Author's response to reviews

Title: Small non-coding RNA signature in Multiple Sclerosis patients after treatment with Interferon-beta

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To the Editor of
BMC Medical Genomics

Dear Editor,

I am sending you the answers to reviewer suggestions, the new revised manuscript and a new Figure 2.

In the hope to hearing you soon,

Best regards,
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Answers to reviewer:
Reviewer: Maurizio Taglialatela
Reviewer's report:
The authors have addressed some of the issues I raised previously, though I still believe that the paper needs some revision.

Major compulsory revision.
In particular:
1. Fig. 5. The individual data points seem different from those reported in previous versions of the manuscript. Please explain. It is not a matter of symbol size, but rather of rough data. Have the authors included more patients? If so, please explain and change the figure legend.

Answer: In Figure 5 we plotted the miR-26a-5p expression and DLG4 expression values from patients after 6 months treatment. In the first Figure 5 the population looked like to stratify in two separate groups, since mainly they have similar expression values among them. I understand your point, but in the publication the graph symbols (dots) must be large and unfortunately, they overlap. I made smaller dots to avoid confusion (see new Fig.5).

Beside, data from the patients consisted of columns of raw data from the scientific instrument and a calculated average, since all samples were analyzed in triplicates. There was a little incongruity in the old graph, for 5 patients, linked to the columns of raw data. On remaking the graph, it was modified to use the column of averaged data for such 5 patients (as we did already for all the others). We apologize, since overall this made little statistical difference, but it did alter the look of the graph very slightly.

2. I still have concerns about the significance of the results for IFN-beta response. If the authors (as they claim in their reply to the referees) have data showing that non-responders do not show the increase in miR-26a-5p levels, these data should be included.

Answer: as suggested, we included in a new Figure 2 the data from 10 patients, which are IFN-beta non-responders. miR-26a-5p expression levels do not increase in such patients.

Minor essential revision
1. Please do not speculate about glutamate release (page 15). PSD95 is a postsynaptic protein, and it is not likely to be involved in glutamate release.

Glutamate signaling is a much better generic term.

Answer: we removed glutamate release and used glutamate signaling. We also removed a sentence about PSD95 in the discussion.

Level of interest: An article of importance in its field.
Quality of written English: Needs some language corrections before being published
Answer: as suggested, we checked the English grammar.
Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:
None