Name of journal: World Journal of Diabetes

Manuscript NO: 93244

Title: Interactions between myoblasts and macrophages under high glucose milieu result in inflammatory response and impaired insulin sensitivity

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 03769068

Position: Editorial Board

Academic degree: PhD

Professional title: Adjunct Professor, Professor

Reviewer’s Country/Territory: Brazil

Author’s Country/Territory: China

Manuscript submission date: 2024-02-22

Reviewer chosen by: AI Technique

Reviewer accepted review: 2024-03-29 18:25

Reviewer performed review: 2024-04-06 20:13

Review time: 8 Days and 1 Hour

Scientific quality

<table>
<thead>
<tr>
<th></th>
<th>Grade A: Excellent</th>
<th></th>
<th>Grade B: Very good</th>
<th></th>
<th>Grade C: Good</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade D: Fair</td>
<td></td>
<td>Grade E: Do not publish</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Novelty of this manuscript

<table>
<thead>
<tr>
<th></th>
<th>Grade A: Excellent</th>
<th></th>
<th>Grade B: Good</th>
<th></th>
<th>Grade C: Fair</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade D: No novelty</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Creativity or innovation of this manuscript

<table>
<thead>
<tr>
<th></th>
<th>Grade A: Excellent</th>
<th></th>
<th>Grade B: Good</th>
<th></th>
<th>Grade C: Fair</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Grade D: No creativity or innovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SPECIFIC COMMENTS TO AUTHORS
I have now reviewed your paper and recognize the importance of your research question. Manuscript NO. 93244 aimed to assess the interaction dynamics between myoblasts and macrophages in environments with elevated glucose levels, specifically focusing on their effects on inflammatory response and insulin sensitivity within skeletal muscle. 1. The “Abstract” needs improvements. a. “BACKGROUND” — Further exploration of macrophages’ role in insulin resistance (IR) and the dynamics of their infiltration and polarization is warranted. Additionally, the omission of myoblasts weakens the study's objective. b. The “RESULTS” are presented succinctly, but it would be helpful to include some quantitative data or statistical information to support the findings and strengthen the impact of the study. c. “CONCLUSION” — While the study's potential impact on understanding insulin resistance is mentioned, it could be helpful to explicitly state how these findings could inform future research or clinical interventions in the field. Additionally, discussing any limitations or future directions for research would add depth to the conclusion. d. LANGUAGE AND GRAMMAR: There are several instances of grammatical errors and awkward phrasing throughout the
Abstract. 2. Overall, the INTRODUCTION section presents the significant points related to the research background and objectives; however, it could benefit from further emphasis on clinical-epidemiological aspects to strengthen its relevance. 3. METHODS: Please mention the rationale behind the choice of glucose and insulin doses in both in vivo and in vitro experiments. Additionally, highlighting the sensitivity and specificity of the ELISA kits utilized holds significance. Regarding statistical analysis, methods employed to address deviations from normality should be described. It is currently considered crucial to report effect sizes for group differences. Please include methods for effect size estimation in the “Statistical analysis” subsection. 4. RESULTS: Overall, the study offers evidence connecting insulin resistance with inflammatory mechanisms in skeletal muscle, specifically implicating macrophage infiltration, M1 polarization, and cytokine release. However, certain areas for improvement could bolster the reliability of the results. While the use of two-tailed Student’s t-test and two-way ANOVA for statistical analysis is appropriate, the study would benefit of effect size reporting for group differences. Moreover, the sample size (n = 6 per group) may be small for drawing generalizable conclusions, particularly in complex biological systems. 5. The DISCUSSION scrutinizes the findings through systematic theoretical analyses. However, there is scope for improvement by offering a more explicit evaluation of the study’s strengths and limitations, which would prove beneficial.