

Biogeosciences Discuss., referee comment RC3  
<https://doi.org/10.5194/bg-2021-8-RC3>, 2021  
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## Reply on RC1

Anonymous Referee #2

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Referee comment on "Isolation of subpollen particles (SPP) of birch: SPP are potential carriers of ice nucleating macromolecules" by Julia Burkart et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2021-8-RC3>, 2021

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Referee 1 stated: *"Furthermore, the authors used two methods, fluorescence spectroscopy and quantitative protein analysis assay, to determine the protein content of the ice nucleating macromolecules."*

I do not agree with the phrase "the protein content of the ice nucleating macromolecules". As far as I can see, the authors have shown that the soluble material released from the cytoplasm contains proteins, and quantified them, and that the cytoplasm also contains ice nucleating molecules. But they did not show that the proteins are the ice nucleating molecules. There is some concentration correlation between the proteins and the ice nucleating molecules, but I would argue that the same correlation would hold for any soluble molecules contained in the cytoplasm, also those that were not analyzed regarding their chemical nature (e.g., polysaccharides, DNA etc.).