

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 89716

Title: Recent advances in age-related metabolic dysfunction-associated steatotic liver disease

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02991481

Position: Associate Editor

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2023-11-12

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2023-12-13 15:05

Reviewer performed review: 2023-12-14 18:04

Review time: 1 Day 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 Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<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
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The authors reviewed updates in age-related NAFLD focusing on the underlying mechanisms and potential therapeutic approaches. Overall, the manuscript was well-written and reads well. This reviewer has the following concerns, if addressed, should improve the manuscript: 1. In the section of Mitochondrial homeostasis, the authors indicate that fragmented mitochondrial DNA accumulates in nuclear. Any reference for this? How could this occur and the pertinent mechanism? 2. Fructose intake or consumption is a major cause of NAFLD, the contribution of this sugar to NAFLD in aged cohorts, should be elaborated.

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 89716

Title: Recent advances in age-related metabolic dysfunction-associated steatotic liver disease

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02731847

Position: Editorial Board

Academic degree: MD, MSc

Professional title: Associate Professor, Staff Physician

Reviewer's Country/Territory: Brazil

Author's Country/Territory: China

Manuscript submission date: 2023-11-12

Reviewer chosen by: Jia-Ru Fan

Reviewer accepted review: 2023-12-13 19:16

Reviewer performed review: 2023-12-23 20:29

Review time: 10 Days and 1 Hour

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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

This is a paper which examines the increasing prevalence of non-alcoholic fatty liver disease (NAFLD), affecting 25% of the global population and emerging as a significant chronic liver condition, particularly associated with aging. The review explores the role of aging-related factors such as oxidative stress, autophagy, mitochondrial homeostasis, bile acid metabolism, and dysbiosis in the development of NAFLD, aiming to identify potential therapeutic targets for age-related NAFLD and its progression in the context of an aging global population. It is well written and very well organized. Major concern: In this day and age, MASLD is the correct term, and not NAFLD. Please, review the paper and correct this (<https://www.aasld.org/new-masld-nomenclature>). Some minor suggestions: The sentence "Although AMP-activated protein kinase (AMPK) activation induces autophagy, aging is associated with decreased AMPK activation..." could be clarified by mentioning that AMPK activation is a regulator of autophagy and aging-related changes in AMPK activation may impact autophagic processes. The sentence "Mitochondrial homeostasis is closely related to the occurrence and development of NAFLD" is a broad statement. It might be helpful to briefly mention



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: office@baishideng.com
https://www.wjgnet.com

specific aspects of mitochondrial homeostasis that are crucial for NAFLD development. The section discussing TLR5-deficient mice could be nuanced by highlighting the complexity of the relationship between TLR5 and metabolic syndrome, as it seems to have dual effects according to the presented studies. The sentence "Additionally, the transplantation of GM from younger mice to older mice could reverse age-related changes in the gut, eyes, and brain" is factually accurate, but for a more comprehensive understanding, specifying the key findings related to gut health from the study or studies would be beneficial.