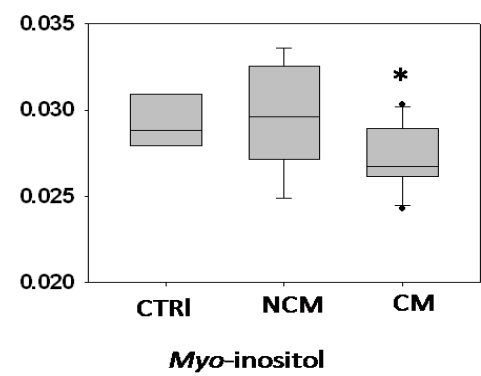
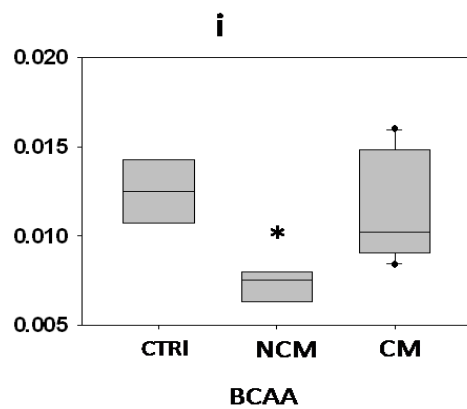
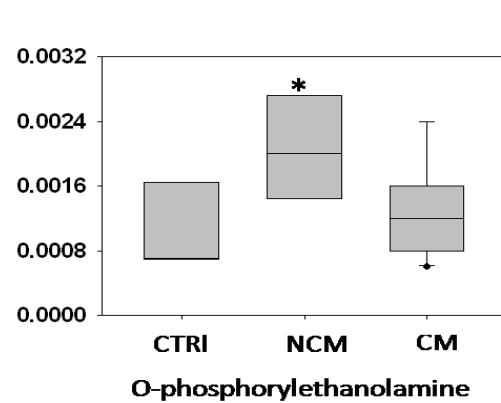
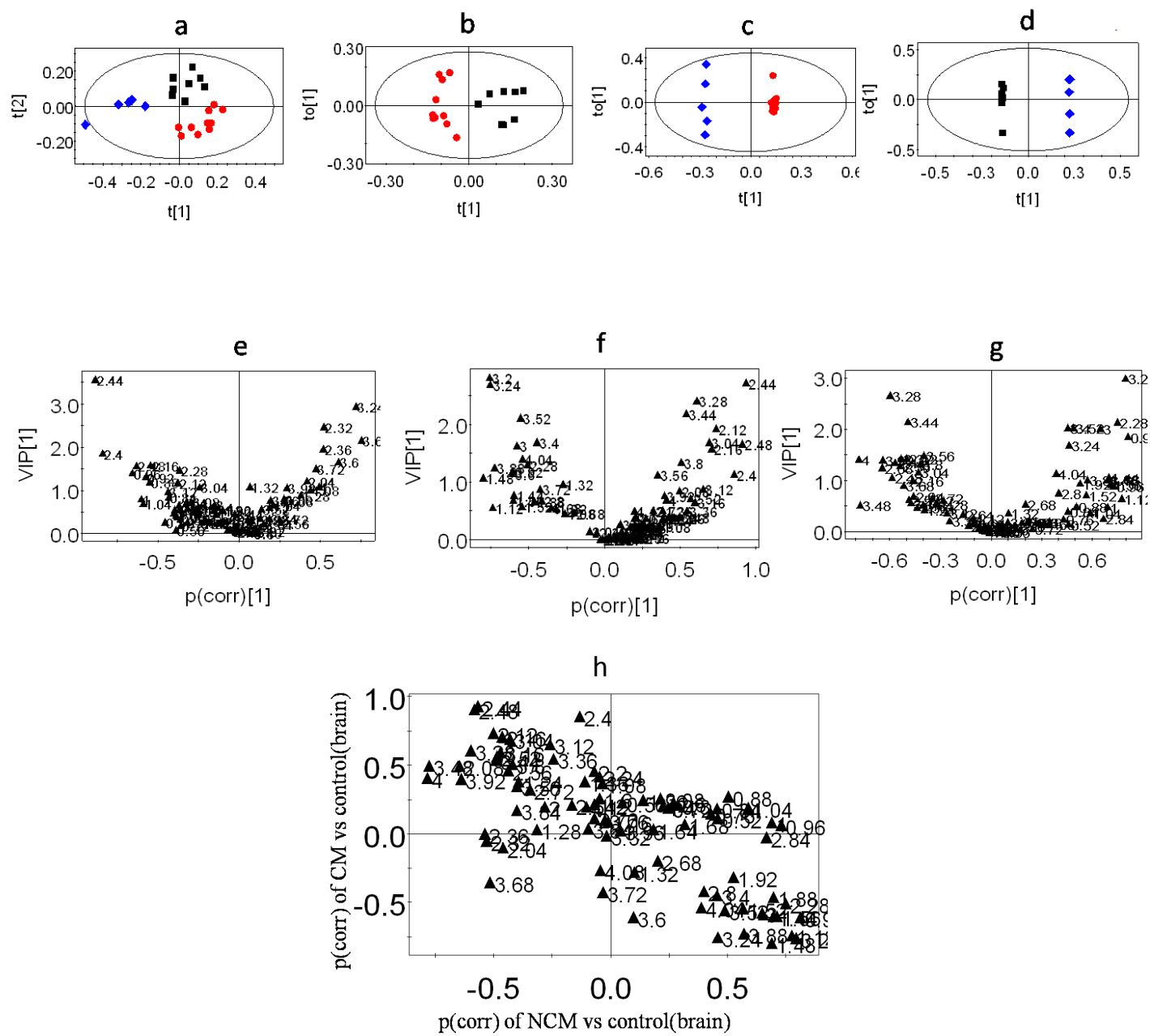
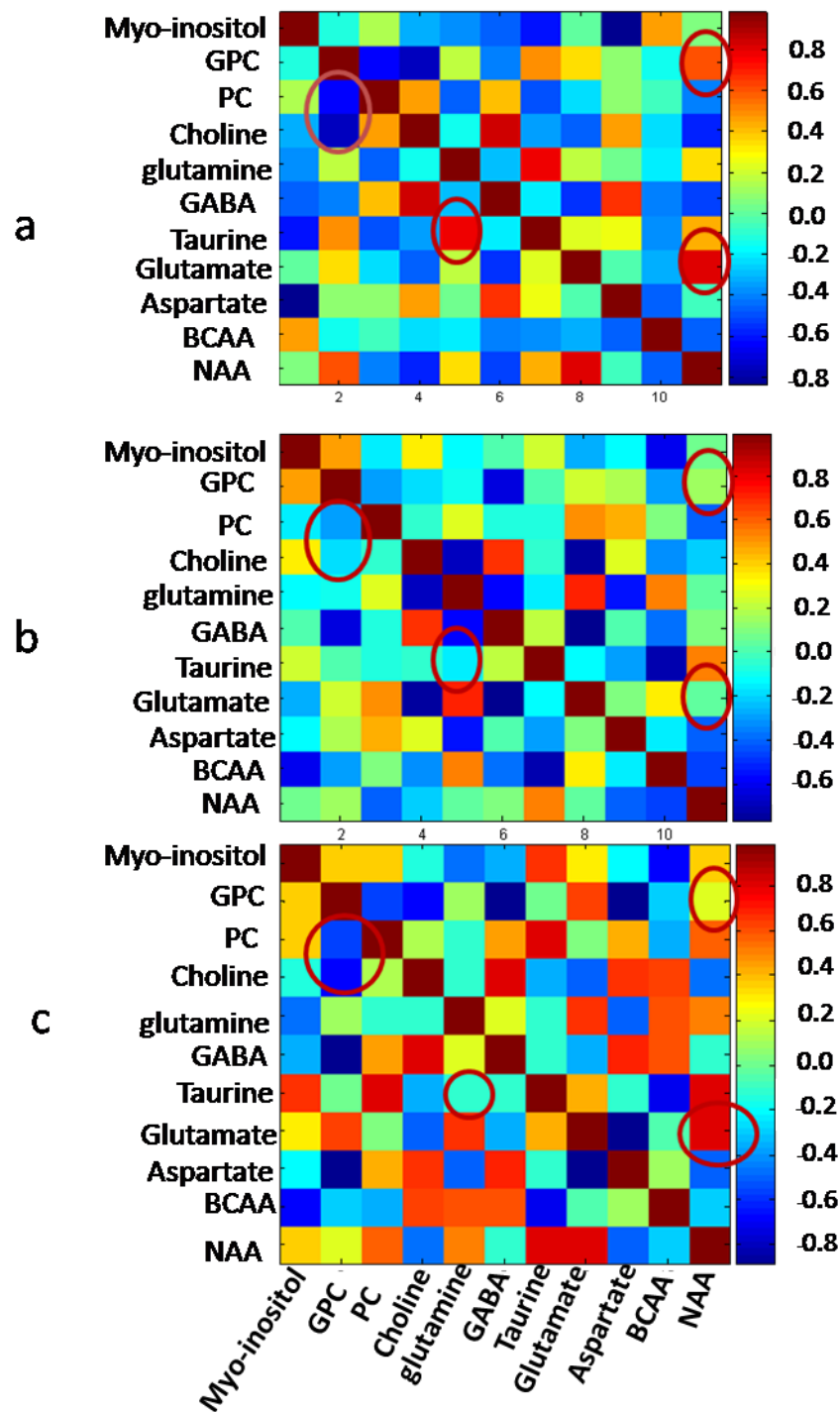


Supplementary 1. OPLS-DA scores and loadings of ^1H NMR spectra of serum samples of C57BL/6 female mice infected with PbA. (a) Scores of CM, NCM and uninfected control mice of the three experiments together, (b) scores of CM and NCM of Experiment 1, (c) loadings S plot of (b), (d) predicted scores of CM and NCM of Experiment 2 based on the Experiment 1, (e) scores of the Experiment 2, (f) loadings S plot of (e). Symbols: red CM, black – NCM and blue – control. The ellipse in the scores is a 95% Hotelling T^2 ellipse. (g-A) SUS plot of p(corr) values of the model of CM and control mice vs p(corr) values of the model of NCM and control animals, (g-B) zoomed region of g-A. The numbers near the coordinates (1,1) represent the chemical shift of metabolites upregulated in sera of both CM and NCM animals with respect to that of controls. The numbers near (-1,-1) represent the chemical shift of the metabolites which are downregulated in both CM and NCM with respect to control animals. The numbers near the coordinate (0,1) and (0,-1) represents the chemical shift of the metabolites which are selectively upregulated and downregulated respectively in sera of mice with CM with respect to control animals.

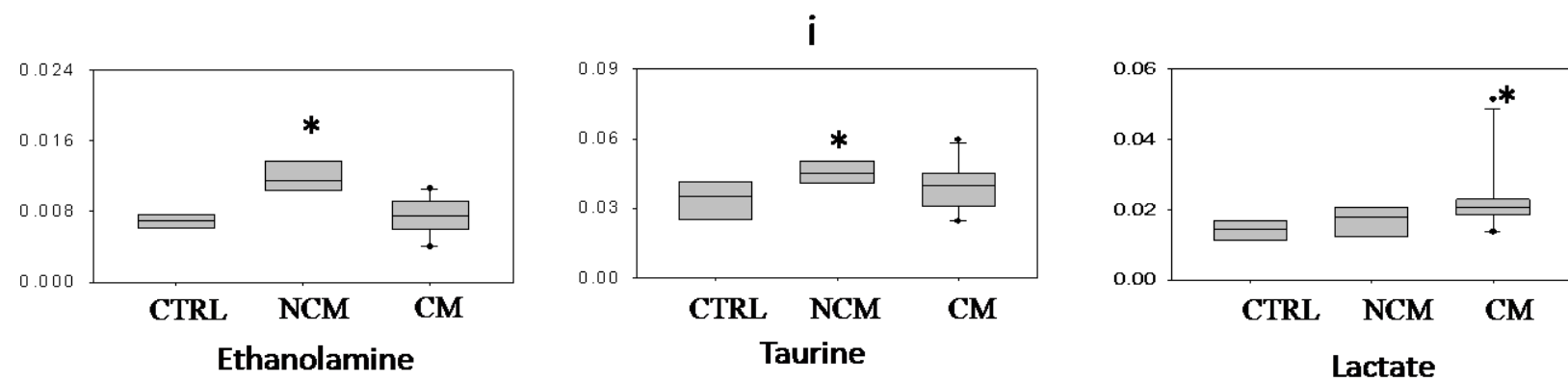
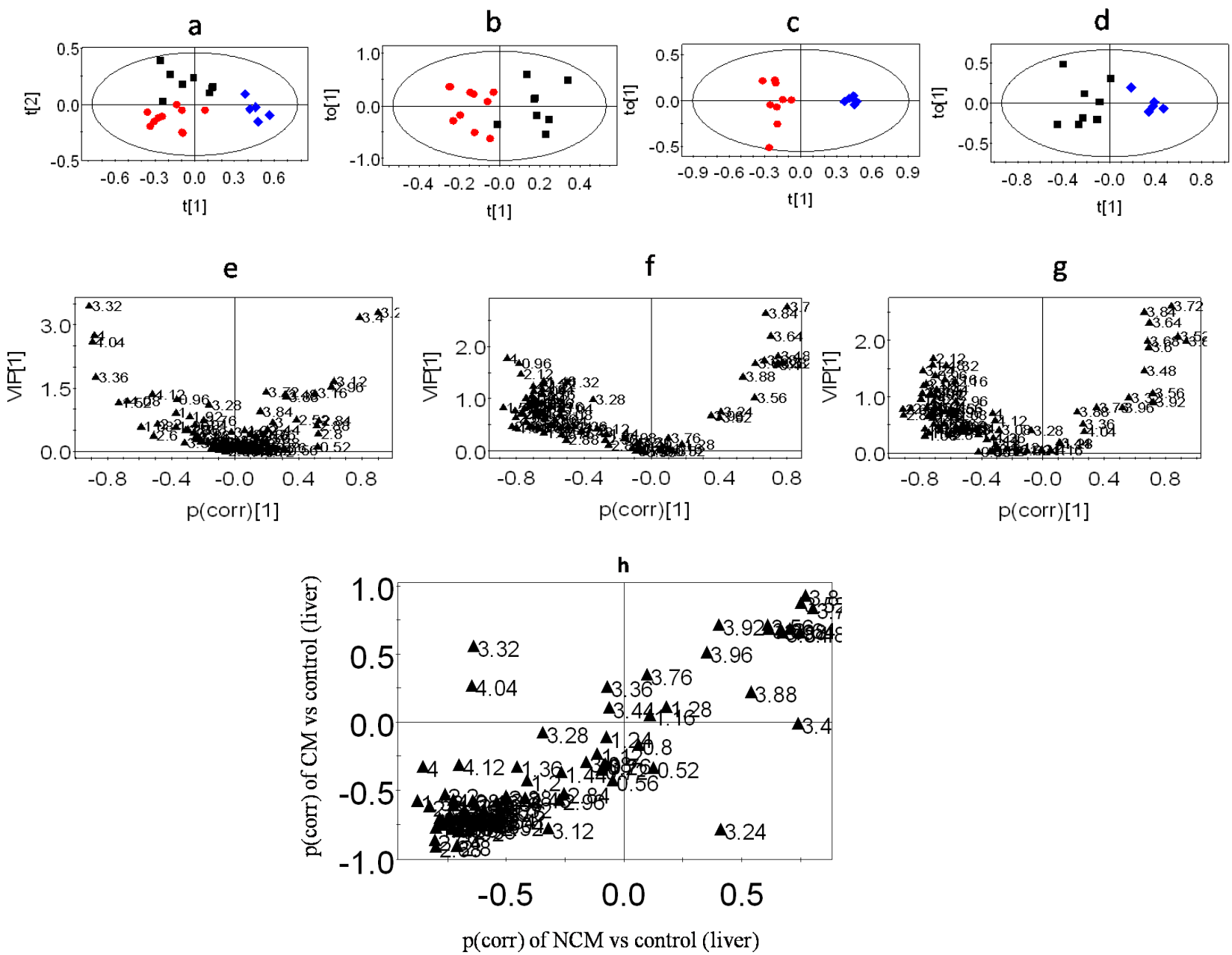


Supplementary 2. OPLS-DA scores plot of the ¹H NMR spectra of perchloric acid extracts of brain of C57BL/6 female mice infected with PbA.

(a) Scores of CM, NCM and control, (b) scores of CM and NCM, (c) scores of CM and control, (d) scores plot of NCM and control. Symbols: red – CM, black – NCM and blue – control. The ellipse is a 95 % Hotelling T² ellipse. Each data point represents an extract sample. V plot corresponding to (e) CM vs. NCM, (f) CM vs. control, (g) NCM and control. (h) SUS plot of p(corr) values of OPLS-DA model of CM and control vs. p(corr) values of model of NCM and control animals. The numbers near the coordinates (1,-1) represent the chemical shift of the metabolites which are downregulated in brain of CM and NCM mice in comparison to the controls. The numbers near the coordinate (0,1) and (0,-1) represent the metabolites which are selectively upregulated and downregulated respectively in brain of mice with CM with respect to controls. The numbers near the co-ordinate (1,0) and (-1,0) represent the chemical shifts of the metabolites that are selectively downregulated and upregulated respectively in the brain of NCM mice with respect to controls. (i) Box plot of normalized intensity of metabolites in CM, NCM and control. The line in the box denotes median. The asterisk denotes significant difference in levels of metabolites in infected groups (CM /NCM) vs. controls.



Supplementary 3. Spearman correlation matrix of metabolites in brain of C57BL/6 female mice infected with *P. berghei* ANKA. (a) CM, (b) NCM and (c) control animals. The color coding refers to the correlation value of metabolites referred to in the index next to the plot of the matrix. The red ellipses are some correlations discussed in this paper.



Supplementary 4. ¹H NMR based OPLS-DA scores and loadings of perchloric acid extracts of liver of C57BL/6 female mice infected with *P. berghei* ANKA. (a) Scores of the CM NCM and control, (b) scores of CM and NCM, (c) scores of CM and control; (d) scores of NCM and control; Red – CM, black – NCM and blue – control. The ellipse is a 95% Hotelling T² ellipse. Each data point represents an extract sample. V plot of the model for (e) CM vs. NCM, (f) CM vs. control. (g) NCM and control. Symbols: red CM, black – NCM and blue – control. The ellipse in the scores is a 95% Hotelling T² ellipse. (h) SUS plot (p(corr)) values of CM and control vs. (p(corr)) values of NCM and control animals. The numbers near the coordinates (1,1) represent the chemical shifts of the metabolites which are downregulated in liver of both CM and NCM with respect to that of controls. The numbers near the coordinate (0,-1) represents the chemical shifts of metabolites that are selectively upregulated in NCM with respect to CM. The numbers near (-1,0) represents the chemical shifts of metabolites that are selectively upregulated in CM liver with respect to NCM liver. (i) Box plot of normalized intensity of metabolites in CM, NCM and control. The line in the box denote median. The asterisks denote significant difference in levels of metabolites in infected groups (CM /NCM) vs. controls.