



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Marjon Y. Momand	Project Number J1324
Project Title New Antibiotic from the Mold Trichothecium	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The goal of this experiment is to see which mold will produce the most potent antibiotic. This experiment will open up new antibiotics that can cure people from bacterial infections. The hypothesis was that the mold Eurotium would produce the best antibiotic.</p> <p>Methods/Materials The materials used were 26 petri dishes, 7 different types of mold, 500 mL of Agar, 1 L of Luria Broth, Bacto-Agar, pipet aid pumps, 1 sheet of Whatman no. 1 filter paper, 10mg of Ampicillin, butanol, kanamycin and E. coli bacteria. Agar plates were made out of Luria Broth so E.coli bacteria could grow upon them. The E. coli bacteria was incubated overnight. Seven of the Agar plates had mold on them, so they were used for this experiment. The molds that were grown were Altenaria, Eurotium, Mortierella, Aspergillus, Arthrinium, Phoma and Trichothecium. The mold was collected and butanol was added to the mold after being centrifuged. The molds were placed on discs of filter paper. The filter papers were put on the Agar plates. The plates included two discs of the mold, positive controls and a negative control. The positive controls were kanamycin and ampicillin. The negative control was butanol. In one day, the killing zone was seen for each plate. The killing zone was measured by getting the radii of the three areas around the discs.</p> <p>Results Trichothecium mold had the largest killing zone compared to the molds Altenaria, Eurotium, Mortierella, Aspergillus, Arthrinium and Phoma. The average of the 2 discs of Trichothecium was 1.3mm. Kanamycin had larger killing zones (7.0mm-8.6) than the other positive control: Ampicillin (0mm-4.6).</p> <p>Conclusions/Discussion The hypothesis was proven incorrect. The mold trichothecium had the largest killing zone with 1.3mm. This was the mold that killed off the most E. coli bacteria. Further research will be done on testing Trichothecium on other types of bacteria.</p>	
Summary Statement The mold trichothecium produces an antibiotic that is able to kill E. coli bacteria.	
Help Received Father helped with supervising experiment and providing laboratory materials.	