Author’s response to reviews

Title: The 1H NMR Serum Metabolomics Response to a Two Meal Challenge: a Cross-Over Dietary Intervention Study in Healthy Human Volunteers.

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Author’s response to reviews:

Editor
Nutrition Journal

Dear Dr. Cahill,

Thank you for the opportunity to resubmit our revised paper and for the valuable comments on how to improve our work. I hope that our revision meets your expectations. Please find enclosed our revised manuscript “The 1H NMR Serum Metabolomics Response to a Two Meal Challenge: a Cross-Over Dietary Intervention Study in Healthy Human Volunteers.” by Millie Rådjursöga et al., together with rebuttal to each point made by the reviewer. Revisions in the manuscript are highlighted in yellow.

We look forward to hearing back from you soon.

Yours sincerely,

Millie Rådjursöga & co-authors
Reply Reviewer #3:

Minor comments to address before accepting:

1. Abstract contains more abbreviations (like e.g.) and several grammar and language improvements could be made.

Answer: Abbreviations have now been removed from the abstract and we have improved the language.

2. Authors did not make a point-by-point reply of the changes that they had made. They just replied to each question that changes had been made to the background and discussion section.

Answer: We revised the text in the Background during the 1st revision giving the reader an introduction to terms and statistical models used in the study (Line 100-117). The Background was condensed into two paragraphs focusing on current difficulties in measuring dietary exposure and an introduction to metabolomics and the rationale for statistical models used in our study. Examples of metabolites that can be measured with metabolomics were added on Line 90-91.

3. Line 314: is MatLabR2015a usually written MatLab R2015a?

Answer: We have now changed this as suggested, line 314.

4. Lines 442-444: this is an interesting point/finding. Usually paragraphs contain more than one sentence though. Does this finding fit what previous work has shown? Does it make sense biologically?

Answer: We have now expanded this paragraph and added how our results fit to previous findings and potential explanations to our results (Line 442-450).

5. Table 4: what variables were included in the model? Gender? Age?

Answer: Metabolites presented in Table 4 were discriminating between the two breakfast meals. Variables included in the OPLS-DA and OPLS-EP models were metabolite concentrations (peaks in NMR spectra) (n=290). Hence, in these models no corrections were made regarding gender or age. In the ANOVA-PLS model variables including Metabolite concentrations relating to variation of breakfast type and residuals were included in the model (Line 294-300).