

## Description of Additional Supplementary Files

### Title: Supplementary Data 1

Description: Serum concentrations of lipoproteins, lipids and metabolites in study 1 (72h fed untreated or fasting treated with leptin or placebo) Data are presented as Mean  $\pm$  SE. Mixed model was performed adjusted for baseline. P-values are presented for parameter "Group" i.e. Fed, Fasting+Placebo, Fasting+Leptin in mixed model; parameter "Time" i.e. 0,1,2,3 completed days of fasting; interaction of the two parameters. By p in mixed model (parameter group or group\*time)  $<0.05$ , post-hoc Bonferroni test was performed between the estimated means of the three groups. "a" indicates p-value $<0.05$  for Fed vs Fasting+Placebo; "b" indicates p-value $<0.05$  for Fed vs Fasting+Leptin; "c" indicates p-value $<0.05$  for Fasting+Placebo vs Fasting+Leptin. "Processed" data set, as defined in statistical analysis section was used.

### Title: Supplementary Data 2

Description: Description of all the identified metabolites included in this study