

Review of: "Implications of the SARS-CoV-2 spike protein interaction with type-1 macrophages via $\alpha 7$ -nAChR."

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The present opinion piece starts with a compelling and novel hypothesis regarding immunological aspect of the SARS-CoV-2 infection, providing valuable insights into the less-appreciated interaction between the causative pathogen behind COVID-19 and type-1 macrophages via alpha-7 nicotinic receptor. However, the manuscript falls short at delivering the hypothesis in question in a conclusive manner, leaving the reader with an incomplete piece, that can also be quite confusing at times.

Title, Abstract and References

1. First of all, the scope of the suggested title is too wide to be discussed in such a short manuscript. In fact, the present article is more like a commentary, and cannot be considered a review, or even a mini-review. If the manuscript is presently in its final form, then perhaps the authors should reconsider the title, and come up with a more narrow heading, as the paper mostly discusses the immunological implications of such interaction. Not to mention that the manuscript also does not meet the requirements to be regarded as a commentary, based on the guidelines of the majority of publishers.
2. The present article is too short to require an abstract in such length.
3. The number of references included in this opinion piece is exceedingly high. Some statements are over-referenced. For instance, the statement "monocytes, on the other hand, express the ACE2 receptor and are highly susceptible to SARS-CoV-2" in the first paragraph is supported by four papers, two of which were published prior to the identification of SARS-CoV-2, and thus, are irrelevant to that particular statement. Therefore, either the manuscript should be revised in a way to include the papers it is citing, or the irrelevant references should be omitted.

Introduction/Background

The authors should consider adding an introduction to the manuscript, or repurposing of the first paragraph as the introduction.

Discussion and Conclusions

Discussion is an integral part of original papers, nonetheless, in the case of reviews (excluding systematic reviews) one may not be necessarily obliged to define a separate section as discussion, since a review article is basically an extended

form of discussion. Thus, different subheadings can be used to distinguish the content of certain paragraphs from others. As with the present opinion piece, it appears that the authors have mislabeled the final two paragraphs as discussion; since the section is more of a conclusion, providing suggestions for development of vaccines.

Aside from the issue of subheadings, the manuscript also fails to properly discuss several important subjects, especially the titular **α7-nAChR** itself. What does the term “α7-nAChR” stand for? What kind of a receptor it is? And why is it of particular interest to this paper? The authors are expected to properly address each and every term and concept that may sound strange to the reader. Another instance is the haphazardly discussed antibodies, namely, CR3022 and CR3014. Almost no detail is given regarding these antibodies in the manuscript.

Thus, the authors are strongly advised to provide a more conclusive discussion, that would suit the novel hypothesis.

Verdict

In spite of the compelling and novel title, and the fairly good opening paragraph, the present paper falls exceedingly short at properly discussing its subject matter.

Pros	<ul style="list-style-type: none">• Compelling hypothesis• Potentially significant subject matter	
Cons	<ul style="list-style-type: none">• Abstract is a redundancy in the current form• Underwhelming discussion fails to properly establish the idea presented in the title• Over-referencing can be exasperating at times	