

Response to the editor comment:

Editor comment: Thank you for the comprehensive responses to Referee comments. I feel that the revised manuscript is publishable but I was surprised at the choice to not cite Fankhauser et al. (2019, <https://pubs.acs.org/doi/full/10.1021/acsearthspacechem.9b00054>) in the review as recommended. In my opinion it can be cited alongside Evrens and Amato (2020) as noted in the response letter; excluding it from the citations list of an Ideas and Perspectives manuscript strikes me as unnecessarily excluding the important work of talented young scientists who are making key contributions to this important field.

Author response: We thank the editor for accepting the revision of our manuscript. We are happy the last final change and added the citation to Fankhauser et al. (2019) at two places (bottom of p. 3/ top of p. 4) (addition in **bold**):

Since single bacterial cells are often similar in size to these particles, it is likely that each particle hosts only one cell (Fankhauser et al., 2019). The fact that the bacteria number concentration is much smaller than the total CCN concentration in the atmosphere led **Fankhauser et al. (2019) and** Evrens and Amato (2020) to conclude that only 1 out of ~ 10000 cloud droplets contains a bacteria cell.

References

- Evrens, B. and Amato, P.: The global impact of bacterial processes on carbon mass, *Atmospheric Chemistry and Physics*, 20, 1777–1794, <https://doi.org/10.5194/acp-20-1777-2020>, 2020.
- Fankhauser, A. M., Antonio, D. D., Krell, A., J., A. S., Banta, S., and Mc Neill, V. F.: Constraining the Impact of Bacteria on the Aqueous Atmospheric Chemistry of Small Organic Compounds, *ACS Earth Space Chem*, 3, 1485–1491, <https://doi.org/10.1021/acsearthspacechem.9b00054>, 2019.