



PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 76727

Title: Maternal inappropriate calcium intake aggravates dietary-induced obesity in male offspring by affecting the differentiation potential of mesenchymal stem cells

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03693084

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2022-05-05

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-05-06 11:38

Reviewer performed review: 2022-05-15 13:58

Review time: 9 Days and 2 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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SPECIFIC COMMENTS TO AUTHORS

1. Why were male offspring selected as experimental subjects? 2. The experiment uses NC as the control group. It is better to compare the NC, DC, LC, and HC groups with each other and discuss their differences. 3. Only the results of qPCR cannot fully prove the changes of adipogenic differentiation, osteogenic differentiation and Wnt pathways. It is recommended to supplement the Western blot results of key genes. 4. Please reflect the second part of the results-"Maternal abnormal dietary calcium intake could cause the disorders of the infiltration of immune cells in the adipose tissues among their male offspring" in the discussion.



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Peer-review model: Single blind

Reviewer's code: 05935626

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Indonesia

Author's Country/Territory: China

Manuscript submission date: 2022-05-05

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-05-26 08:31

Reviewer performed review: 2022-05-26 17:53

Review time: 9 Hours

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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Peer-reviewer statements	Peer-Review: [<input checked="" type="checkbox"/>] Anonymous [<input type="checkbox"/>] Onymous Conflicts-of-Interest: [<input type="checkbox"/>] Yes [<input checked="" type="checkbox"/>] No
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SPECIFIC COMMENTS TO AUTHORS

I would like to congratulate the authors for this manuscript. The study is interesting and brings new perspective. I have some comments about the manuscript: Materials and methods / experimental procedures: Please add brief description or reference from previous study (if any) regarding the calcium percentage determination in the reproductive diets (0.05%, 0.25%, 0.70%, 1.20%) in relation to table 2 (the diet formula) for better understanding. Please add the rats' initial maternal body weight for all the groups that were used in the study. Line 148: "the low-fat diet", does this supposed to be "the normal diet" as the control group (NC-C)? please clarify. Line 151: For animal termination, was inhalation of carbon dioxide the only method used or was additional anesthetic agent administered to the rats? if yes please clarify. Line 152: please clarify "blood samples were collected through eye-drop to minimize their suffering under the 12-hour fasting", does this means the blood samples were collected retro-orbitally? or other method was used, please specify. Please make sure to use SI units according to guidelines for authors. There are several mistyped words and lack of space between words in several sentences, please double check thoroughly. Mistyping of "resistin" are found in line 333, 341, 342, 343, 345, 447, 453, and 507. Line 153: rpm/min does it means r/min? please make sure there are no mistyped words.



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Peer-review model: Single blind

Reviewer's code: 03982512

Position: Peer Reviewer

Academic degree: PhD

Professional title: Assistant Professor, Instructor

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2022-05-05

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-05-23 00:13

Reviewer performed review: 2022-06-02 14:52

Review time: 10 Days and 14 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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SPECIFIC COMMENTS TO AUTHORS

The manuscript by Li et al., was a relatively comprehensive study on the roles of the genes regulations of the bone marrow cells. The authors seemed to focus on the stem cell differentiation and tested the molecular and cellular changes in the obesity of the mice. Experiments were well performed, and data was well collected. Due to experimental design issues, the article might be more suitable for more specific journals. There were some significant concerns: (1) The evaluation of the normal development should be considered. (2) Calcium-dependent genes in diseases should be referenced (such as DOI: 10.3389/fpsy.2020.00080). (3) The fat deposition was mentioned (such as in Discussion section Lines 419-420) but not directly tested/measured. (4) The “lineage-specific commitment” (Line 440) and related concept were logical unclear. (5) How the other MSCs (from different origins) were affected should be studied. (6) The study can at least describe the female offspring scientifically. (7) It is noted that the weaning may affect the results. It needs to be solved. (8) In the BMSCs experimental results in Table 1 and related design, cells need to be characterized. The statistics is unclear, and it may need re-analyzing.