Reviewer’s report

Title: Identification of biomarkers and drug repurposing candidates based on an immune-, inflammation- and membranous glomerulonephritis-associated triplets network for membranous glomerulonephritis

Version: 0 Date: 04 Sep 2019

Reviewer: Kinsuk Chauhan

Reviewer's report:

In this paper authors have tried to construct IIMATs network, and MGN related core clusters with matched controls. Also, novel drug re-purposing candidates for MGN based on IIMATs.

Major comments:
1. Introduction lacks information about currently available drugs for MGN in market or in literature. There should be few lines in the intro explaining it plus state their limitations.
2. Provide the list of genes and downloaded data associated with those genes, may be as a supplementary material for the readers.
3. Provide baseline characteristics table for case-controls.
4. give more detail about PPI data and HPRD database, and how network was developed. Also, provide 3 decimal version of the Cytoscape used for the study.
5. Methods used to calculate score difference is not clear. There are standard ways to combine different p-values (e.g. Fisher's method)
6. Identification and classification power of core clusters from dysregulated IIMATs needs more explanation, provide the files input and output as a supplementary material.
7. English needs improvement.
8. Abstract lacks any numbers. It has no results.
9. Please provide the date on which data was downloaded from different sources including version of databases used and software version used.
10. Please explain how the probe ids from GEO platform were mapped to genes. How mupltiple probeids were handled.
11. Section of "identification of drug repurposing candidates" is too short. Also, explain about the Nintedanib drug.
12. What was the version of drugbank used and provide date of download.
13. How r-square was calculated in figure 1 & 2 and what is the threshold of r-square, below which a network is not considered a scale free network?
14. Write the limitations of the study. Also, include the suggestive nature of the results. This can't be ensured until unless validation is done in-vitro or in-vivo. Discuss these points in the discussion section.

Minor comments:
1. Figure 1 labels are not easily readable. Make the fonts larger or with different background color.
2. What is the degree of PRKCD gene, add one line.
3. What is the difference between baseline and dysregulated network? How latter was made?
4. Give more details about the consensus clustering.
5. Figure 3d heatmap lacks color legends.
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.

Yes

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

Unable to assess

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 recommend additional statistical review

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

Needs some language corrections before being published

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