



Supplementary Fig. 5. Ice nucleation activity (INA) test in sterilized distilled water (A), sterilized deionized water (B), mixture of sterile distilled water (SDW) and apple leaf juice (C). *Pseudomonas syringae* pv. *syringae* (*Pss*) in SDW showed an INA point at -0.7°C , *Pss* in sterilized deionized water showed an INA point at -2.8°C , and *Pss* with SDW and apple leaf juice showed an INA point at -2.3°C . *E. coli* TOP10 showed an INA point at -9.6°C . For control (SDW), the INA point was -4.7°C . For all three conditions, the freezing point was 0°C . The experiment was repeated at least once with six replicates per treatment.