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PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 91955

Title: Impact of Microplastics and Nanoplastics on Liver Health: Current Understanding and Future Research Directions

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06301995
Position: Peer Reviewer
Academic degree: MD
Professional title: Doctor
Reviewer's Country/Territory: China
Author's Country/Territory: Taiwan

Manuscript submission date: 2024-01-10

Reviewer chosen by: AI Technique

Reviewer accepted review: 2024-01-10 12:01

Reviewer performed review: 2024-01-10 12:19

Review time: 1 Hour

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish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	[Y] Grade A: Priority publishing [ ] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] 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

The novel content is a serious but neglected problem facing mankind at present. I think the direction of analysis and elaboration chosen by the paper is also reasonable. However, I think it is still necessary for the author to add the following. 1. The theory of multiple blows is currently a recognized pathogenesis of MAFLD, and I think the author should elaborate it in the manuscript and link it with the pathogenesis of MPs. I think it can be derived from the inflammatory (activating macrophages -- pro-inflammatory cytokines ---- reactive oxygen species/oxidative stress) 2. The author mentions that intestinal flora is affected, and I think the literature should be supplemented to further clarify the effects of MPs on the diversity of intestinal flora and the abundance of some specific bacteria from the published articles 3. The section "Inflammation", I think, should be further specified as kupffer cells in the liver (macrophages in the liver) and look for the effect of MPs on the activation of kupffer cells. In addition, the activation of macrophages in the liver will affect lipid metabolism, activate the oxidation of free fatty acids, and then produce excess ROS, resulting in liver damage. This point should be reflected in the article This is a very good research direction, because the research is a

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serious problem at present. We believe that "long-term uncontrolled inflammation" is the main cause of tumor induction. So I think this paper is very meaningful, but the author should elaborate on the above content in depth to provide guidance for other scholars' research.