



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

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<b>Project Title</b> <b>The Penetration Ability of Tinea corporis (Ringworm) in Two and One-Half Hours</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> I am a wrestler, and in the past I have been infected with Tinea corporis (ringworm). The purpose of this experiment was to determine if ringworm could penetrate through a bandage in two and one-half hours. If a bandage successfully prevents the spread of ringworm, wrestlers can practice without fear of infecting practice partners.</p> <p><b>Methods/Materials</b> Ringworm is considered potentially dangerous, therefore I used Aspergillus niger. I created four groups of five plates. The first group was Sterile Petri dishes, the second group was Potato dextrose agar, the third group was Potato dextrose agar with 10 mm<sup>2</sup> of Aspergillus niger, and the fourth group was Potato dextrose agar with 10 mm<sup>2</sup> of Aspergillus niger and a bandage covering the Aspergillus niger. I let the plates sit for two and one-half hours then measured the amount of fungus on them using a microscope and caliper. Once I had my data, I ran an ANOVA test on it. For statistical reasons, I repeated this procedure thrice.</p> <p><b>Results</b> The Aspergillus niger grew under the bandages and on the plates without a bandage; based on the ANOVA test there is at least a 14.99% chance that it will grow if I repeated the test. The Aspergillus niger did not grow through the bandages, therefore there is statistically a 0% chance it will grow through a bandage if I duplicated the test.</p> <p><b>Conclusions/Discussion</b> Therefore, I concluded that Tinea corporis would grow in size under a bandage but not grow through the bandage, infecting a wrestler's practice partner.</p>	
<b>Summary Statement</b> The prevention of the spread of Tinea corporis (ringworm).	
<b>Help Received</b> My parents proofread the report; my Biology teacher supervised the experiment; school AP Statistics teacher helped analyze the data.	