



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Michael S. Berriman</b>	<b>Project Number</b> <b>S1405</b>
<b>Project Title</b> <b>Manganese Sulfate Supplemented Caenorhabditis elegans Display Increased Resistance to Oxidative Stress</b>	
<b>Abstract</b> <b>Objectives/Goals</b> To observe the effects of Manganese Sulfate (MnSO(4)) upon C. Elegans roundworms under Heat Stress, temperature set at 35 Degrees C. <b>Methods/Materials</b> Place 20 Gravid worms of desired strain(s) on an agar plate, 1 plate per strain, with a platinum wire pick. Place the plates in the 35 degree incubator for 2 hours, check deaths under microscope and document. Repeat process, but every 1 hour from then on. <b>Results</b> The variable data set of worms, which was the MnSO(4) supplemented population, showed increased longevity under the circumstance of increased temperature. <b>Conclusions/Discussion</b> Worms treated with MnSO(4) displayed increased thermotolerance, as they were better able to internally neutralize ROS.	
<b>Summary Statement</b> I treated C. elegans with MnSO4 in order to reduce Oxidative stress, and the Heat Stress Assay performed helped to display that MnSO4 does increase the worms' lifespan.	
<b>Help Received</b> Used lab equipment at Cal State Fullerton under Dr. Srinivasan ; Father edited report; Jessica Hessom of CSUF Biochemistry Department helped with protocol and poster	