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## LETTER TO THE AUTHOR

# Reply to: Probiotics for the Prevention of COVID-19 Sequelae

Dear Editor,

We would like to thank the interesting comments related to our article titled “Probiotics in Prevention and Treatment of COVID-19: Current Perspective and Future Prospects”.

In our review article, we highlighted the possible role of probiotics in the treatment of COVID-19. De Almeida VM, et al. have provided evidence regarding the direct association between gut microbiota and the long-term effects of COVID-19. They identified *Enterobacteriaceae* strains with a multi-drug resistance phenotype in the gut microbiome in post-COVID patients. In addition, the fecal transfer from post-COVID participants showed impaired lung response and impaired cognitive function in mice. They also demonstrated that pre-treatment with the probiotic bacterium *B. longum* 5<sup>1A</sup> protected from cognitive impairment (1).

As we have already mentioned under the section ‘Conflicting Evidence on Probiotics,’ “Differences persist in the physiology and metabolism among probiotic strains of various species, and consequently, their effects are different on the human body. Even different strains of the same species may have different health effects.” A retrospective study among patients with severe COVID-19 disease concluded that probiotics could effectively inhibit secondary infections and modulate immunity (2). Gutiérrez-Castrellón P, et al. conducted a randomized controlled trial which demonstrated that strains of *Lactiplantibacillus plantarum* and strains of *Pediococcus acidilactici*, when administered to COVID-19 patients for 30 days, resulted in complete remission in 53% of the participants (3). Fernández-Ferreiro A, et al. showed that the probiotic *Loigolactobacillus coryniformis* K8 enhances specific immune responses against COVID-19 (4). Currently, some studies have assessed the efficacy of specific strains of probiotics in COVID-19, and several more have been registered in the clinical trial registries whose results are yet to be published. Hence, the specific strains that would be beneficial could be identified from the existing literature and further from well-designed trials.

### Conflict of Interest

None.

### Supplementary Materials

Supplementary material associated with this article can be found, in the online version, at doi:[10.1016/j.arcmed.2022.08.005](https://doi.org/10.1016/j.arcmed.2022.08.005).

### References

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