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PEER-REVIEW REPORT

Name of journal: *World Journal of Biological Chemistry*

Manuscript NO: 66383

Title: Increased monoamine oxidase activity and imidazoline binding sites in insulin-resistant adipocytes from obese Zucker rats

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05821062
Position: Peer Reviewer
Academic degree: MD
Professional title: Doctor
Reviewer's Country/Territory: China
Author's Country/Territory: France

Manuscript submission date: 2021-03-26

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-27 22:22

Reviewer performed review: 2021-03-27 23:16

Review time: 1 Hour

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No

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Peer-reviewer statements	Peer-Review: [ ] Anonymous [Y] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The manuscript 02817363 theoretically studied the activation of glucose uptake activation by hydrogen peroxide in adipocytes using radiolabeled non-metabolizable analog of glucose [3H]-2-DG for hexose uptake and [3H]-glucose for lipogenic activity. The study found that the adipocytes from obese the Zucker rats exhibit increased monoamine oxidase (MAO) activity and imidazoline binding site number. But, perhaps a number of issues should be clarified to improve the overall quality of this manuscript. Therefore, I suggest that this manuscript could be accepted for publication in BPBSE after a revision. 1. Semicarbazide-sensitive amine oxidase (SSAO) and monoamine oxidases (MAO) were highly expressed in adipocytes, and hydrogen peroxide was generated after SSAO and MAO activated. And Carpéné et al (2007) had found that fat deposition was reduced by combined inhibition of monoamine oxidases and semicarbazide-sensitive amine oxidases in obese Zucker rats. According to the published literature, whether were the results of the increased monoamine oxidase (MAO) activity and imidazoline binding site number also obtained the same decreased fat deposition or glucose uptake? If yes, is there any innovation for this manuscript? Reference Carpéné C, Iffiú-Soltesz Z, Bour S, Prévot D, Valet P. Reduction of fat deposition by combined inhibition of monoamine oxidases and semicarbazide-sensitive amine oxidases in obese Zucker rats. Pharmacol Res. 2007, 56(6):522-30. 2. Amine oxidase expression was also established a human preadipocyte cell strain from a patient with Simpson-Golabi-Behmel syndrome (Bour et al., 2007). How is the expression profile of amine oxidase encoding genes in insulin-resistant adipocytes from obese Zucker rats? Reference Bour S, Daviaud D, Gres S, Lefort C, Prévot D, Zorzano A, Wabitsch M, Saulnier-Blache JS,

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Valet P, Carpéné C. Adipogenesis-related increase of semicarbazide-sensitive amine oxidase and monoamine oxidase in human adipocytes. Biochimie. 2007, 89(8):916-25. 3. Would you please update the cited references using the latest ones? Fontaine J, Tavernier G, Morin N, Carpéné C. Vanadium-dependent activation of glucose transport in adipocytes by catecholamines is not mediated via adrenoceptor stimulation or monoamine oxidase activity. World J Diabetes. 2020, 11(12):622-643. ……