Author's response to reviews

Title: HOX-7 suppresses body weight gain and adipogenesis-related gene expression in high-fat-diet-induced obese mice

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Author's response to reviews: see over
Editor
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Dear Sir/Madam
We appreciate the reviewer’s valuable comments and have revised our manuscript accordingly. Below, please find our responses to the comments made. We hope that you find the revised manuscript suitable for publication in BMC Complementary and Alternative Medicine.

Reviewers' Comments

Reviewer 1
Authors analyzed the inhibitory effects of HOX-7 on HFD-induced obesity. Although the experiments were well organized and performed, the manuscript needs a revision for publication.

- Minor Essential Revisions

1. In methods of abstract, it is unclear whether authors summarized the experimental design appropriately. More detailed methods are needed. In addition, it is recommended to delete the sentence ‘Food intake and body weight~ every week’. It seems unnecessary.

Response: The methods of abstract have been revised like blow.

"Methods: The mice were divided into four groups and were fed a normal diet (ND), HFD, or HFD with oral administration of HOX-7 at 100 or 200 mg/kg/day for 12 weeks. Body and fat weight, histological changes of fat tissue, and the expression of key adipogenic transcription factors were investigated."

2. In Background, there are numerous therapeutics for treating obesity. It doubts whether current treatment strategies for obesity are grouped only into two categories.

Response: Thank you for your comments. We changed the “current treatment” to “current pharmacotherapy”.

3. The ‘animal experiments’ section should be described in more detail. There are few information,
such as treatment volume, treatment period, HFD feeding period and number of animals.

**Response:** We added the information about the treatment volume, treatment period, HFD feeding period and number of animals in revised manuscript ‘animal experiments’ section. “ND group were fed a commercial standard chow diet and HFD group were fed the HFD for 12 weeks. HOX-7 was dissolved in DW and, orally and daily administrated for 12 weeks with HFD.”

4. How was the fat diameter measured? Per slide? How many slides? Please confirm it.

**Response:** We added the adipocyte diameter analysis method in revised manuscript ‘histological analysis’ section. “Digital images were taken from each slide (5 per group), and adipocyte diameters were measured using Image J software.”

5. Page 10, line 2; page 11, line 6, 8, 10, 14; page 12, line 6. “SREBP-1c” should be changed to “SREBP1c”.

**Response:** We changed “SREBP-1c” to “SREBP1c” in revised manuscript.

6. In figure 1A, “body weight” should be changed to “Body weight”.

**Response:** We changed the figure.

7. In figure 3, “AP2” should be changed to “aP2”.

**Response:** We changed the figure.
8. In figure 3 and 4, “SREBP” should be changed to “SREBP1c”.

**Response:** We changed the figure.

9. In figure 4, it is recommended to suggest the method of densitometric analysis and equalize the density of bands.

**Response:** We changed the figure and method of densitometric analysis added in revised manuscript ‘western blot analysis’ section.

**Reviewer 2**
- Minor Essential Revisions

1. It needs to check spellings of some words.
1) line 8 on page 3; mg/kg/day. Food ~ # mg/kg/day. Food ~
2) line 12 on page 3; and total ~ # and total ~
3) line 6 on page 5; Radix Polygoni Multiflori # Polygoni Multiflori Radix
4) line 3 on page 5; Piper longum L. # Piperis Longi Fructus
5) line 12 on page 5; Piper longum L. # Piperis Longi Fructus
6) line 22 on page 5; Piper longum L. # Piperis Longi Fructus
7) line 6 on page 6; Piper longum L. # Piperis Longi Fructus
7) line 7 on page 5; oriental countries # east Asian countries
8) line 12 on page 5; significant anti-oxidative activity # anti-oxidative activity

Response: We changed the manuscript as suggested above.

2. It would be better to add “Effect of Nelumbo nucifera on expression of peroxisome proliferator-activated receptor gamma (PPAR#) (reference 14)”.

Response: We added the “Effect of Nelumbo nucifera on expression of peroxisome proliferator-activated receptor gamma (PPAR#)” in the revised manuscript page 5, line 5.


Response: We added the “Effect of Salicornia herbacea on Adipogenesis” in the revised manuscript page 5, line 7. Reference is also added.


Response: We added the “Effect of Atractylodes macrocephala Koidzumi rhizome on adipogenesis” in the revised manuscript page 5, line 16. Reference is also changed.