatty acids (%)



Fatty acids by
saturation



Fatty acids by
saturation (%)



ALSPAC M1&M2

Metabolic measures
January 23, 2014

 Reference population sample (N~10000, EDTA plasma, all ages, males and females, non-fasting)



ALSPAC M1 (N=4530)

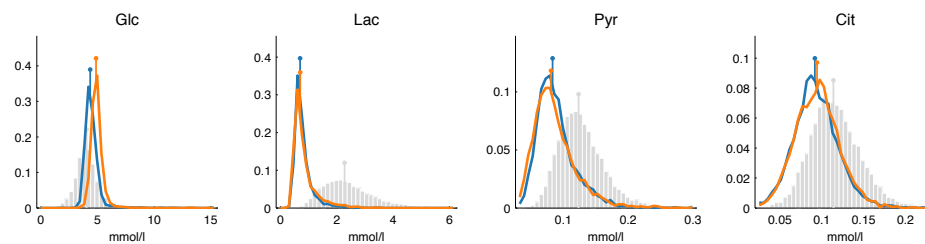


ALSPAC M2 (N=2795)

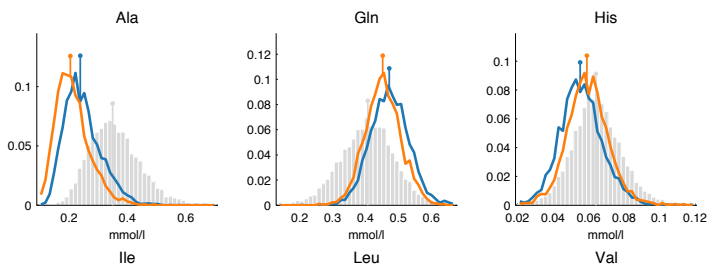
 median

Distributions

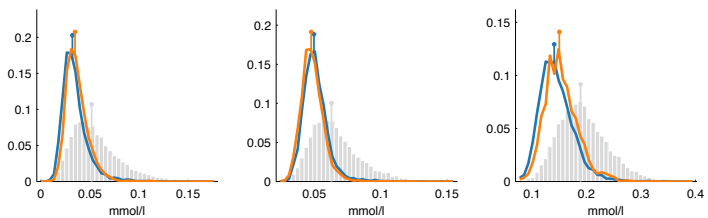
Glycolysis
related
metabolites



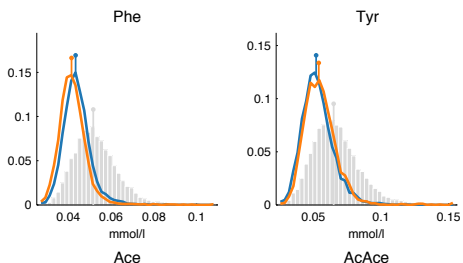
Amino acids



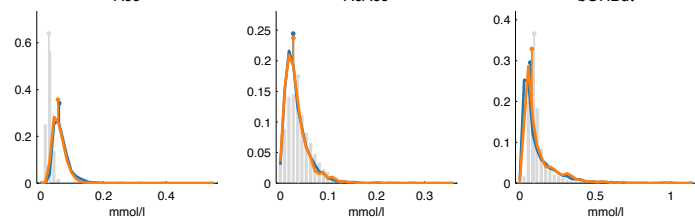
*Branched-chain
amino acids*



*Aromatic
amino acids*

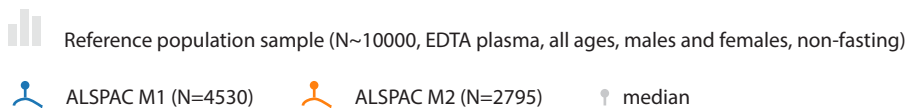


Ketone bodies



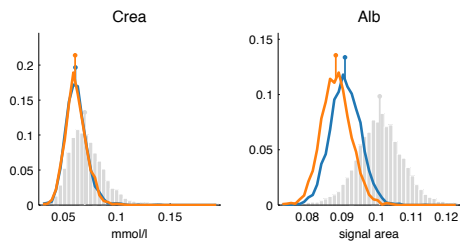
ALSPAC M1&M2

Metabolic measures
January 23, 2014



Distributions

Fluid balance



Inflammation

