Reviewer’s report

Title: Altered DNA methylation in liver and subcutaneous and visceral adipose tissues derived from individuals with obesity and type 2 diabetes

Version: 0 Date: 09 Oct 2017

Reviewer: Stella Liong

Reviewer's report:

The study by Barajas-Olmos et al. describes alterations in DNA methylation in adipose tissue, liver and bloods in T2D obese individuals. The study found the majority of DNA methylation alterations were in the liver and visceral adipose tissue. I have a few questions regarding the recruitment of subjects for the study:

1. Were any subjects' heavy smokers or drinkers of alcohol? These factors can influence DNA methylation.

2. With the liver biopsies, were all subjects healthy? Were there any indications of non-alcoholic fatty liver disease or cancer?

3. Were any subjects on medication? Metformin or insulin? If so, did the authors assess whether these had any effects on DNA methylation?

4. Have the authors investigated whether the differential methylation between diabetic and non-diabetic obese individuals are associated with differential protein expression of some of your genes of interests?

5. Results. The authors note there were no significant changes in lipid profiles between the two groups, however they found DMCs located in genes which are involved in lipid metabolism pathways. Could the authors comment on this?

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 am able to assess the statistics

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

Acceptable

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