Reviewer’s report

Title: Effects of coal-fired PM2.5 on the expression levels of atherosclerosis-related proteins and the phosphorylation level of MAPK in ApoE-/ mice

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Reviewer: Fenghua Zhou

Reviewer's report:

PComments:

I do appreciate your manuscript "Effects of coal-fired PM2.5 on the expression levels of atherosclerosis-related proteins and the phosphorylation level of MAPK in ApoE-/ mice ". This is certainly an interesting topic for the cardiovascular community; I do only have some suggestions and comments for a (limited) revision of your manuscript:

1. In the Abstract, both the methods and results were not well introduced. Based on the results in this study, we cannot come to the conclusion. The relationship between these proteins, such as ET-1, ICAM-1, and 35 E-selectin, and the MAPK signaling pathway has not been well clarified.

2. You do not present "Highlights" of your interesting study; these should be added.

3. The Introduction is meaningful.

4. The Methods used are basically adequate and well described; as to the atherosclerotic plaque, it is more adequate to use oil-red-O staining rather than H&E staining.

5. In the Results, I recommend explaining more in detail. In Figure 4, the whole vessel section should be showed not a part of it. In figure 6, the total MAPK signaling, such as ERK, JNK and p38 protein should also be detected compared with its respective phosphorylation level.

6. The Conclusions, however, should be more cautious: This study does not suggest a relationship between ET-1, ICAM-1, and 35 E-selectin and MAPK signaling; so it is hard to say that coal-fired PM2.5 may induce increased expression levels of ET-1, ICAM-1, and 35 E-selectin via activation of MAPK signaling pathways.

I hope that I may contribute to a successful publication of your interesting manuscript with my comments!

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.

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:

Needs some language corrections before being published

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