



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Terri N. King</b>	<b>Project Number</b> <b>S1413</b>
<b>Project Title</b> <b>Fungal Prevention and the Light Spectrum</b>	
<b>Objectives/Goals</b> The Objective of this experiment is to discover if the growth of fungus can be retarded following to exposure to various colors of light.	
<b>Abstract</b> <b>Methods/Materials</b> The medium, bread, yields the test subject-Rhizopus Stolonifier; Zygomycota- that eventually growth to have a diameter of eight centimeter. Each of the subjects should be equal in size, shape, age and condition. Six filters with the colors: blue, red, yellow, green, black and transparent, are used to expose the fungus to specific lights. (This is to allow circulation of air to the mold) Place one teaspoon of water (in the form of eye-droplets) onto each sample Cover each sample with designated color filter. The Maytag Gemini cooking oven is use on all subjects simultaneously to control temperature (60 Degrees Fahrenheit) , humidity and degree of light~(40 watts). Placed in oven for 120 hours. Used Millimeter grid to measure growth every 12 hours.	
<b>Results</b> The extent to which the fungus grew, as well as the rate at which it grew, was moderated by the specific light. Under the yellow light, the mold sporangiophores growth was induced at a fast rate while it began to lose speed when required to grow sporangiophores. The Red lights halted the growth of the mold temporarily in comparison with the other molds. The full-spectral light allowed the mold to grow exponentially at a fast rate. The green light was temporarily halted during the first stage but formed sporangiophores rapidly. The blue light stimulated the growth of hyphae stems while limiting the germination and sexual reproduction of the mold. The mold under no light failed to reproduce during the trial.	
<b>Conclusions/Discussion</b> Through this experiment, I have observed that the various rays of light stimulate the growth of the fungus during different cycles of the growth cycle, thus slowing the process of growth. This can be seen in the sporadic rate of growth in various lights during various periods. The theory of colored light as a means of reducing the rate of mold growth may, in the future, be utilized by constructors of offices servicing the public, such as schools and hospitals, which must condense the spread of all maladies that induce sickness.	
<b>Summary Statement</b> This project measures the affect of various spectral lights on the growth of Fungus.	
<b>Help Received</b> Mother for transportation, Equipment from science and math coordinator at Upland Highschool; David Allen, Equipment from Edna Lee King, Academic and visual mentorship from Mr. Steve Levy, Academic mentorship from Dr. Aubrey King, Academic mentorship from Terry W. Hill, Ph.D., directorial	