Reviewer’s report

Title: Towards Personalised Molecular Feedback for Weight Loss

Version: 0 Date: 10 Oct 2018

Reviewer: Saad Siddiqui

Reviewer's report:

I commend the authors for undertaking this study. The research is relevant and plugs a gap in the literature with regards to the measurement of metabolites in fat loss assessment.

However, the write-up for this study currently requires revisions in order for it to be publishable. Mainly, the current methods section is severely lacking and replicating the study would be difficult based on the information provided. While the authors have described the laboratory procedures with a good amount of necessary detail, description of the actual study design is not explicitly stated. There is significant missing information with regards to how recruitment took place (where was the study advertised? Is there a potential for bias?), what kind of comparison was conducted, and how the survey was scored or analysed, or even linked to the metabolite data. This information needs to be explicitly stated in the methods section.

The authors used the "fatsecret" database for getting nutrient estimates from participant diets. What is the validity of the fatsecret database? Is it possible to state whether this is valid or a limitation of the study, and how this might affect or not affect the results? Is there a reason this database was picked, such as popularity, comprehensiveness or ease of use?

The authors mention controls in the abstract, specifically in the results, but the methods do not describe the type of analysis or define what constitutes a control or intervention. Was there an intervention? Was there a washout period? Was this a case-control study comparing obese with non-obese participants, or was there a meal-skip intervention? If it is the latter, were 3 to 24 days sufficient to assess differences (a biochemical justification)?

I look forward to a proper methods section for this manuscript, since the study is timely and the results could be beneficial to follow-up studies and reviews, as well as the development of fat-loss interventions that overcome current challenges.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
No

Are the conclusions drawn adequately supported by the data shown? If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review? If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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