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## PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 64891

Title: Fatty acid metabolism and acyl-CoA synthetases in the liver-gut axis

Reviewer's code: 05275052

**Position:** Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor, Director

Reviewer's Country/Territory: Ukraine

Author's Country/Territory: Germany

Manuscript submission date: 2021-02-25

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-21 09:23

Reviewer performed review: 2021-05-01 10:08

Review time: 10 Days

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	<ul> <li>[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing</li> <li>[ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection</li> </ul>
Conclusion	<ul> <li>[ ] Accept (High priority) [Y] Accept (General priority)</li> <li>[ ] Minor revision [ ] Major revision [ ] Rejection</li> </ul>
Re-review	[Y]Yes []No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [] Yes [Y] No



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## SPECIFIC COMMENTS TO AUTHORS

This review of the literature "Long-chain fatty acids, short-chain fatty acids, acyl-CoA synthetases, microbiota, and liver-gut axis" completely describes the problem of the short-chain fatty acids and its role in the "gut-liver axis". The manuscript includes the latest concerning the pharmacological targeting effect on the short-chain fatty acids production and long-term consequences which are associated with it. As far as we know, no previous research has investigated this problem fundamentally. Nevertheless, given the name "Long-chain fatty acids, short-chain fatty acids, acyl-CoA synthetases, microbiota, and liver-gut axis", in this manuscript there are very little data about gut microbiota species and its impact on short-chain fatty acids as one of the important ways for gut-liver axis induction. Additionally, there are insufficient information about the problem of intestine excessive bacterial growth (SIBO) and gram-negative microbiota, which are often acts as the trigger of cascade reactions which are leading to "Gut-liver" start. Summarizing this review, I recommend this work to publication in World Journal of Hepatology, with minor refinements to the above points.