Reviewer’s report

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

Version: 0 Date: 16 Feb 2017

Reviewer: Fatma Eldefrawy

Reviewer's report:

Comments in general

Need more focused hypothesis, while the experimental procedures and sequencing were well defined.

Abstract:

- Mention that rosiglitazone is a member of the thiazolidinedione class of drugs in abstract; Otherwise, the aim of the study not connected to the title.

Keywords:

- include Akt in keyword

Introduction

- the authors should include PI3K-Akt MAPK or ERK pathway

- the authors should include PKC and AKT inhibitor in introduction

- Line 38. Add information linking thiazolidinedione and PI3K-Akt signaling.
Materials and Methods

- In line 18 the authors should justify why they used HUVECs

- animals: in line 10 please mention the age of the mice (why chose this age)

- in line 25 correct rat to mice

- In Line 16, 20 need to include the basic information which made the author use this dose?

- in line 13 why the authors used saline for each animal group? Did they inject AKT inhibitor and rosiglatazon without saline?

- line 52 need to clarify about the mice; how these mice were different from that used in the injection AKT inhibitor and rosiglatazon?

- Show number of repeats for each experiments either in this section or in the figure captions.

- In Line 10, the author should provide some basic toxicology data about the mice (e.g., organ weight, BW, Blood glucose level before and after injection)

- line 25 (Statistical analysis) why you used this p value?

Results

- the PKC β inhibitor expression and AKT inhibitor expression seems to produce the similar effect so recommended to make combination of PKC β and AKT inhibitors and figure out the effect

Discussion

- AKT and PKC inhibitors were missed in discussion
Figures

Figure 2. Legend line 58 give the numbers of used wells

Figure 3 and 4 need band quantification

Figure 6 need combination of PKC β and AKT inhibitors

Figure 7 too much difference between two figures (B), please give information about animal background glucose and organ data?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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:

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