Editor,                                                        Date: 22.04.23
Microbes, Infection and Chemotherapy

**Subject:** Submission of the corrected version of manuscript

Dear Editor,

Please find the corrected version of the manuscript entitled "Phyloepidemiology and adaptive evolution of SARS-CoV2 during the first and second wave of COVID-19 in India: Phyloepidemiology of SARS-CoV2 in India". Please find the point by point rebuttal of the comments suggested by the reviewers. The corrections/insertions are marked in blue with track changes.

Kind regards,

**Dr. Anuj Tewari,**
**Asstt. Prof.,**
**Veterinary Microbiology,**
**GB Pant University of Agriculture & Technology,**
**Pantnagar,**
**India.**

**<u>Reviewers' Comments and their rebuttal</u>**

Reviewer A:
Recommendation: Revisions Required

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1. Relevance of the title to the content of the article

Regular

Remarks

The title is good and representative of the manuscript.

2. Summary: Presents the general idea of the topic, objectives, research methods, results and conclusions, written in an objective and concise manner; and are found according to the maximum number of words per section.

Regular

Remarks

<mark>A structured abstract might help the readers better understand the study's methods and importance.</mark>

**Rebuttal: The abstract has been corrected and restructured.**

3. Introduction: Presentation of the subject, justification of the problem, objectives, hypotheses and methodological foundation, exposing the subject in an orderly and detailed manner

Regular

Remarks

<mark>The manuscript is poor in novelty, and the authors have presented a rather duplicate of previous studies, but it still contains valuable data. Many studies have been conducted in this field before (e.g., 10.3855/jidc.15484 and 10.1016/j.mjafi.2022.05.006). What are the novelties of the current study?</mark>

**Rebuttal:** For kind information of the reviewers, we started analyzing the data in July 2021 and the first submission was made to Frontiers in Veterinary Sciences where the manuscript was accepted by one reviewer and declined by other. Thereafter, it was submitted to AMB express where it could not be reviewed due to non-availability of reviewers. So during this one and half years of incubation, other manuscripts got published which were similar in structure to that of ours. So, yes the novelty may not be upto the mark. However, many other information like six novel mutations, three in NSP2 (P129A, V381A, V381F), one in NSP3 (P822S), and one in S protein (Q23R) evolving under positive selection pressure are still new.

4. Methodology: Describes the procedure, methods and techniques used in data collection and analysis.

Regular

Remarks

<mark>I believe that a preprint version of this manuscript has been previously made public. It is strongly recommended to mention the previous preprint publications in the final article (Please contact the journal's respected Editor and Editorial Office in this matter).</mark>

<mark>**Rebuttal:** The preprint version of this manuscript was submitted to authorea and the respective editor was contacted in this regard to seek permission. The editor has replied that the preprint version can be published by the authors.</mark>

5. Ethical aspects. Does the manuscript have a paragraph on ethical aspects, where it mentions approval by the ethics committee, informed consent, and strict compliance with research ethics?

Yes

6. Results: They are presented adequately and it is not redundant with tables or graphs shown.

Good

Remarks

- The manuscript is good in flow. The main point of the manuscript is conveyed to the readers.
- Minor corrections should be made in the Supplementary file, including the journal name.

<mark>**Rebuttal:** Corrections made in the supplementary file</mark>

7. Discussion: They present a level of critical analysis in correspondence with the problem presented. Purposes of the article, scope, support theory and proposed methodological design.

Good

Remarks

**The authors could address the variants of concern (Alpha, Beta, and Delta by the scientific name with the lineage in the main text.**

**Rebuttal:** Corrections made as suggested.

8. Conclusions: Presents the author's inferences and teachings in relation to the investigated topic, it must correspond to the objectives of the study.

Good

Remarks

The conclusions are sound and justified by the presented results.

9. References. Quality of bibliographic references and if they are in accordance with the Vancouver format.

Good

Remarks

The references are selected from recent and high-quality studies.

10. Redaction. Is the manuscript correctly written? Does it contain any spelling or grammar mistakes?

Needs some language corrections

<mark>Rebuttal: Language corrections done.</mark>

11. Contributions. What are the main weaknesses of the manuscript and how the author can do to improve it

I appreciate the authors' great work studying the various COVID-19 circulating lineages during different waves in India. The main issue of this manuscript is the lack of novelty; however, the manuscript still contains valuable comparing data. Some minor changes and corrections should be made to the manuscript mentioned above.

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Reviewer C:
Recommendation: Revisions Required

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1. Relevance of the title to the content of the article

Regular

Remarks

2. Summary: Presents the general idea of the topic, objectives, research methods, results and conclusions, written in an objective and concise manner; and are found according to the maximum number of words per section.

Regular

Remarks

avoid acronyms. Explain NCBI, GISAID, etc

The journal doesnt publish key points

3. Introduction: Presentation of the subject, justification of the problem, objectives, hypotheses and methodological foundation, exposing the subject in an orderly and detailed manner

Regular

Remarks

4. Methodology: Describes the procedure, methods and techniques used in data collection and analysis.

Regular

Remarks

5. Ethical aspects. Does the manuscript have a paragraph on ethical aspects, where it mentions approval by the ethics committee, informed consent, and strict compliance with research ethics?

No

6. Results: They are presented adequately and it is not redundant with tables or graphs shown.

Regular

Remarks

7. Discussion: They present a level of critical analysis in correspondence with the problem presented. Purposes of the article, scope, support theory and proposed methodological design.

Regular

Remarks

8. Conclusions: Presents the author's inferences and teachings in relation to the investigated topic, it must correspond to the objectives of the study.

Regular

Remarks

9. References. Quality of bibliographic references and if they are in accordance with the Vancouver format.

Regular

Remarks

10. Redaction. Is the manuscript correctly written? Does it contain any spelling or grammar mistakes?

Needs some language corrections

Rebuttal: Language corrections done highlighted in yellow.

11. Contributions. What are the main weaknesses of the manuscript and how the author can do to improve it

References must be in Vancouver style

Rebuttal: References included in Vancouver style.