



**PEER-REVIEW REPORT**

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

**Manuscript NO:** 38869

**Title:** The production of extracellular lysophosphatidic acid in the regulation of metabolism and liver fibrosis.

**Reviewer’s code:** 03475479

**Reviewer’s country:** Japan

**Science editor:** Xue-Jiao Wang

**Date sent for review:** 2018-03-25

**Date reviewed:** 2018-03-28

**Review time:** 3 Days

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

**COMMENTS TO AUTHORS**

Authors reviewed the role of LPA in the regulation of metabolism. This work is well-written and informative. Authors should discuss about the association between metabolic disorder and liver fibrosis, especially about the contibution of LPA.



**PEER-REVIEW REPORT**

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

**Manuscript NO:** 38869

**Title:** The production of extracellular lysophosphatidic acid in the regulation of metabolism and liver fibrosis.

**Reviewer's code:** 00000083

**Reviewer's country:** United States

**Science editor:** Xue-Jiao Wang

**Date sent for review:** 2018-03-26

**Date reviewed:** 2018-03-29

**Review time:** 3 Days

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

**COMMENTS TO AUTHORS**

This paper by Yang and Chen presents an in-depth review of LPA and its signaling in metabolism and liver fibrosis. The review is generally well organized and written. However, the majority of the review is about the general information on LPA synthesis and LPA-mediated signaling and effects, and the actual discussion on metabolism and fibrosis takes a back seat. This review seems a bit misleading in this. Although there is increasing interests on LPA and autotaxin in the pathogenesis of diabetes and other liver diseases, most of the studies are correlative findings with a few exceptions. 1. The "metabolism" in the title should be changed since this has a much broader implication than the review presents. 2. Increasing evidence demonstrate the expression and secretion of autotaxin by adipocytes, but the authors downplay this fact for unknown reasons. 3. There is a fair amount information linking diabetes to liver fibrosis, but the



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review lacks a clear link between these pathologies. 3. Top of pg 20: "LPA from HCC cells ....fibroblasts associated with the tumor" Please check.



**PEER-REVIEW REPORT**

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

**Manuscript NO:** 38869

**Title:** The production of extracellular lysophosphatidic acid in the regulation of metabolism and liver fibrosis.

**Reviewer's code:** 00503345

**Reviewer's country:** Canada

**Science editor:** Xue-Jiao Wang

**Date sent for review:** 2018-03-26

**Date reviewed:** 2018-04-07

**Review time:** 12 Days

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Duplicate publication	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

**COMMENTS TO AUTHORS**

In this manuscript the authors review the history of research on lysophosphatidic acid (LPA) biological functions, including the mechanisms of LPA production, the discovery of LPA receptor subtypes, and LPA receptor signaling pathways. The contribution of autotaxin (ATX) to LPA production and of LPA receptors to the physiopathology of obesity, to insulin resistance and fibrosis in different liver diseases is discussed. Though the review is fine as is, I suggest a significant number of minor corrections and additions: -Page 5 (line 28) and Figure 2: Phosphatidic acid is not generated by a lysophospholipase D (lysoPLD). It is rather produced through the hydrolysis of phospholipids by phospholipase D enzymes (PLD1 and PLD2). This mistake needs to be corrected. -Page 6, line 18: I would rather say that lipid phosphate phosphates (LPPs) are also involved in the LPA turnover (or recycling). Saying that LPPs are involved in



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LPA production is a little bit misleading. -Page 6, last line: I would state that the biologically active LPA-like products generated by this non-enzymatic oxidation co-migrated with an authentic LPA standard in thin layer chromatography. -Page 8, line 3: I would rather say that extracellular LPA was found to be present in sub-micromolar or micromolar ranges. -Page 9, line: I would rather state that the ATX human and mouse ATX gene structures are conserved. -Page 9. The authors should highlight that a polybasic insertion corresponding to exon 12 in ATX $\alpha$  confers binding to heparin sulfates (Houben AJ et al., 2013, PMID: 23150666). This is another potential mechanism for localizing ATX $\alpha$  to cell membranes and for LPA production in close proximity to LPA receptors. -Table 1, and page 13. With regard to expression of LPA3 receptor in mouse tissues, including the reproductive organs, I would cite the study by Zhao C et al. (Transgenic Research, 2015, PMID: 25982332). -Page 17, end of the paragraph, line 20. The last part of the sentence should be revised. -Page 18, line 12: "in them" can be deleted. -Page 18, line 13: ... ATX knockout mice fed with a high-fat diet ... -Page 18. The authors may highlight that LPA can negatively regulate ATX expression in adipose tissues (Benesch MG et al., 2015, PMID: 25896349). -Page 18, line 24: ... obese-only subjects ... -Please check symbols and Greek letters that did not display properly in the word document.