Reviewer’s report

Title: Silibinin Attenuates Adipose Tissue Inflammation and Reverses Obesity and Its Complications in Diet-induced Obesity Model in Mice

Version: 0 Date: 23 Nov 2019

Reviewer: Giovanni Dothel

Reviewer's report:

The study assessed in vivo the effect of sibilinin, a natural compound derived from thistle seeds, on weight loss as well as inflammatory and metabolic biomarkers associated to obesity. In addition, a histological analysis was carried out to compare WAT and BAT and fat liver content upon treatment. The study purpose is in line with the development of a preclinical proof of concept for a novel treatment of obesity and the associated inflammatory pathologies.

Experimental design and data presentation are clear and well described, however there are minor points that need to be clarified.

1. Although several inflammatory processes are favoured by obesity, this condition should not be defined strictly as an inflammatory disease, please reformulate abstract's text accordingly.

2. How was the number of animal determined during the experimental design? Please mention the statistical power calculation carried out before the analysis in the corresponding paragraph.

3. How the dose of 50mg/kg was chosen for animal treatment? Please cite the relevant literature.

4. Inhibition of leukocyte recruitment was inferred by gene expression analysis of immunocytes markers, immunohistochemistry analysis should be carried out to confirm mRNA expression results. As an alternative, sentence of line 60 should be rephrased.

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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