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PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer's code: 02904354

Reviewer's country: China

Science editor: Fang-Fang Ji

Date sent for review: 2017-10-07

Date reviewed: 2017-10-17

Review time: 9 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"/> Duplicate publication | |
| <input type="checkbox"/> Grade D: Fair | <input type="checkbox"/> Grade C: A great deal of language polishing | <input type="checkbox"/> Plagiarism | <input type="checkbox"/> Rejection |
| <input type="checkbox"/> Grade E: Poor | | <input type="checkbox"/> No | <input type="checkbox"/> Minor revision |
| | <input type="checkbox"/> Grade D: Rejected | BPG Search: | <input type="checkbox"/> Major revision |
| | | <input type="checkbox"/> The same title | |
| | | <input type="checkbox"/> Duplicate publication | |
| | | <input type="checkbox"/> Plagiarism | |
| | | <input type="checkbox"/> No | |

COMMENTS TO AUTHORS

In the paper, there are lots of grammar errors, which preclude my understanding. For examples, the sentence "However, the major hitches remains like the donor wise phenotypic variations and sourcing limitation." was wrong in grammar. The sentence "The mechanical strength of acellularized liver scaffolds after sterilization as compared with the native liver." was wrong in grammar. The sentence "Hence neglecting several crucial stimuli that allow control over the cellular organization and function." was wrong in grammar. The sentence "Mixed tensile strength, suture retention strength and compressive strength analysis of was analyzed according to the protocol described earlier" was wrong in grammar.



PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer’s code: 03476715

Reviewer’s country: China

Science editor: Fang-Fang Ji

Date sent for review: 2017-10-17

Date reviewed: 2017-11-01

Review time: 15 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"/> [Y] 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 | | [Y] No | <input type="checkbox"/> [] Major revision |
| | | BPG Search: | |
| | | <input type="checkbox"/> The same title | |
| | | <input type="checkbox"/> Duplicate publication | |
| | | <input type="checkbox"/> Plagiarism | |
| | | [Y] No | |

COMMENTS TO AUTHORS

It is an interesting research. Clearly defined methodology and results. I would like to see this manuscript published.



PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer's code: 02861124

Reviewer's country: Saudi Arabia

Science editor: Fang-Fang Ji

Date sent for review: 2017-11-06

Date reviewed: 2017-11-12

Review time: 6 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

The submitted manuscript deals with a very interesting piece of work on developing an ex vivo bioengineered humanized livers model to more efficiently screen the absorption, distribution, metabolism, excretion and toxicity of several pipeline drugs, and closely mimics the pre-clinical in vivo systems. Overall the work is well conceived, planned, executed and written. However, the manuscript suffers a poor language control that hampers the flow and readability. The major concern is the mixing of parts of methodology with results, and the too lengthy discussion. My comments/suggestions are highlighted in the attached manuscript file. I would recommend re-submission of the revised manuscript for further consideration.



PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer's code: 02861012

Reviewer's country: United Kingdom

Science editor: Fang-Fang Ji

Date sent for review: 2017-11-06

Date reviewed: 2017-11-15

Review time: 9 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 checked="" type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> The same title | <input type="checkbox"/> High priority for publication |
| <input checked="" 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

In this manuscript Vishwakarma and co-authors describe their work on creating bioengineered humanized livers as better three-dimensional drug testing model system. The authors present convincing data that bioengineered livers are a feasible approach with repopulated acellular scaffolds being functionally active able to produce key molecules such as albumin. The work is very interesting however there are still some gaps that should be answered: 1. The authors do not give any information on the size/grams of livers they used to isolate human hepatic progenitor cells. How many cells were the authors able to isolate? 2. The authors mentioned (page 9) that human HPCs were characterised for the expression of liver specific pluripotent markers etc; they need to show this data. 3. The authors used 12x10⁶ Epcam+enriched hHPCs but it is unclear whether these cells were derived directly ex vivo or they were left to expand in vitro first.



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4. It hasn't been clear how long overall can these humanized livers survive? The authors only show data up to day 7. How does this compare with the drug usage and metabolism in the human body? 5. The authors claim that their unique system allows for high-throughput studies. Can the authors be a bit more specific about this? 6. The authors have not described their data in comparison to what has been already described by the Pinzani group on liver bioengineering.



PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer's code: 00068720

Reviewer's country: China

Science editor: Fang-Fang Ji

Date sent for review: 2017-11-06

Date reviewed: 2017-11-15

Review time: 9 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 checked="" type="checkbox"/> Grade B: Minor language polishing | <input type="checkbox"/> The same title | <input type="checkbox"/> High priority for publication |
| <input checked="" 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 authors describe a way towards the development of suitable humanized preclinical model systems for pharmacological testing, which may reduce the cost and time duration of preclinical drug testing and further overcomes on the anatomical and physiological variations in xenogeneic systems. The data is interesting and relevant. In Resultst and Figure section, the authors indicate that One way and two way ANOVA was performed to identify the statistical significance among multiple groups,and the P value($P < 0.01$ or $P < 0.001$ e.g.)has been marked,but how to compare between groups is not clear. The authors should discuss this point in more detail, and if possible, add some statistical parameters(F value, e.g.).



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PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer's code: 02861124

Reviewer's country: Saudi Arabia

Science editor: Fang-Fang Ji

Date sent for review: 2017-12-07

Date reviewed: 2017-12-11

Review time: 4 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

The revised manuscript is now suitable for publication.



PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer’s code: 02861012

Reviewer’s country: United Kingdom

Science editor: Fang-Fang Ji

Date sent for review: 2017-12-07

Date reviewed: 2017-12-08

Review time: 1 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"/> [Y] 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

My comments have been addressed and I have no further comments.



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PEER-REVIEW REPORT

Name of journal: World Journal of Hepatology

Manuscript NO: 36450

Title: Bioengineered humanized livers as better three-dimensional drug testing model system

Reviewer's code: 00068720

Reviewer's country: China

Science editor: Fang-Fang Ji

Date sent for review: 2017-12-07

Date reviewed: 2017-12-22

Review time: 15 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

From my point of view, the work is well-done and provides interesting results or reply to the office of World Journal of Hepatology and thus it merits to be published.