



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Danielle P. Monahan</b>	<b>Project Number</b> <b>S0421</b>
<b>Project Title</b> <b>Oligomerization of the <i>P. aeruginosa</i> Aer-z N-terminal Domain May Determine Signaling State</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The goal was to determine if the N-terminal domain of the Aer-z affects oligomerization of the receptor when it is oxidized or reduced.</p> <p><b>Methods/Materials</b> <i>P. aeruginosa</i> fragments Aer-z PAS 173-289 was examined as a compact monomer in oxidized and reduced states.</p> <p><b>Results</b> Aer-z PAS 173-289 elevated as compact monomer in oxidized and reduced states. N-terminal domain Aer-z-289 elevated as a compact monomer when oxidized but not when reduced.</p> <p><b>Conclusions/Discussion</b> Aer-z N-terminal domain assumes different conformations in different signaling states and suggests that oligomerization is associated and interacts with a loss of signaling.</p>	
<b>Summary Statement</b> The goal was to determine if the N-terminal domain of the Aer-z affects oligomerization of the receptor when its oxidized or reduced.	
<b>Help Received</b> Used lab equipment at Loma Linda University under the supervision of Dr. Watts and Dr. Taylor in a summer immersion program.	