Reviewer’s report

Title: The FATZO mouse, a next generation model of type 2 diabetes, develops NAFLD and NASH when fed a western diet supplemented with fructose

Version: 1 Date: 16 Jan 2019

Reviewer: Reviewer 2

Reviewer’s report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

Statistics - Is the use of statistics in the manuscript appropriate?

Not sure - I am not able to assess the statistics in this study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?
Yes - current version is technically sound

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: This study is conducted appropriately to determine if the FATZO mice fed a western type diet supplemented with fructose is a suitable clinical NASH model. The authors have used suitable animal numbers, allocated them randomly to the different treatment groups and had someone blinded to the study design perform the histology analysis.

REQUESTED REVISIONS:

Authors need to clarify the statistical analysis used here as it is unclear if they used a one way ANOVA or a t test. If they used both they need to precise in the figure legends which analysis is used for which figure.

In addition it is surprising not to see histology data for the liver of the mice on diet for 8 and 12 weeks as they were planned in the study design and blood was used for blood chemistry. It would be interesting to see the progression of the liver pathology along the full time of the study rather than just seeing endpoint.

Finally how can the authors explain that the mice lose fat mass after 4 weeks of diet while their body weight steadily increases?

ADDITIONAL REQUESTS/SUGGESTIONS:

Get grammatical check as they are some typos in the manuscript

Note: This reviewer report can be downloaded - see attached pdf file.

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

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

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 recommend additional statistical review

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

Needs some language corrections before being published

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