



Aerosolization of two strains (ice+ and ice-) of *Pseudomonas syringae* in a Collison nebulizer at different temperatures

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The aerosolization of microorganisms from aquatic environments is understudied. In this study, an ice nucleation active (ice+) strain and a non-ice nucleation active (ice-) strain of the bacterium *Pseudomonas syringae* were aerosolized from aqueous suspensions under artificial laboratory conditions using a Collison nebulizer. The aerosolization of *P. syringae* was not influenced by water temperatures between 5° and 30°C. In general, the culturability (viability) of *P. syringae* in aerosols increased with temperature between 5 and 30°C. The ice+ strain was aerosolized in greater numbers than the ice- strain at all temperatures studied, suggesting a possible connection between the ice nucleation phenotype and aerosol production. Together, our results suggest that *P. syringae* has the potential to be aerosolized from natural aquatic environments, such as streams, rivers, ponds, and lakes; known reservoirs of *P. syringae*. Future work is needed to elucidate the mechanisms of aerosolization of *P. syringae* from natural aquatic systems.