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Funding Source: Life Sciences Undergraduate Research Opportunity Program

Pathogen susceptibility to *Pseudomonas syringae* in *Arabidopsis thaliana*

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Peptides may act as regulatory molecules that coordinate cellular responses needed for growth, differentiation and development. A novel family of small peptides, encoded by the DEVIL (DVL) gene family, was identified in a screen for genes that alter plant development. During further investigation of these genes a double mutant was made, DVL DISTORTED, that showed an apparent increase in disease susceptibility. The objective of this study was to determine the pathogen susceptibility of these plants. The study tested the mutants' susceptibility to *Pseudomonas syringae*, a bacterial pathogen of plants. *Pseudomonas syringae* pv. tomato strain DC3000 and DC3000 expressing the avirulence gene *avrRps4* were injected into the plants of interest and compared to wildtype. A growth curve assay was also conducted which measured the number of bacterial colonies able to grow in each leaf inoculated with DC3000, DC3000 (*AvrRps4*), or DC3000 (*HopPsyA*). Initial results indicated that DVL mutant plants are more susceptible to *Pseudomonas syringae*. Trials are being repeated to confirm results.