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PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 91036

Title: Taurine alleviates activated hepatic stellate cells through inhibiting autophagy and inducing ferroptosis

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06290020
Position: Peer Reviewer
Academic degree: N/A

Professional title: N/A

Reviewer's Country/Territory: Brazil

Author's Country/Territory: China

Manuscript submission date: 2023-12-21

Reviewer chosen by: AI Technique

Reviewer accepted review: 2024-01-02 21:47

Reviewer performed review: 2024-01-13 20:01

Review time: 10 Days and 22 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[Y] Grade A: Excellent [ ] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[Y] Grade A: Excellent [ ] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

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Scientific significance of the conclusion in this manuscript	[Y] Grade A: Excellent [ ] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [ ] Grade B: Minor language polishing [Y] 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	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Taurine alleviates activated hepatic stellate cells through inhibiting autophagy and inducing ferroptosis by Li Sen et al In this study, the authors propose novel findings building upon previous research, indicating that taurine treatment holds promise in alleviating liver fibrosis. Drawing on established evidence that taurine can inhibit hepatic stellate cell activation and proliferation, crucial elements in liver fibrosis, the study delves into the less-explored realms of autophagy and ferroptosis. Employing molecular biology tests and bioinformatic methods, the research sheds light on the impact of taurine on autophagy and ferroptosis in hepatic stellate cells in vitro. Remarkably, the study unveils that experimentally induced taurine exerts a dual effect: suppressing autophagy in hepatic stellate cells to inhibit their activation, while simultaneously triggering ferroptosis and ferritinophagy, leading to the elimination of activated hepatic stellate cells. Notably, the mechanism of ferritinophagy is intricately linked to taurine's direct targeting effect on NCOA4. This marks the first demonstration of taurine's potential in modulating autophagy and ferroptosis as a means to combat liver fibrosis. I found the topic to be original and highly relevant in the field, addressing

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a specific gap. The methodology is fine and no further control is required. I found the conclusion to be in line with the evidence and arguments presented. The manuscript is interesting; however, it can be improved and strengthened by addressing the following comments: 1. The article would benefit from a thorough refinement of the English language. 2. The captions for Figures 2 and 5 are unclear. 3. The conclusion section lacks clarity and could be more explicit.