



PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 39577

Title: Murine models based on acute myeloid leukemia-initiating stem cells xenografting

Reviewer's code: 02540473

Reviewer's country: China

Science editor: Li-Jun Cui

Date sent for review: 2018-04-29

Date reviewed: 2018-05-01

Review time: 2 Days

| SCIENTIFIC QUALITY | LANGUAGE QUALITY | CONCLUSION | PEER-REVIEWER STATEMENTS |
|--|--|--|---|
| <input type="checkbox"/> Grade A: Excellent | <input checked="" type="checkbox"/> Grade A: Priority publishing | <input type="checkbox"/> Accept | Peer-Review: |
| <input checked="" type="checkbox"/> Grade B: Very good | <input type="checkbox"/> Grade B: Minor language | (High priority) | <input checked="" type="checkbox"/> Anonymous |
| <input type="checkbox"/> Grade C: Good | polishing | <input checked="" 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 type="checkbox"/> Minor revision | topic of the manuscript: |
| publish | <input type="checkbox"/> Grade D: Rejection | <input type="checkbox"/> Major revision | <input type="checkbox"/> Advanced |
| | | <input type="checkbox"/> Rejection | <input checked="" type="checkbox"/> General |
| | | | <input type="checkbox"/> No expertise |
| | | | Conflicts-of-Interest: |
| | | | <input type="checkbox"/> Yes |
| | | | <input checked="" type="checkbox"/> No |

SPECIFIC COMMENTS TO AUTHORS

The manuscript is important in leukemia.and the review is well-written.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:



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PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 39577

Title: Murine models based on acute myeloid leukemia-initiating stem cells xenografting

Reviewer’s code: 02446101

Reviewer’s country: China

Science editor: Li-Jun Cui

Date sent for review: 2018-04-29

Date reviewed: 2018-05-02

Review time: 3 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 checked="" 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 type="checkbox"/> Minor revision | topic of the manuscript: |
| publish | <input type="checkbox"/> Grade D: Rejection | <input type="checkbox"/> Major revision | <input type="checkbox"/> Advanced |
| | | <input type="checkbox"/> Rejection | <input checked="" 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 introduces the field of AML pathogenesis and the concept of LSC, to present the current knowledge on leukemic blasts surface markers and current attempts to develop best AML animal models. The content of this manuscript is systemic and readable. I’m sure that it’s helpful to the readers. So, acceptance should be recommended



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for this manuscript. 1 Title. Does the title reflect the main subject/hypothesis of the manuscript? Yes. 2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? Yes. 3 Key words. Do the key words reflect the focus of the manuscript? Yes. 4 Background. Does the manuscript adequately describe the background, present status and significance of the study? Yes. 5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? This manuscript is a review and has no the section of methods. 6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? This manuscript is a review and has no the section of results. 7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper's scientific significance and/or relevance to clinical practice sufficiently? This manuscript is a review and has no the section of discussion. 8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends? The figure is good. 9 Biostatistics. Does the manuscript meet the requirements of biostatistics? No. 10 Units. Does the manuscript meet the requirements of use of SI units? Yes. 11 References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? Does the author self-cite, omit, incorrectly cite and/or over-cite references? Yes. 12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? Yes. 13 Research methods and reporting. Authors should have prepared their manuscripts according to



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manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? Not applicable for this manuscript. 14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? Not applicable for this manuscript.

INITIAL REVIEW OF THE MANUSCRIPT

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PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 39577

Title: Murine models based on acute myeloid leukemia-initiating stem cells xenografting

Reviewer's code: 02446280

Reviewer's country: Russia

Science editor: Li-Jun Cui

Date sent for review: 2018-04-29

Date reviewed: 2018-05-04

Review time: 5 Days

| SCIENTIFIC QUALITY | LANGUAGE QUALITY | CONCLUSION | PEER-REVIEWER STATEMENTS |
|---|---|--|---|
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| <input type="checkbox"/> Grade C: Good | polishing | <input type="checkbox"/> Accept | <input type="checkbox"/> Onymous |
| <input checked="" 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 type="checkbox"/> Minor revision | topic of the manuscript: |
| publish | <input type="checkbox"/> Grade D: Rejection | <input checked="" type="checkbox"/> Major revision | <input type="checkbox"/> Advanced |
| | | <input type="checkbox"/> Rejection | <input checked="" type="checkbox"/> General |
| | | | <input type="checkbox"/> No expertise |
| | | | Conflicts-of-Interest: |
| | | | <input type="checkbox"/> Yes |
| | | | <input checked="" type="checkbox"/> No |

SPECIFIC COMMENTS TO AUTHORS

The manuscript entitled "Murine models based on acute myeloid leukemia-initiating stem cells xenografting" addresses very important issue of disease modeling. Indeed human hematological cancers were first studied in mice and since that murine models represent the best choice for most pathological conditions. Although animal models



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provide an opportunity to investigate human pathologies in a statistically reliable manner, they also have a disadvantage of species specific differences and homogeneous genetic background. In present review Authors describe murine models with the application of AML and tumor initiating cells studies. Overall manuscript is well written and first impression is positive. However there is some internal discrepancy. In the Introduction section Authors state that “AML is one of the hematologic malignancies that fails to properly engraft into the existing strains of mice due to the lack of a proper BM niche, and absence of specific human growth factors and supporting stromal cells” however do not provide any experimental evidences for this. Even more, on the next pages Authors write “AML was among the first diseases in which the existence of cancer stem cells was documented using xenograft animal models”. Indeed modern “engineered” animals provide better opportunity to study human malignancies although will never recapitulate variable human genetic background completely. I would also consider that the section “Cell line derived xenografts” is out of the scope of murine models description but rather adapt human cells to the existing mouse strains. Overall I could not give high priority to this manuscript, it is fair enough.

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PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 39577

Title: Murine models based on acute myeloid leukemia-initiating stem cells xenografting

Reviewer's code: 00609434

Reviewer's country: Italy

Science editor: Li-Jun Cui

Date sent for review: 2018-04-29

Date reviewed: 2018-05-09

Review time: 10 Days

| SCIENTIFIC QUALITY | LANGUAGE QUALITY | CONCLUSION | PEER-REVIEWER STATEMENTS |
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| <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 type="checkbox"/> Advanced |
| | | <input type="checkbox"/> Rejection | <input checked="" type="checkbox"/> General |
| | | | <input type="checkbox"/> No expertise |
| | | | Conflicts-of-Interest: |
| | | | <input type="checkbox"/> Yes |
| | | | <input checked="" type="checkbox"/> No |

SPECIFIC COMMENTS TO AUTHORS

The manuscript from Mambet et al. is an interesting review describing acute myeloid leukemia (AML) pathogenesis, the concept of leukemia stem cells (LSC) and the current status in the attempts to develop suitable mice preclinical models of AML for applied cancer research. The review is very interesting and updated in its collection and



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description of current knowledge on LSC features and AML mice models of disease. I find it worthy of publication although English grammar should be thoroughly checked (I saw several errors) and also the consecutio temporum of the paragraphs should be fixed (for example in paragraph "3. Murine models - which are the best choice?" from the end of page 9 to the end of page 10).

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