Author's response to reviews

Title: Antioxidant, antidiabetic and hypolipidemic effects of Tulbaghia violacea Harv. (wild garlic) rhizome methanolic extracts in a diabetic rat model

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Version: 4
Date: 22 September 2015

Author's response to reviews: see over
RESPONSE TO REVIEWERS COMMENTS ON MANUSCRIPT

The authors thank reviewers 1 and 2 for their comments. The comments will be addressed as follows:

1. Reviewer comment /Query
2. Authors response
3. Change in manuscript

Referee 1

Comment 1
- Major Compulsory Revisions
1- The whole manuscript has to be edited as there are a few typos.

Author’s response
We agree with the reviewer and have edited the manuscript.

Change in manuscript
The manuscript has been edited.

Comment 2
2- Give references for the following methods: Induction of diabetes, 2.8. Oral glucose tolerance test (OGTT), 2.10. Determination of plasma insulin levels, .13. Determination of serum lipids, liver-function enzymes 2.15. Determination of plasma antioxidant levels

Author’s response
We have provided the references as requested.

Change in manuscript
Reference provided for:
Induction of diabetes
2.8. Oral glucose tolerance test (OGTT)
An oral glucose tolerance test (OGTT) was performed on each rat 6 weeks after the intervention. (26).

2.10. Determination of plasma insulin levels
Plasma insulin levels were measured by Enzyme-linked Immunosorbent Assay (ELISA) technique, using an Insulin (Rat) Ultrasensitive ELISA kit (DRG) Diagnostics (Marburg, Germany)(27).

2.13. Determination of serum lipids, liver-function enzymes

Serum triglyceride, total cholesterol, HDL-cholesterol, aspartate transaminase (AST), alanine transaminase (ALT) and creatinine were determined using an Automated Chemistry Analyzer (LabmaxPlenno, Labtest, Lagoa-Santa, Brazil) (26). Low density lipoprotein (LDL)-cholesterol concentrations were calculated according to the formula given by (30) as follows: LDL-cholesterol =Total cholesterol– [HDL-cholesterol + TG/5)] where TG/5 is equivalent to the amount of very low density lipoprotein (VLDL)-cholesterol.

2.15. Determination of plasma antioxidant levels

The activities of superoxide dismutase (SOD), catalase and glutathione peroxidase (GPx) in liver samples were determined using Biovision (California, USA) assay kits according to the manufacturer’s instructions(32).
Minor Essential Revisions

Comment 3
Title:
3- give precision on the fact that it is methanol extract and that it is from rhizomes

Author’s response
We agree with the reviewer’s suggestion.

Change in manuscript
The title has been amended to “Antioxidant, antidiabetic and hypolipidemic effects of *Tulbaghia violacea* Harv. (“wild garlic”) rhizome methanolic extracts in a diabetic rat model”.

Comment 4
4- Page 2 Line 7 ‘‘To determine the effects of *Tulbaghia violacea* Harv.on blood glucose,’’: add space betwenn ‘‘Harv.’’ and on

Author’s response
We apologize for the oversight.

Change in manuscript
Manuscript edited.

Comment 5
5- Page 2 Line 13 add space between ‘‘ (10mg/kg.b.w).’’ and ‘‘Food »

Author’s response
We apologize for the oversight.

Change in manuscript
Manuscript edited.

Comment 6
6- Page 2 Line 15: ‘‘7 week ‘‘ add ‘‘s”

Author’s response
We have rephrased the sentence.

Change in manuscript
After 7 weeks, the animals were sacrificed by halothane overdose, blood was removed by cardiac puncture and tissues were harvested.

Comment 7
7- Page 2 Line 15: give the full signification of ‘‘TBARS’’ as it is the first time it appears in the text

Author’s response
We apologize for the oversight.

Change in manuscript
Manuscript edited as ffl:
TVL treatment also reduced liver thiobarbituric acid reactive substances (TBARS).

Materials and Methods

Comment 8
8. Page 7 Line 11: change ‘‘method described by[27].’’ into ‘‘method described by Zafar and Naqvi [27].’’

Author’s response
We agree with the reviewer’s suggestion.

Change in manuscript
We have amended the manuscript to “The liver glycogen content was measured according to a modified method described by Zafar and Naqvi [27].”

Comment 9
9. The authors should harmonize the way they write ‘‘LKW’’ and ‘‘HW’’ in the whole manuscript

Author’s response
We agree with the reviewer.

Change in manuscript
LKW, HW and LLW have been standardized in the manuscript.
**Comment 10**

10-Page 17 Line 14: change ‘’triglyceride’’ into triglycerides.

**Author’s response**

We did not agree with the reviewer’s suggestion as the statement reads “Consistent with this, we found elevated triglyceride, total cholesterol, VLDL-cholesterol and decreased HDL-cholesterol levels.”

**Change in manuscript**

No change

**Comment 11**

11- Page 19. ‘’Table 1. Table showing compounds identified in GC-MS analysis of Tulbaghia violacea extract ‘’ : delete ‘’Table showing’’

**Author’s response**

We agree with the reviewer.

**Change in manuscript**

'Table showing’’ has been deleted from the manuscript.

**Comment 12**

12- The authors should harmonize the way they mark the significant differences for figures and tables.

* for NDC,
# for diabetic control,
letters a,b,c for baseline values ;
$ for TVL

In this way, modifications should be made for
- Table 2,
- Figure 2, non-diabetic control is it different from non-diabetic group? these appear separately. Also ### is put for p<0.01, it should be p<0.001 or ## is put for p<0.01

**Author’s response**
We agree with the reviewer’s recommendation.

**Change in manuscript**

We have used* for NDC,# for diabetic control, letters a, b, c for baseline values ;
$ for TVL. We have also amended the oversight. ## is put for p<0.01.

**Comment 13**

13- For the figures 2 and 3, the curves of diabetic control should be harmonize
(same colour, …)

**Author’s response**

We agree with reviewer’s suggestion.

**Change in manuscript**

We have harmonized the choice of colour for the diabetic control.

**Comment 14**

References

14- The authors should make sure they write all the scientific names in italic. Example of mistakes include Z. officinale, Eryngium carlinae and Terminalia paniculata respectively in references 1, 2 and 3

**Author’s response**

We agree with the reviewer.

**Change in manuscript**

We have italicized scientific names in the references.

- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

**Comment 15**

15- Many abbreviations are used in the manuscript, it is better to include a list of abbreviations before competing interests and authors' contributions.

**Author’s response**

We have decided not to include a list of abbreviations.

**Change in manuscript**
Referee 2

Comment 1
1) Background:
Page 4; line 16 remove “in our laboratory”; line 17 replace “we also found” by “it also showed”

Author’s response to comment 1
We agree with the reviewer’s suggestion.

Change in manuscript (comment 1)
We have amended the manuscript accordingly.

Comment 2
Oral glucose tolerance test (OGTT)
Line 26 add space between any interval of time; also add “s” to minute

Author’s response to comment 2
We agree with the reviewer’s suggestion

Change in manuscript (comment 2)
Manuscript edited as requested by reviewer.

Comment 3
3) Effect of TVL on serum lipids and liver function enzymes
Page 13; line 24 please remove the sentence “the treated diabetic groups did not show significantly different”

Author’s response to comment 3
We apologize for the oversight.

Change in manuscript (comment 3)
We have removed the sentence from the manuscript.

Comment 4
4) Discussion
Page 14; Line 16 replace “importantly” by “nevertheless”
Page 15; line 5 remove “is known to”
Page 16; line 16 replace “the present” by “this”; Line 22 remove “to be”
Page 19 table 1 remove “table showing”
Author’s response to comment 4
We agree with the reviewer’s suggestion.

Change in manuscript (comment 4)
Page 14; Line 16 “importantly” has been replaced by “nevertheless”
Page 15; line 5 “is known to” has been removed.
Page 16; line 16 “the present” has been replaced by “this”;
Line 22 “to be” has been deleted.
Page 19 table 1 “table showing” has been deleted.