



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Hayley C. Morton</b>	<b>Project Number</b> <b>J1425</b>
<b>Project Title</b> <b>The Effectiveness of Microban Inhibiting the Growth of Microbes on a Computer Mouse</b>	
<b>Objectives/Goals</b> My hypothesis is that the Fellowes Microban antimicrobial product inhibits the growth of microbes and is effective against a broad range of bacteria. I base my hypothesis on the fact that Microban is used as an antimicrobial solution for consumer, industrial and medical products for a vast number of large corporations.	
<b>Abstract</b>	
<b>Methods/Materials</b> Materials: 2 Fellowes Microban mice, 2 Fellowes standard mice, 30 sterile swabs, 24 agar plates, a few pairs of gloves, 1 refrigerator, 1 digital camera, 1 HP inkjet printer, 4 computers, people to use the mice, 1 logbook for data and observations.  Method: Collect bacteria from each mouse using the sterilized swabs. Inoculate each dish by streaking a pattern gently across the entire agar surface without tearing into it. Streak the sample in a straight line. Let grow in undisturbed warm location, ideally in an environment around 100° F (37° C). Make observations and keep records of what you see growing in each dish. The student isolates and grows a strand of three different bacterial cultures. Photograph agar plates from day 1 to 6 for results.	
<b>Results</b> I labeled ten agar plates Sets 1 to 5 (sample A and B) in two different series, MCB (with Microban) and no MCB (no Microban). I then recorded the results and took pictures for days 2, 4, and 6. Although the MCB (with Microban) agar plates showed less bacterial growth on day two, the difference was not that sizable. By day 6, the amount of microbes on the agar plates labeled no MCB (no Microban) was decidedly larger than on the agar plates that had been swabbed from the Microban computer mouse. In reviewing the data gathered on day 6, Table 1, the results showed that the computer mouse A protected with Microban had 25.93% less bacterial growth than the computer mouse without Microban. In fact, the total number of colonies of microorganisms was: with MCB (14) and no MCB (54). The results from day 6, Table 2, were 38.10% less bacterial growth for the Microban protected computer mouse and the total number of colonies of microorganisms was only 16 compared to 42 for the unprotected mouse.	
<b>Conclusions/Discussion</b> The results from the experiment supported my hypothesis that the Fellowes anti-microbial product was effective in reducing the amount of bacterial growth on a computer mouse.	
<b>Summary Statement</b> My project was to test the claim of the Fellowes Manufacturing Company that their Microban antimicrobial product would be more effective inhibiting the growth of bacteria on a treated computer mouse than an untreated computer mouse.	
<b>Help Received</b> My mother helped drive me to the stores for materials such as agar plates. Both parents encouraged me to get my work turned in on time.	