

# Review of: "The $\alpha 7$ Nicotinic Acetylcholine Receptor: a Key Molecule in Post-COVID Syndrome?"

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**Potential competing interests:** No potential competing interests to declare.

The manuscript by Maryna Skok explores the role of  $\alpha 7$  NAR as a critical factor in inducing post-Covid syndrome. The author has comprehensively compiled information from recent and past publications that indicate the pathological roles of  $\alpha 7$  NAR. However, I have following comments that might help in improving the quality of the manuscript:

1. The authors have described post-COVID syndrome very briefly. More information on reported pathological implications should be included.
2. In the introduction, please discuss Long Covid symptoms especially neurological, respiratory, cardiological and other symptoms and their implications to overall human health.
3. A number of reports have indicated potentiation and inhibition of  $\alpha 7$  NAR by SARS-CoV-2 ectodomain. Please add this information.
4. A table of known  $\alpha 7$  NAR ligands and repurposed drugs against it should be included.

**Minor comments:**

1. The manuscript will benefit from English language editing. There are several places in the paper where article 'We' is mentioned which is inappropriate. Please rectify.