Reviewer’s report

Title: High-fat diet aggravates postoperative cognitive dysfunction in aged mice

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Reviewer: X Guo

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High-fat diet aggravates postoperative cognitive dysfunction in aged mice. (manuscript number: BANE-D-17-00396) by Lan Wei et al

Summary: Based on the research by Heyward also suggested that normal mice fed a HFD exhibit impaired hippocampus-dependent spatial memory and a corresponding alteration in the expression of Sirt1, which has been implicated in memory consolidation, the authors investigated the body weight changes, the behavioral tests, the expression levels of Sirt1, Bcl-2, Bax and caspase-3 cleaved and found that HFD can increase body weight, aggravates POCD and possibly by down-regulating the expression levels of Sirt1 and Bcl-2 and up-regulating the expression levels of Bax and caspase-3 cleaved, thereby increasing hippocampal neuron apoptosis.

Minor points:

1. How old were the mice in this research?

2. How do you prove that apoptosis is not an accompanying phenomenon but a cause of cognitive impairment of the mice in you study?
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.

Unable to assess

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

No

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

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

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