



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Oncology*

Manuscript NO: 87620

Title: Potential biological function, immunological and prognostic value of PDHB in cancer: From pan-cancer analysis to liver cancer validation

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 00053419

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: Spain

Author's Country/Territory: China

Manuscript submission date: 2023-08-19

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-08-24 08:37

Reviewer performed review: 2023-08-31 10:49

Review time: 7 Days and 2 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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 Grade E: Do not publish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 type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Minor revision <input checked="" 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 manuscript by Yao Tong et al reports a statistical analysis to determine the correlation of PDHB changes with a number of tumor associated features. The study is extended to publicly available genome wide molecular profiles of different cancer types. The main outcome is that PDHB regulation may be a driver of tumor progression and, based on this, it is proposed as a prognostic marker. While some of the findings might be relevant there are important concerns that require the attention of the authors. 1. Correlations not always mean causality. Further analysis and discussion are needed to convince the reader that the reported correlations are not epiphenomena, which would underscore the role of PDHB as cancer driver. 2. The analysis of different tumor types is of interest. However, it is difficult to extract an overall conclusion in light of the different regulation of PDHB (it is up-regulated in some tumors while the opposite occurs in others; negative and positive regulation cannot be considered as the same thing) and correlations with tumor features across the analyzed cancers. If there is indeed a causal effect, it must be carefully analyzed why up and down-regulation of the protein display the same type of correlations in some cases while this is not the case in others. Are all



**Baishideng
Publishing
Group**

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

correlations equally relevant? 3. The structure of the manuscript should be revised. It is challenging for the reader to figure out the relevance of the reported data. As different tumors appear to present specific PDHB regulation and correlation profile, a cancer type presentation of the results might be clearer. Then, comparison across tumors could be done and discussed. 4. The results reported in the text do not always agree with what is shown in the corresponding figure. Comments concerning all cases is mentioned while heterogeneity across tumor type is observed. This should be carefully revised to avoid misleading interpretations. 5. Figure 4 is confusing since authors include ROC curves for cancer types that have not been included in the staging analysis. Moreover, if no statistical differences were observed, how the corresponding ROC curve could be explained? 6. If the tumor present cellular heterogeneity, how this factor affects or contribute to the reported correlations? Are PDHB changes associated to a specific cellular entity? 7. The link between PDHB and DNA methylation is unclear. According to the authors' comments the alteration of one carbon metabolism leading to a deregulated SAM production could be inferred. Is this a possibility? If so, it would be of interest to investigate a correlation between PDHB changes and one carbon metabolism dysregulation. 8. The cancer types included in figure 1A without control are irrelevant. 9. The text in the figures is too small. 10. Abbreviations should be defined in the figure legends for an easy understanding 11. Complete images of WB must be included as supplementary information.



PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Oncology*

Manuscript NO: 87620

Title: Potential biological function, immunological and prognostic value of PDHB in cancer: From pan-cancer analysis to liver cancer validation

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05382551

Position: Editorial Board

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Spain

Author's Country/Territory: China

Manuscript submission date: 2023-08-19

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-10-16 09:53

Reviewer performed review: 2023-10-16 14:30

Review time: 4 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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 type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Grade B: Minor language polishing <input checked="" 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

The article is within the scope of the magazine and deals with an interesting topic. It is well written. Reading is fluid. It is a novel and original work that represents an advance in the area of knowledge. A well-designed experiment is presented, the materials, methods are described, and a set of results are discussed. However, to accept the article some improvements would need to be made: a) The discussion should be improved so that the work presented is compared with other similar works, showing its progress and limitations. b) The presentation of materials and methods should be improved. c) In the conclusions section, the explanation of the scientific contribution of the article should be improved. d) The introductory section should be better organized into the state of the art presentation.