Reviewer's report

Title: Rosiglitazone increases endothelial cell migration and vascular permeability through Akt phosphorylation

Version: 1 Date: 02 May 2017

Reviewer: Fatma Eldefrawy

Reviewer's report:

Abstract:

- in line 22 don't repeat the phrase (member of the thiazolidinedione class) as it was used in line 18

Background:

- line 57 page 3 "inhibited" should be corrected to be "inhibit";

- line 6 page 4 please add reference after "discontinuation of therapy"

- needs hypothesis

Materials and Methods

- line 13 page 8. Saline was injected for each animal group. Is the saline used as vehicle for AKt inhibitor?

- the author should include references for using the dose 5 mg/kg/ rosiglitazone and 0.15mg/kg of Akt inhibitor.

- the author should provide some basic toxicology data about the mice (e.g., organ weight, BW, Blood glucose level before and after injection per each group), because the data in line 26 page 8 was still not sufficient

- OCT compound, FITC and DAPI are missed in abbreviations
Results

- Line 47 page 10 "none of the inhibitors affected cell migration"; should "migration" be "permeability"?

- Line 52 page 10 should "all inhibitors blocked" be "all inhibitors which blocked"?

- Line 23 page 12 "HUVECs transfected with Akt-1 specific siRNA were compared with cells transfected with a non-targeting siRNA" is not clear

Discussion

Line 47 page 14, hypothesis should be moved from Discussion to Background

Line 47 page 17 remove the second PKCβ "PKCβ is activated and PKCβ selectively inhibits the PI3K / Akt"

Figures:

Figure 2. C Wortmanin: explain why the author use this, and it was not mentioned in legend or results

Figure 3, 4, 5 and 6 still need band quantification for western blot

Figure 6:B. author have to write "NS" in legend

Figure 7: the author should provide the number of animals which used for neovascularization (add the number in legend and methods)
Reference:

- line 16 page 24 reference number 22 add the year

- line 23 page 26 reference number 37 add the year Line 44 page 27 reference number 44 add the year

- Line 45 page 27 reference number 46 add the year

- Line 20 page 28 reference number 50 add the year

- Line 43 page 28 reference number 53 add the year

- Line 52 page 28 reference number 54 add the year

- Reference 11,31 and 32 and didn't present in the introduction, methods or discussion, so check 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

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Please indicate the quality of language in the manuscript:

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