Reviewer's report

Title: Rhizoma polygoni cuspidati extract reduced progression of diabetic nephropathy via inhibition of platelet-derived growth factor-BB (PDGF-BB) and its receptor interaction in streptozotocin-induced diabetic rats

Version: 2

Date: 3 July 2014

Reviewer: Karim Raafat

Reviewer's report:

1. The references is old, please use more recent references.
2. The statement: "albuminuria is well characterized in the streptozotocin (STZ)-induced diabetic animal model", needs more emphasis and reference.
3. In the title the authors mentioned rhizomes of the plant and in the aim of the work they mentioned roots. Did the authors use rhizomes or roots?
4. The statement: "In traditional Chinese medicine, rhizoma polygoni cuspidate has been used for anti-diabetic, antibacterial and antiviral effects", needs more emphasis and reference.
5. Why did the authors use one-way analysis of variance, although in the experimental part they declared that they used more than one solvent?
6. The statement: " no difference in body weight between the vehicle-treated diabetic rats and PCE-treated diabetic rats.", is this an indication that the extract is inactive. Please clarify?
7. In table (1), 475.9 ± 10.7 is a body weight or BGL?
8. In table (1), 162.1 ± 11. missing figure?
9. In table (1), apparently the PCE is inactive towards diabetes. Please clarify?
10. In figure (1), there is no significant difference between normal and DN in diameter. Please clarify?
11. How did the authors measure the albuminuria in more details?
12. Figure 2 is not clear and need more metrical illustration.
13. How did the authors measure the protein expression in more details?
14. The binding assay declare that there is no affinity. Please clarify?
15. In Figure , Why PCE-100 is better than PCE-350? Please explain?
16. Figure 5 is not completely clear and need more metrical and scientific illustration.
17. The results and discussion sections need to be more detailed and clear.
18. Is albuminuria alone indication of improvement of DN. Please clarify?
19. With such insufficient findings is the title still valid. Please change the tile to suit the findings.
20. Did the authors use emodin. Please clarify. If not what is the evidenced responsible active ingredient in PCE?

21. Why did the authors use ethanolic extract only of PCE, which is apparently inactive against diabetes?

22. The statement: "Although major chemical compounds of PCE include resveratrol and emodin, the most active compound of PCE remains to be identified. Nevertheless, the ability of PCE to protect against renal damage may be due to the effect of these compounds." is scientifically vague. Please illustrate?

23. The authors declared that the animals were 16 weeks diabetic and these are not illustrated in the results. Authors should show the aggravation or progression of DN.

24. English editing should be done with a native expert.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.