

## PEER-REVIEW REPORT

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

**Manuscript NO:** 38560

**Title:** Dynamic alteration in the gut microbiota and metabolome during the development of methionine-choline-deficient diet-induced non-alcoholic steatohepatitis

**Reviewer's code:** 02631746

**Reviewer's country:** United States

**Science editor:** Xue-Jiao Wang

**Date sent for review:** 2018-03-01

**Date reviewed:** 2018-03-02

**Review time:** 1 Day

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input checked="" 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 checked="" type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input checked="" 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 checked="" type="checkbox"/> No	

## COMMENTS TO AUTHORS

Well done

## PEER-REVIEW REPORT

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**Manuscript NO:** 38560

**Title:** Dynamic alteration in the gut microbiota and metabolome during the development of methionine-choline-deficient diet-induced non-alcoholic steatohepatitis

**Reviewer's code:** 03023823

**Reviewer's country:** Italy

**Science editor:** Xue-Jiao Wang

**Date sent for review:** 2018-03-01

**Date reviewed:** 2018-03-02

**Review time:** 1 Day

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 checked="" 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 checked="" type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

## COMMENTS TO AUTHORS

The manuscript "Dynamic alteration in the gut microbiota and metabolome during the development of methionine-choline-deficient diet-induced non-alcoholic steatohepatitis" reports the results of an experimental intervention study. Its content is overall interesting and timely. Scope is clearly defined: The purpose of the present study was to investigate the dynamic alterations in the gut microbiota and metabolome during the development of MCD diet-induced NASH. The rationale and the unmet need are not sufficiently justified: "The progression of liver injury in methionine-choline-deficient (MCD) diet-induced rats has been well-characterized[. However, a detailed knowledge of the changes in the gut microbiota and metabolome that occur during NASH development in mouse models is still unknown." Well, where is the rationale? Please, justify links, if any, between the two facets – liver and gut – of your experiment. There is



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anything that we should accept as a reason for this deprivation model as a mirror of human NASH? There is any analogy of the gut microbiome of rats with the spectrum of human microbiomes? The main limitation is the conclusion toward which all the manuscript runs: conclusion, the MCD diet induced gut microbiota and metabolome deterioration, which may contribute to NASH progression. Even for a conjecture, we need new information using appropriate methods and criteria of rat population selection. The manuscript is written clearly using Standard English English, spelling and syntax of a few sentences need minor reappraisal, and a further professional review could improve style. Overall, the manuscript seems more suitable for a short communication than to a full-length article; this because, among the limitations, several information are not provided. The manuscript should become technically more sound before any further revision.

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**Manuscript NO:** 38560

**Title:** Dynamic alteration in the gut microbiota and metabolome during the development of methionine-choline-deficient diet-induced non-alcoholic steatohepatitis

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**Reviewer's country:** Japan

**Science editor:** Xue-Jiao Wang

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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 checked="" type="checkbox"/> Grade B: Very good	<input checked="" 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 checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

## COMMENTS TO AUTHORS

The manuscript written by Jian-Zhong Ye et al. describes the dynamic changes in the gut microbes during the development of NASH induced by methionine-choline-deficient diet. The mice fed with methionine-choline-deficient diets develop simple hepatic steatosis after 2 weeks and progress to NASH after 4 weeks, and gut microbiota and metabolome have been changed dynamically during that course. The data suggest that the alteration may be associated with the development of NASH. The data are important and may give new insight on the pathogenesis of NASH. However, there are some concerns that need to be addressed. Major point Even if there are some dynamic changes in the composition of gut microbiota, it is not necessarily mean that the change may contribute the development of NASH. In other words, methionine-deficient diet might induce NASH with no association with changes in gut microbiota. In order to

clarify the direct evidence for the contribution, the authors should show that the gut microbiota obtained from methionine-choline-deficient diet at different time points causes the same fatty changes in liver histology if administered to control mice. Alternatively, gut microbiota of NASH mice induced by other methods should be similarly analyzed, and confirm the similar changes in the composition of gut microbiota occur during the development of NASH. The authors should, at least, discuss on that point. 2. The same approach or strategy as #1 should be considered in the metabolites produced by gut microbiota.