Reviewer's report

Title: FAM168A participates in the development of chronic myeloid leukemia via BCR-ABL1/AKT1/NFκB Pathway

Version: 1 Date: 14 Jun 2019

Reviewer: Reviewer 3

Reviewer's report:

"PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses one or several testable research questions? (Brief or other article types: is there a clear objective?)

Yes - there is a clear objective

DESIGN - Is the current approach (including controls and analysis protocols) appropriate for the objective?

Yes - the approach is appropriate

EXECUTION - Are the experiments and analyses performed with sufficient technical rigor to allow confidence in the results?

Yes - experiments and analyses were performed appropriately

STATISTICS - Is the use of statistics in the manuscript appropriate?

Yes - appropriate statistical analyses have been used in the study

INTERPRETATION - Is the current interpretation/discussion of the results reasonable and not overstated?

Yes - the author's interpretation is reasonable
OVERALL MANUSCRIPT POTENTIAL - Has the author addressed your concerns sufficiently for you to now recommend the work as a technically sound contribution? If not, can further revisions be made to make the work technically sound?

Yes - current version is technically sound

PEER REVIEWER COMMENTS:

GENERAL COMMENTS: Summary of the manuscript revision

The authors made all the corrections in the manuscript according to the comments provided in the peer review.

Regarding the responses to the comments from the Reviewer 1

Regarding the question about chromosome phenotype and the BCR/ABL fusion (comment 2), the authors have responded that all three patients had chromosome phenotype of 46, XX, t (9:22) (q34: q11) and BCR/ABL1 fusion gene.

As to the comment about required larger group of patients (comment 3), the authors have pointed out that the incidence of CML is low and that more than three independent experiments have been performed by RT PCR, WB and flow cytometry.

For the question about the gel pictures on the figure 8 (comment 4), the authors have explained that bands might appear to be morphologically different because the target proteins were detected by Western blot on different blotting membranes.

For the comment 5 about the regulation of apoptosis by TCRP1 in the K562 cells, the authors have deleted data on a regulatory effect of FAM168A on apoptosis in Figure 9.

Following the request to clarify the figures (comment 6), the authors have performed the requested changes.

As to the comment 7, the authors have clarified that the experiment has been performed only one time.

Regarding the time curve of AKT phosphorylation, it has not been performed in this study (comment 8).
According to the authors' response, the revised manuscript has been edited by a native English speaker (comment 9).

Regarding the responses to the comments from the Reviewer 2

For the comment 10, the authors have modified the sentence in the line 28-29 by stating only that "the pathogenesis of CML remains elusive".

For the comment 11, "TCRP1" was replaced with "FAM168A".

As to the comment 12, the paragraph about CML in different age groups has been revised.

As to the comment 13, "BCR-ABL" has been revised to "BCR-ABL1".

Regarding the comment 14, In the line 74 the "is called the fusion protein tyrosine kinase p210bcr-abl. p210bcr-abl" was removed.

The correction in the text was made according to the comment 15.

The authors have made corrections as suggested in the comments 16 and 17.

Abbreviation for Standard Deviation has been clarified (comment 18).

The sentence about the data on TCRP1 expression has been removed (comment 19 and 20).

As to the comments 21 and 22, the way of data representation as mean ± SD has been explained.

The better descriptive legend for Figure 4 has been provided (comment 23).

Regarding the comment 24, the authors have answered that they plan to collect adult CML samples.
REQUESTED REVISIONS:

Additional comments

For Methods

Page 17, line 217

Instead of ""analysis of FAM168A was performed…"", it should be written (add a space after FAM168A): ""analysis of FAM168A was performed…"

For the Cell culture subsection, please provide the names of the company/companies, which produced the reagents for cell culture medium.

When you mention the names of companies producing the reagents, please provide the location (city/state, country).

For Figures

Regarding the figures, in some of them the significance is shown by adding * symbols (figures 1, 2 and 8), in the figure 6 the actual p values are written, while in figure 7 the statistics is not shown. It is recommended to be consistent.

If the difference was not significant, the authors can add p-value or ""NS"" (non-significant).

Conclusion

The authors have done responded to all the comments included in the peer review. Most of the corrections have been performed. The in vivo experiment has been performed only one time, however there were 7 mice in each group. Overall, the present research manuscript can be recommended as a technically sound contribution. The results of this study will be of interest for clinical and experimental hematologists.

ADDITIONAL REQUESTS/SUGGESTIONS: The authors have responded to all the comments in the peer review. The present research manuscript can be recommended as a technically sound contribution. The authors are suggested to make several corrections mentioned in the quality review."
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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