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OPEN PEER REVIEW

Genotyping of rs1127354 and rs7270101 SNPs in Multiple Sclerosis Patients: Correlation with *ITPA* Gene Expression

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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Contents

1 **Original submission** Referee 1, Associate Editor 2
2 **Revision 1** 3
Authors' reply to reviewers 4
Reviewer and editor comments 8

1 Original submission

2 comments · 20 Mar 2024 – 6 Apr 2024

Referee 1 Reviewer

ACCEPT 20 Mar 2024

The paper is well executed and the writing has good potential, but it requires some modifications to improve its quality.

1. Please revise your keywords to ensure they are MESH terms. This will increase the citations for your study.
2. It is better to split the first sentence of the introduction into 2 sentences.
3. In line 34, the substrate name is deoxy inosine triphosphate (dITP).
4. In line 48, what does “immunity” refer to? Maybe ‘immune system’ is a better replacement for it.
5. In line 52, it is necessary to insert (isoform a) in parentheses after ‘longest transcript’ and mention it before writing isoform b.
6. In line 57, it is better to replace ‘patients and controls’ with “participants” or “study subjects”.
7. In line 59, please explain HERE how you chose ‘32 patients and 30 controls’ from ‘112 patients and 109 healthy’.
8. In line 64, ‘other diseases’ is not scientific. Your statement must be clear.
9. The suggestion is to replace the word ‘by’ with “using” in line 69.
10. The suggestion is to replace the word ‘by’ with “using” in line 72.
11. In “the ITPA transcript variant 1”, the word “the” is redundant. Remove it from line 75.
12. Please correct line 80 to “200 nM of each forward and reverse primers”.
13. In lines 58 & 59, you mentioned ‘total of 112 patients with MS and a population of 109 healthy people were genotyped’. But in line 67, you stated ‘Blood samples were obtained from 32 MS patients and 30 controls’. Which one is correct? Please edit the text so that the two parts become consistent.
14. In the method section, it is not clear how much blood was obtained from each patient.
15. In line 93, please specify whether the PCR product length is for rs1127354 or rs7270101.
16. When using an abbreviation in your paper for the first time, explain it and use whole words. For instance, RFLP, PAGE, etc.

Associate Editor

MAJOR REVISION 6 Apr 2024

Major revision

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor-in-Chief

Jentashapir Journal of Cellular and Molecular Biology

We would like to express our gratitude for the constructive comments and suggestions and the opportunity to revise the manuscript that has been provided. We received informative and deep comments and tried our best to address all of them. We hope our revision has improved the paper to a level of their satisfaction. Responses and changes made to the manuscript are in red. Here are the answers to the reviewer's comments respectively:

Reviewers' comments:

We highly appreciate the reviewers' insightful and helpful comments on our manuscript. The followings are our point-by-point responses:

Reviewer 1:

The authors of manuscript entitled " rs1127354 and rs7270101 SNPs genotyping in multiple sclerosis patients: its correlation with ITPA gene expression" should address the following issues before any possible chance of publication:

1- The English should be revised by a native speaker.

Thanks for the reviewer's suggestion. We revised the manuscript.

2- The gene symbol should be written in Italic Format.

Thanks for the precision reviewer's suggestion. We written gene symbol in Italic Format.

3- The manuscript should be reorganized and be structured better.

Thanks for the reviewer's comment. We reorganized the manuscript.

4- Abstract should be rewrite carefully. The first part of your article after the title that readers will see, please focus on key results, conclusions.

We agree with the perfect reviewer's opinion; We rewritten the abstract.

5- The aim of study as well as novelty of this study should be clearly highlighted in introduction section. Why these two polymorphisms were selected? Explain about the pathogenicity potential of these variants, frequency among different population.

We appreciate the valuable opinion of the reviewer. This is a great suggestion. We have added information about the novelty of this study, why these two polymorphisms were selected? Explain about the pathogenicity potential of these variants, frequency among different population in the introduction.

6- The methods section is poorly described. The authors should be write this section clearly and in logistic consequence. As an example, sample size calculation, detection of each polymorphism should be described clearly. Genotype and allele frequency, calculating the odds ratio, compatible pattern of inheritance, calculating EW equation to verify the genotyping, should be clearly written at first step. How did you analyze these data? Secondly, did the results polymorphism genotyping leave important questions open that you addressed in an additional experiment like real-time PCR? Is yes, please include it in method section.
Thank you very much for your nice comment. We agree with the perfect reviewer's opinion; We explained all these things in the method section.

7- In writing the results sections, authors should use clear language and a logical organization to share their data. It should describe the results of all experiments performed during the study.
Thanks for the reviewer’s suggestion. We described the results of all experiments performed during the study.

8- Tables and figures play a critical role in enhancing the overall quality and impact of a research manuscript. Therefore, it is essential to ensure that the tables and figures in your research manuscript are flawless, effective, and attractive. Ensure that the tables and figures in your research manuscript are self-explanatory and can be understood independent of text. Write clear, informative titles for your tables and figures, and label column heads, axis labels, figure labels, etc., clearly and appropriately.
Based on the valuable opinion of the reviewer, we changed tables and figures.

9- A Strong Discussion section provides a great deal of analytical depth. Your goal should be to critically analyze and interpret the findings of your study. You should place your findings in the context of published literature and describe how your study moves the field forward.
We agree with the perfectly correct reviewer's opinion; we changed and added contents in discussion section.

Reviewer 2:

The paper is well executed and the writing has good potential but it requires some modifications to improve its quality.

1. Please revise your keywords to ensure they are MESH terms. This will increase the citations for your study.

We agree with the perfectly correct reviewer's opinion; we changed the keywords.

2. It is better to split the first sentence of the introduction into 2 sentences.

We agree with the perfectly correct reviewer's opinion; we changed this sentence.

3. In line 34, the substrate name is deoxy inosine triphosphate (dITP).

Thanks for the reviewer’s precise comment. We corrected it.

4. In line 48, “immunity” refers to what? Maybe the ‘immune system’ is a better replacement for it.

Thanks for the reviewer’s precise comment. We corrected it.

5. In line 52, it is necessary to insert (isoform a) in parenthesis after ‘longest transcript’ and mention it before writing isoform b.

Thanks for the reviewer’s precise comment. We corrected it.

6. In line 57, it is better to replace ‘patients and controls’ with “participants” or “study subjects”.

We appreciate the valuable opinion of the reviewer. We changed it.

7. In line 59, please explain HERE how you chose ‘32 patients and 30 controls’ from ‘112 patients and 109 healthy’.

Thank you very much for your comment. First, we selected 112 patients and 102 healthy individuals for genotyping. Before genotyping, we randomly selected 40 patients and 40 healthy people for gene expression analysis. Then, blood sampling and RNA extraction were performed, and some of the samples were lost during these steps, leaving only 32 case RNA samples and 30 healthy RNA samples.

8. In line 64, ‘other diseases’ is not scientific. Your statement must be clear.

We appreciate the valuable opinion of the reviewer. We changed it.

9. The suggestion is to replace the word ‘by’ with “using” in line 69.

Thank you very much for your comment. We replaced the word ‘by’ with “using”

10. The suggestion is to replace the word ‘by’ with “using” in line 72.

Thank you very much for your comment. We replaced the word ‘by’ with “using”

11. In “the ITPA transcript variant 1” the is redundant. Remove it from line 75.

Thanks for the reviewer’s precise suggestion. We removed it.

12. Please correct line 80 to “200 nM of each forward and reverse primers”.

Thanks for the reviewer’s precise suggestion. We corrected it.

13. In lines 58 & 59 you mentioned a ‘total of 112 patients with MS and a population of 109 healthy people were genotyped’. But in line 67 you stated ‘Blood samples were obtained from 32 MS patients and 30 controls’. Which one is correct? Please edit the text so that the two parts become consistent.

Thank you very much for your comment. Because we had both genotyping and gene expression analysis, two blood samples were taken for these two tests: one for DNA extraction and one for RNA extraction.

14. In the method section, it is not clear how much blood sample was obtained from each patient.

Thanks for the reviewer’s suggestion. We added the amount of blood samples obtained from the participants.

15. In line 93, please specify which one is the length of PCR product for rs1127354 or rs7270101.

Thank you very much for your nice comment. We specified the length of PCR product for rs1127354 and rs7270101.

16. When using an abbreviation in your paper for the first time, explain it and use whole words. For instance, RFLP, PAGE, etc.

Thank you very much for your nice comment. We explained the abbreviations.

Please let me know if more correction is needed.

Yours sincerely,

2 Revision 1

0 comments

No public comments in this round.