

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Virology*

**Manuscript NO:** 82522

**Title:** Re-analysis of HBV integration sites reveals potential new loci associated with oncogenesis in hepatocellular carcinoma

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 06266268

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Chief Physician

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Japan

**Manuscript submission date:** 2022-12-28

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2023-01-03 00:38

**Reviewer performed review:** 2023-01-05 10:57

**Review time:** 2 Days and 10 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 Grade E: Do not publish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 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

<b>Scientific significance of the conclusion in this manuscript</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	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 submitted to World Journal of Virology, entitled “Re-analysis of HBV integration sites reveals potential new loci associated with oncogenesis in hepatocellular carcinoma”, reanalyzed HBV integration sites using publicly available data consisting of 426 liver tumor samples and 426 paired adjacent non-tumor samples by GridSS VIRUSBreakend, when T2T-CHM13 (v2.0) or GRCh38 was used as the human reference genome. The significant limitations of the manuscript are described below, along with several minor points. It's worth noting that there is no line numbers in the manuscript, and line number have been added, the following points listed according to that line numbers. Major points: 1. Line 104-105: As we all known, marker genes are critical and often play the most important roles in the pathway. In this paper, frequent integration breakpoints were similar to that marker genes, however, the data in the Table2 suggested that the original study worked better than the current study, so what's the point of this study? 2. Line 34, 182: These two conclusion seem to exist some ambiguity, please make sure your conclusions are consistent. 3. Figures should be combined into one figure, such as figure 1A-1C should be put together, but not



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interspersed. Minor point: 1. Line 12: "hepatocellular carcinoma" should be written as "HCC". 2. Line 22: what is the hg19? Please write full name on its first occurrence. 3. Line 52-53: when HBV infects liver cells, is HBV DNA integrated into the human genome certainly? If not, please do a accurate description. 4. Line 57: HBx, Please write full name on its first occurrence. 5. Line 63-64: "HBV-infected HBV-infected" should be written as "HBV-infected". 6. Line 64: "mitochondria" should be written as "mitochondria DNA". 7. Line 74: The word "breakends" has not an exact meaning. Please use the exact word. 8. Line 95-96: "In total" and "Overall" have similar meaning, this sentence should be rewritten. 9. Line 101-103: "For example,..... in the original analysis", these data were not showed up in this paper. 10. Line 112, 141, 156 et al: Chr11q13.3 and 11q13.3 should mean the same thing, please unified their writting. 11. Line 134: "the GCCXTTCTCATC sequence", please explain what does X stand for in the DNA sequence. 12. Line 167, 172: "reported" is used many times in the manuscript, please replace other similar words. 13. The references need to be edited and sorted using reference management software, such as ENDNOTE. 14. Editing for English grammar and usage is needed.

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**Reviewer's code:** 06087386

**Position:** Peer Reviewer

**Academic degree:** MDS

**Professional title:** Assistant Professor, Research Fellow

**Reviewer's Country/Territory:** India

**Author's Country/Territory:** Japan

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**Reviewer chosen by:** AI Technique

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**Reviewer performed review:** 2023-01-13 06:20

**Review time:** 2 Days and 1 Hour

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 checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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<b>Scientific significance of the conclusion in this manuscript</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	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

Reviewer comments to author 1. ---kindly include full form of HIVID 2. In discussion---- Integration at 11q13.3 is a potential driver event[19], but its frequency is not high.-----not in line with reference 19----kindly check 3. several studies have detected these events[4,5,20]----- not in line with quoted references----kindly check