



California Science Center
CALIFORNIA STATE SCIENCE FAIR
2001 PROJECT SUMMARY

Your Name (List all student names if multiple authors.) Christopher K. Khavarian	Science Fair Use Only
Project Title (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) Effect of UV Light Exposure on the Number of Bacterial Colonies	J1217
	Division X Junior (6-8) _ Senior (9-12)
Preferred Category (See page 5 for descriptions.) 12 - Microbiology	
Abstract (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges. <p>The objective was to see whether Ultraviolet light is harmful to living organisms. So the experiment was the effect of ultraviolet light exposure on the number of bacterial colonies.</p> <p>As the exposure times increased my of the bacteria did not survive. From the times of zero minutes to three minutes there was a rapid drop of the survival of bacteria. From three minutes to five minutes there was a little drop and then a small gain. There are many reasons why that could have happened. One of the reason that the UV light acted this was because was because it excited the DNA of the bacteria. The bacteria could not handled it with the DNA getting messed up so it damaged the bacteria.</p> <p>The hypothesis was supported by the data of the experiment. The hypothesis went like this, #If the times of ultraviolet light exposure is increased then the number of bacteria would decrease.# The reason it was given do to the references of pervious knowledge that said how ultraviolet light is harmful. This was mostly supported by my data.</p> <p>My data came out to what was mostly expected that the amount that survived would go down with more UV light. In this case it went down in a big slope unlike what was thought that it would gradually go down at a nice even slat. It seemed that in all of the data there was a result that was very high. In the graphs made for each one it looked like a mountain with small little hills. This could also be noticed when looking at the raw data. For instances take three minutes of UV exposure and see what the average is 14% and one of them is 60% of survival. That is very odd in a case like that. That must have been due to a minor mistake that just helped the bacteria grow. The results of the experiment all varied and had some significant things in the case that could have been changed.</p> <p>The experiment could be modified to see if there is a cure to all these kind of things. You could for instance put sunscreen and see whether that will even help you in the slightest way not to damage and bacteria. There are a few of the things that can be changed to see whether the experiment will work.</p> <p>The results of the experiment will benefit most people in some way.</p>	
Summary Statement (In one sentence, state what your project is about.) How does ultraviolet light exposure affect living organisms.	
Help Received in Doing Project (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Used lab with equipment at the UCSD under dupervision on Dr. Adina Sobo; Parents help and correcte my typed results; Dr. Deniane Ezell with helping throughout the experiment and work that had to be done	