

Title: Structural and functional studies on *Pseudomonas aeruginosa* DspI:

implications for its role in DSF biosynthesis

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Supplementary Figure Legends

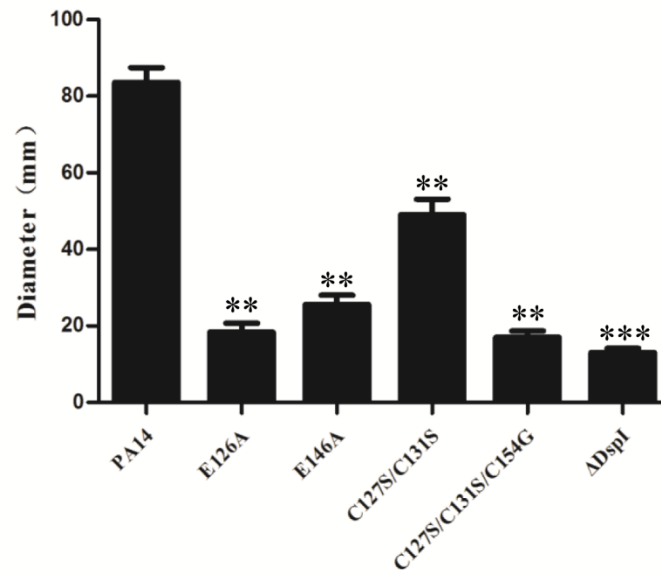


Fig. S1: Statistical results of swarming motility assays presented as the length of the colony tendrils growth. Data shown are represent of three independent experiments. *P* values for comparison of two groups were determined by 2-tailed Student's *t* test (* $P < 0.05$, ** $P < 0.01$ vs wild-type PA14).

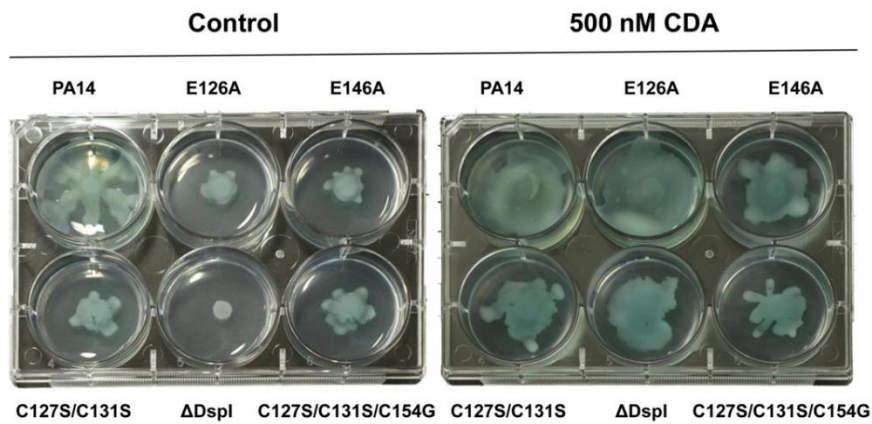


Fig. S2: The swarming-defective phenotype of PA14 mutations could be recovered after the exogenous CDA supplied. PA14 as well as strains carrying mutations in genes were incubated at 37 °C for 16 h in modified M8 plates supplemented with CDA at 500 nM.

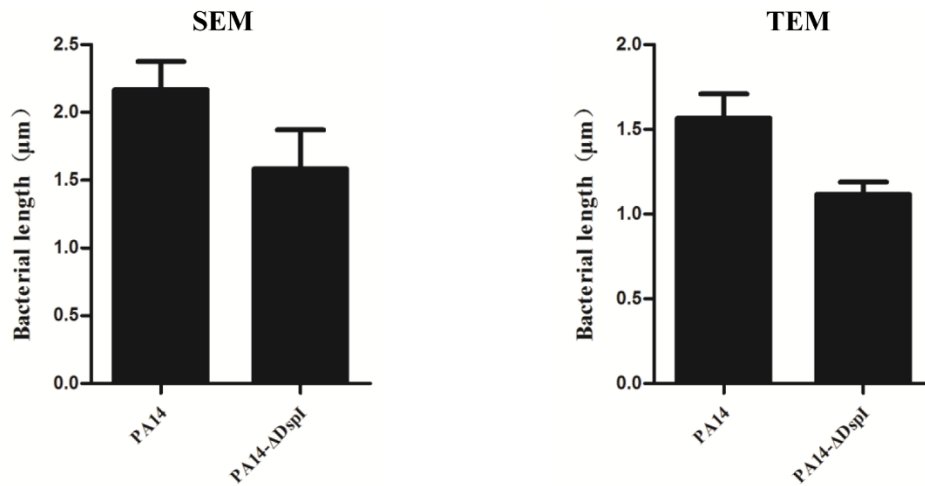


Fig. S3: Statistical results of SEM and TEM assays presented as the size of the bacteria

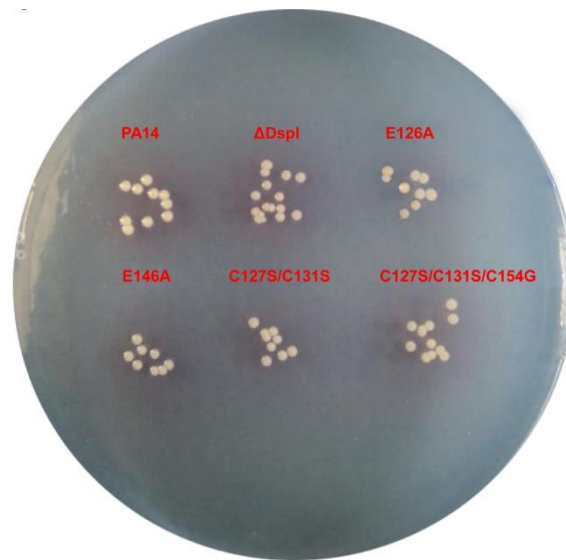


Fig. S4: The PA14 mutation strains exhibited no growth difference relative to wild-type PA14. Wild-type PA14 as well as mutation strains were serially ten-fold dilution to 10^{-6} . Dispense 10 microliters of the last dilution onto the PIA solid medium plates and then take it picture.

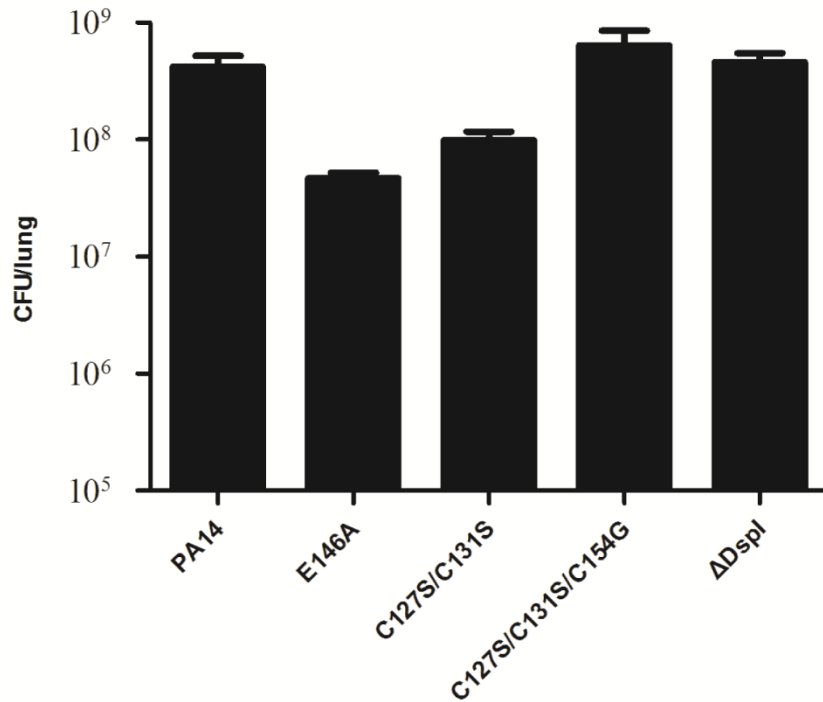


Fig. S5: Mice were infected with mutation strains in lung exhibited almost no difference relative to wild-type PA14. Mice were infected with $5\sim 10 \times 10^6$ CFU/lung of PA14 or mutation strains embedded in agar beads, three days later, the lung was harvested, homogenized, and counted respectively.

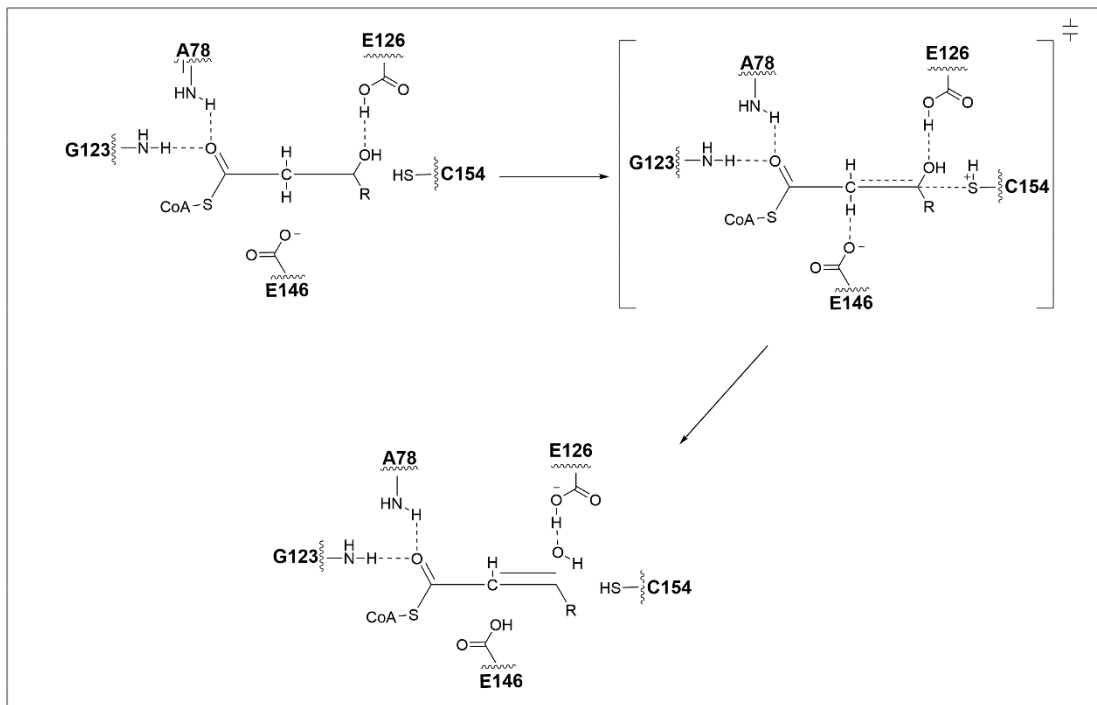


Fig. S6: Possible reaction mechanism for DspI based on its three-dimensional X-ray structure and AutoDock suite.

