

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Diabetes*

**Manuscript NO:** 64514

**Title:** High doses of catecholamines activate glucose transport in human adipocytes independently from adrenoceptor stimulation or vanadium addition

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05315572

**Position:** Editorial Board

**Academic degree:** MD, PhD

**Professional title:** Chief Doctor, Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** France

**Manuscript submission date:** 2021-02-18

**Reviewer chosen by:** Ya-Juan Ma

**Reviewer accepted review:** 2021-03-08 14:29

**Reviewer performed review:** 2021-03-09 00:40

**Review time:** 10 Hours

<b>Scientific quality</b>	<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 Grade E: Do not publish
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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

This study investigated catecholamines activate glucose transport in human adipocytes, the advices were as follow 1.The introduction and discussion were too much redundant, which need more concise expression; 2.The insulin resistance of adipocytes in each group should be evaluated; 3.it need some experiments on signal transduction;

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**Peer-review model:** Single blind

**Reviewer's code:** 03564003

**Position:** Peer Reviewer

**Academic degree:**

**Professional title:**

**Reviewer's Country/Territory:** Turkey

**Author's Country/Territory:** France

**Manuscript submission date:** 2021-02-18

**Reviewer chosen by:** Ya-Juan Ma

**Reviewer accepted review:** 2021-03-09 08:35

**Reviewer performed review:** 2021-03-30 11:32

**Review time:** 21 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 checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

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

Dear Author, I have evaluated manuscript titled "High doses of catecholamines activate glucose transport in human adipocytes independently from adrenoceptor stimulation or vanadium addition" for publishing to World Journal of Diabetes. The authors investigated adrenalin and noradrenalin stimulation on glucose transport as 2-DG uptake with and without vanadium in both of rodents (mouse or rat) and human adipocytes.

1 Title. Does the title reflect the main subject/hypothesis of the manuscript? The title of the manuscript completely reflect of the study, but I think authors may change the title more striking than before; may be added or changed in line with research results

2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? The abstract summarize and reflect the work sufficiently.

3 Key words. Do the key words reflect the focus of the manuscript? Key words reflect the focus of the manuscript

4 Background. Does the manuscript adequately describe the background, present status and significance of the study? Yes, the manuscript adequately describe the background, present status and significance of the study.

5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? The manuscript describes applied methods in adequate.

6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? The research are achieved by the experiments in this study. In human adipocyte, there were investigated response to insulin with 100  $\mu\text{mol/L}$  adrenaline or noradrenaline activated 2-DG uptake, and dosage quantity of adrenalin, noradrenalin together with natural amines incubation with or without vanadium. Also,

there were presented the results of pargyline, semicarbazide, and benzylamine or methylamine effects on the 2-DG uptake in human adipocyte. 7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper's scientific significance and/or relevance to clinical practice sufficiently? The manuscript interprets the findings adequately and appropriately, and highlighting the key points concisely. The findings and their applicability are stated clear. The discussion is accurate and the paper's scientific significance is sufficient. 8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends? In Figure 1, it should be corrected "control" word the following sentence; A significant influence of vanadium when compared to respective control was observed. It means basal or without vanadate ones? In Figure 3, in X axis, there are shown used concentrations of pyrocatechol, benzoquinone, P+van, and B+van as log(M); but in the result section, from  $\mu\text{mol/L}$  up to 1 mmol/L for pyrocatechol (as below); so there should be same measurements between manuscript and figure (also it should be corrected in each figure) for used each agents. "The metabolite pyrocatechol, formed by a benzene core carrying two hydroxyl substituents, was inefficient on glucose transport in mouse and in human adipocytes when tested alone from 1  $\mu\text{mol/L}$  up to 1 mmol/L (Figure 3)." Also, Fig 3 should be re-drawn clearer and more understandable for readers, are the "c" significance which compares with each agent to basal one? In Fig 4, "c" significance shows different from basal for adrenaline or noradrenaline, but "c" shows the difference glycerol release between adrenaline and noradrenaline. So, it should be re-drawn given meaning under the Fig 4. In Fig 6, there are no using of RX 821002, blocking 2-ARs and pan-antagonist bupranolol for blocking the -ARs; so

authors should add the results related to agents of RX 821002 and bupranolol into Fig 6. In the result following of Fig 6, there were written continuing sentence: “adrenalin at 100  $\mu\text{mol/L}$  increased the basal 2-DG uptake by approximately twice, and this was not impaired by 10  $\mu\text{mol/L}$  of each of the antagonists (basal:  $0.34 \pm 0.02$ , adrenaline:  $0.66 \pm 0.04$ ; adrenaline + RX 821002:  $0.61 \pm 0.06$ ; adrenaline + bupranolol:  $0.58 \pm 0.04$  nmol 2-DG uptaken / 100 mg lipids /10 min; n = 4; NS)” But in the figures, there are no related figure about adrenalin, and antagonist, and adrenalin+RX 821002, adrenaline + bupranolol. If authors will not present the results in the figures, they should state in the manuscript. 9 Biostatistics. Does the manuscript meet the requirements of biostatistics? Yes, the manuscript meet the requirements of biostatistics. 10 Units. Does the manuscript meet the requirements of use of SI units? Yes. The manuscript meet the requirements of use of SI. 11 References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? Does the author self-cite, omit, incorrectly cite and/or over-cite references? Yes, the manuscript cites appropriately references. 12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? The manuscript well, concisely organized and presented, its grammar accurate and appropriate. 13 Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? Yes, the author prepare the manuscript

according to the appropriate research methods and reporting 14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? Yes, it meet the ethic requirements. After these corrections, this manuscript may be accepted,  
Sincerely Yours,

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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**Position:** Editorial Board

**Academic degree:** MD, PhD

**Professional title:** Chief Doctor, Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** France

**Manuscript submission date:** 2021-02-18

**Reviewer chosen by:** Ze-Mao Gong

**Reviewer accepted review:** 2021-04-27 09:50

**Reviewer performed review:** 2021-04-27 14:16

**Review time:** 4 Hours

<b>Scientific quality</b>	<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
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous





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statements

Conflicts-of-Interest: [ ] Yes [Y] No

## SPECIFIC COMMENTS TO AUTHORS

accept

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**Reviewer's code:** 03564003

**Position:** Peer Reviewer

**Academic degree:**

**Professional title:**

**Reviewer's Country/Territory:** Turkey

**Author's Country/Territory:** France

**Manuscript submission date:** 2021-02-18

**Reviewer chosen by:** Ze-Mao Gong

**Reviewer accepted review:** 2021-04-29 10:29

**Reviewer performed review:** 2021-04-29 11:24

**Review time:** 1 Hour

<b>Scientific quality</b>	<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
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [ ] Yes [Y] No

#### **SPECIFIC COMMENTS TO AUTHORS**

I think authors revised the manuscript according to evaluations. Sincerely Yours,