

PEER-REVIEW REPORT

Name of journal: *World Journal of Hepatology*

Manuscript NO: 77971

Title: Bile acids as drivers and biomarkers of hepatocellular carcinoma

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05848410

Position: Peer Reviewer

Academic degree: Doctor, MMed, PhD

Professional title: Chief Doctor, Chief Physician, Dean, Doctor, Professor, Surgeon

Reviewer's Country/Territory: China

Author's Country/Territory: United Kingdom

Manuscript submission date: 2022-05-30

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-06-01 14:11

Reviewer performed review: 2022-06-09 08:50

Review time: 7 Days and 18 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 Grade E: Do not publish
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	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors reviewed the studies about the BAs in carcinogenesis of HCC and concluded that the BAs might be a meaningful biomarker for HCC diagnosis. In this review, the authors listed a lot of evidences to state that the BAs may play an important role in HCC, like rodent models, human in vitro models, and clinical trials. This manuscript has a very fair point and clear structure. However, a minor suggestion should still be placed. As all readers know that the US and AFP are the most important screening methods for cirrhosis patients for HCC detection which the authors also mentioned in this manuscript, the readers may be very interested in whether there is any study compared US or AFP to the BAs.

PEER-REVIEW REPORT

Name of journal: *World Journal of Hepatology*

Manuscript NO: 77971

Title: Bile acids as drivers and biomarkers of hepatocellular carcinoma

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03022543

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: United Kingdom

Manuscript submission date: 2022-05-30

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-07-05 11:28

Reviewer performed review: 2022-07-12 11:13

Review time: 6 Days and 23 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
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 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	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The article briefly summarizes the impact of different bile acids and their metabolites on various biological process of hepatocellular carcinoma, including senescence, proliferation and epithelial-mesenchymal transition. The authors collected evidence from basic and clinical researches and evaluate the possibility of using BA measurements as predictors of HCC incidence or as a potential screening method for the early detection of HCC. As a minireview, this manuscript helps better understand how different BAs and their impact on HCC patients' prognosis. It is worthwhile to be published after some minor revisions which are listed as follows: Firstly, some grammatical mistakes need to be corrected to improve the fluency of the article. For example, in line 212, "an" in the sentence "There are many potential benefits of such an approach." should be omitted. Besides, the authors mentioned different BA receptors (FXR, TGR5, PXR and CAR) involved in regulate cellular metabolic, inflammatory and proliferative phenotypes. However, in the following evidence from in vivo or in vitro experiments, only FXR was mentioned. It will be better to add more concerning other receptors in order to show readers more bridges BAs rely on to HCC. Mentioned the clinical appliance of BAs on HCC patients, they searched a number of clinical trials covering various BAs detected in different kinds of patients (healthy, cirrhosis, HCC) and in different kinds of HCC. This apart is the core of the review by highlighting the actual impact of BAs on patients. It can still be polished by pointing out one or two BAs among all as possible candidates to predict HCC based on all these basic and clinical researched they have mentioned above. Overall, the article is qualified for share the latest information about the potential value of BAs becoming biomarkers of HCC. The above information should be included for publication.