Reviewer’s report

Title: Characterization and risk association of polymorphisms in Aurora kinases A, B and C with genetic susceptibility to gastric cancer development

Version: 1 Date: 18 Mar 2019

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER ASSESSMENTS:

OBJECTIVE - Full research articles: is there a clear objective that addresses a testable research question(s) (brief or other article types: is there a clear objective)?

No - there are minor issues

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

No - there are major issues

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

No - there are minor issues

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

No - there are issues with the statistics in the study

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

No - there are major issues

OVERALL MANUSCRIPT POTENTIAL - Is the current version of this work technically sound? If not, can revisions be made to make the work technically sound?

Maybe - with major revisions
GENERAL COMMENTS: The study titled "Characterization and risk association of polymorphisms in Aurora kinases A, B and C with genetic susceptibility to gastric cancer development" is quite novel, and the authors have attempted to link Aurora kinases ABC polymorphic variants with an increased risk of gastric cancer. The authors have presented only genotype data to demonstrate that AUR kinase A variants rs1047972 and rs911160, AUR Kinase B variants rs2241909 and rs2289590 and AUR Kinase C variant rs11084490 are associated with gastric cancer. However, the data is not supported by expression data analysis. Further, the authors have claimed that rs1047972 and rs911160 are associated with Gastric Cancer susceptibility, whereas the rs8173 variant may act as a protective factor for GC development without providing any solid experimental proof and references. The authors have been able to present the genotypic data with strong statistical analysis.

The authors have failed to provide a precise experimental plan and its execution to convince the reader that the above stated polymorphisms are truly associated with gastric cancer risk.

REQUESTED REVISIONS:

Authors need to design a precise experimental plan to demonstrate that the bioinformatic analysis is followed by genotype analysis and supported by expression data. The statistical analysis is acceptable; however, they should use a significant p value cut off.

There are minor issues with the data interpretation. I was expecting that authors should have performed micro array data analysis and show scatter plots and co-expressed genes. However, in the present investigation, the authors have made conclusions based on the genotype data only.

Note: This reviewer report can be downloaded - see attached pdf file.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

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

No

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

No

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:

Acceptable

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