

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 45933

**Title:** Signal transducer and activator of transcription 3 promotes the Warburg effect might by inducing pyruvate kinase M2 phosphorylation in liver precancerous lesions

**Reviewer's code:** 02936520

**Reviewer's country:** Egypt

**Science editor:** Ruo-Yu Ma

**Reviewer accepted review:** 2019-02-15 21:59

**Reviewer performed review:** 2019-02-19 22:04

**Review time:** 4 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

This manuscript addresses the possible pathogenetic role of STAT 3 in the control of the Warburg effect in an experimental model of hepatocarcinogenesis ( the solt farber model)

1. The manuscript needs minor copy editing. 2. The title needs to be modified to



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demonstrate the contents. 3. The idea has been addressed previously. 4 The methodology is appropriate. 5. The results are presented adequately. Although the histology photos need to be larger 6. The use of an inhibitor of STAT3 and measuring its consequences is strong supportive evidence for the positive role o STAT3 in the pathogenesis of the Warburg effect in experimental HCCs. 7. The discussion needs to address the extrapolation of these results to human cases where stem cell proliferation is not a prominent feature. In those cases where hepatocarcinogenesis is the result of dedifferentiation of heptocytes.

#### **INITIAL REVIEW OF THE MANUSCRIPT**

##### ***Google Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

##### ***BPG Search:***

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Gastroenterology

**Manuscript NO:** 45933

**Title:** Signal transducer and activator of transcription 3 promotes the Warburg effect might by inducing pyruvate kinase M2 phosphorylation in liver precancerous lesions

**Reviewer's code:** 02861035

**Reviewer's country:** United Kingdom

**Science editor:** Ruo-Yu Ma

**Reviewer accepted review:** 2019-02-15 09:44

**Reviewer performed review:** 2019-02-24 01:28

**Review time:** 8 Days and 15 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

In this article, Bi et al used in vivo and in vitro models to show STAT3 promotes the Warburg effect of hepatic progenitor cells through PKM2 during precancerous lesions. The authors first used a model combining DEN, AAF, and PH to simulate hepatic

progenitor cells/oval cell expansion and precancerous lesions. Although it is unclear how appropriate this model in modelling human cancer formation and hepatic lesion, but the authors showed hepatocyte GST expression in some hepatocytes in their model. The authors also showed pSTAT3 are expressed in the liver but the staining is unclear about the identity of cells that express pSTAT3, as it seems that OV-6 cells do not express pSTAT3 in their staining, but instead the cells adjacent to it. Double immunofluorescent staining should be used to confirm whether these cells are hepatocytes or other cells types. Furthermore, level of STAT3 and pSTAT3 by Western blot should be performed to investigate the level of STAT3/pSTAT3 in their model. The authors also showed the expression of PKM2 by hepatic progenitor cells in the model, but this is unclear whether this only specific to this model or to all models with hepatic progenitor cell activation. PKM expression and its level should be investigated also in model such as AAF-PH, like shown in Fig 1.

## INITIAL REVIEW OF THE MANUSCRIPT

### *Google Search:*

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