Reviewers report

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

Version: 0 Date: 01 Aug 2017

Reviewer: Karen Molyneux

Reviewers report:

This manuscript investigates an interesting concept in the mechanism leading to mesangial damage in the diabetic kidney.

On the whole the manuscript is well written and the line of enquiry well laid out.

My reservations are;

For an in vitro study the use of rat mesangial cells was suitable, if not ideal, maybe human mesangial cells may have been more appropriate. The authors note in the discussion that clinical use of a modified peptide of GLP-1 led to 'irreversible kidney function impairment after stopping treatment'. They found no increase in cell death with treatment in vitro, could this be because they used rat instead of human mesangial cells? This is an important question to answer if, as the authors suggest, a large scale clinical trial is to be considered. The clinical trial being considered involved the use of this modified peptide of GLP-1. Maybe the authors could have used the peptide in their study, it would have informed the clinical trial they suggested in their conclusion.

The in vitro experiments are well explained and the results are clear what is not clear is how many experimental repeats were carried out. This information should have been included for all the experiments.

The authors found significant differences between treatment groups but should have stated the statistical test they used to find these differences.

Grammar errors

Page 3 line 9 The anti RAGE
Page 3 line 12 agonist has been shown

Page 3 line 12 PPAR d agonist

Page 12 line 42 AGE-decreased PKA

Page 12 line 49 It is known that, heme oxygenase-1

Page 14 line 49 Various mechanisms

Page 15 line 4 and activated

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
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