



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Jase J. Franke	Project Number J2111
Project Title Which Acne Cream Can Really Zap That Zit?	
Abstract Objectives/Goals The objective is to determine if over-the-counter acne creams or prescription acne creams are more effective at removing facial bacteria. I believe the prescription acne creams will be more effective than over-the-counter acne creams. Methods/Materials The variable of my experiment is that I tested 3 over-the-counter topical acne creams and 2 prescription topical acne creams. The over-the-counter creams were Proactiv, Clearasil and Neutrogena. The prescription acne creams were Duac and SFC which I obtained a prescription from my dermatologist. I tested the acne creams by using the bacteria Bacillus Cereus that I obtained from Carolina Biological. The bacteria was spread in Petri dishes. I spread each acne cream on the bacteria and conducted tests under the same conditions. I determined the most effective acne cream by taking 3 tests each and came up with 5 different ways to show how effective it is. I recorded the following: how far the acne cream has spread, how far the bacteria has spread, time for acne cream to go into effect, how long the acne cream lasted, and the percent of coverage. Results Proactiv, an over-the-counter acne cream was the most effective at killing the bacteria. Averages for Proactiv: 16.6 minutes to go into effect, lasted 3 hours and it spread 3.83mm. The bacterium spread 5mm and the percent of bacteria that covered the Petri dish was 83%. Duac came in second place, Neutrogena came in third place, Clearasil came in fourth place. SFC, a prescription acne cream, was the least effective at killing the bacteria. Averages for SFC: 32.6 minutes to go into effect, lasted 1 hour and it spread 1.5mm. The bacterium spread 4mm, and the percent of bacteria that covered the Petri dish was 79%. Conclusions/Discussion Acne cannot be cured but it can be treated. Modern medicine has produced a wide range of prescription and over-the-counter products to help people deal with acne. I can conclude that regular brand acne creams are more effective than prescription acne creams. My hypothesis was not correct because I thought prescription creams would be more effective. I had figured out that the acne creams with a better combination of ingredients are more effective at removing general facial bacteria. My project has a lot of value because it provides useful information to those who are fighting acne.	
Summary Statement My project is to determine if over-the-counter acne creams or prescription acne creams are more effective at removing facial bacteria.	
Help Received Dr. Dunn, my science teacher, helped me order bacteria, Petri dishes and borrow test tubes from her.	