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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 60749

Title: G protein-coupled receptors as potential targets for nonalcoholic fatty liver disease treatment

Reviewer's code: 02543991
Position: Editorial Board
Academic degree: DPhil, MPhil, PhD
Professional title: Associate Professor
Reviewer's Country/Territory: China
Author's Country/Territory: United States

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Reviewer chosen by: AI Technique
Reviewer accepted review: 2020-11-12 03:02
Reviewer performed review: 2020-12-02 10:45
Review time: 20 Days and 7 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
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) [ ] 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

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SPECIFIC COMMENTS TO AUTHORS

Nonalcoholic fatty liver disease (NAFLD) is a broad-spectrum disease, ranging from simple hepatic steatosis to nonalcoholic steatohepatitis (NASH), which can progress to cirrhosis and liver cancer. Abnormal hepatic lipid accumulation is the major manifestation of this disease, and lipotoxicity promotes NAFLD progression. In addition, intermediate metabolites such as succinate can stimulate the activation of hepatic stellate cells (HSCs) to produce extracellular matrix proteins, resulting in progression of NAFLD to fibrosis and even cirrhosis. G protein-coupled receptors (GPCRs) have been shown to play essential roles in metabolic disorders, such as NAFLD and obesity, through their function as receptors for bile acids and free fatty acids. In addition, GPCRs link gut microbiota-mediated connections in a variety of diseases, such as intestinal diseases, hepatic steatosis, diabetes, and cardiovascular diseases. In this review manuscript, the authors summarize the current findings regarding the role of GPCRs in the development and progression of NAFLD and describes some preclinical and clinical studies of GPCR-mediated treatment. Overall, understanding GPCR-mediated signaling in liver disease may provide new therapeutic options for NAFLD. It is a well organized review. It is suggested to discuss the challenge to target GPCRs in NAFLD and its advantages compared with other NAFLD targets or therapeutics.