Reviewer's report

Title: Glucagon-Like Peptide Receptor Agonists Attenuate Advanced Glycation End Products-Induced Inflammation in Rat Mesangial Cells

Version: 0 Date: 21 Jul 2017

Reviewer: Qiao-Bing Huang

Reviewer's report:

This paper focus on the effect of activation of Glucagon-like peptide (GLP-1) receptor and PPARδ on AGE-treated rat mesangial cells. The results demonstrated that the agonists of GLP-1 receptor or/and PPARδ could attenuated AGE-induced RAGE expression, cytokine secretion and cell survival. The down-regulation of PPARδ expression was able to abolish these effects. The data also showed that the agonists of GLP-1 receptor or/and PPARδ abolished the activation of Nox4 and enhanced the activation of PKA as well. The authors concluded that both GLP-1 receptor and PPARδ agonists have anti-inflammatory effect on AGE-treated rat mesangial cells.

This study was concise but well designed and the manuscript is well organized. There are some concerns:

1. Could the authors make further or more specific conclusion to state the relationship of agonist-receptor-signal-effects. Or it needs more work for further conclusion?

2. It would be better to address why the authors chose mesangial cells, instead of other kidney cell types in this study.

3. Is there any effect of AGEs on GLP-1 receptor and PPARδ expression? At least it should be discuss in this manuscript.

4. When there is a sentence of "Nuclear or total protein samples were mixed with sample buffer, boiled for 5 min, separated by 10% SDS-PAGE under denaturing conditions" on page 10, there is no blotting result in figure and text?
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:

Needs some language corrections before being published

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