



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Jared R. Eifert	Project Number J1408
Project Title The Effectiveness of Lemon Grass as a Natural Mosquito Repellent	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment is to determine if Lemon Grass is an effective mosquito repellent compared to a Deet based bug spray. The hypothesis states: Lemon Grass is an effective alternative mosquito repellent for people sensitive to the Deet compound (Diethylmetatoluamide).</p> <p>Methods/Materials Mosquitoes were harvested and placed in a bug chamber for a series of three sets of experiments: 1) Control: no repellents were used. Mosquitos were then exposed to human* contact. 2) 15% Off brand, commercial Deet based spray was applied to the arm* and then exposed to the mosquitoes in a bug chamber. 3) 25% Lemon Grass solution was applied to the arm* and then exposed to the mosquitoes in a bug chamber. *Informed consent was obtained from each of the human subjects.</p> <p>Results The tests scores illustrate that Deet repellent has an 81% repellent efficiency versus a 51% repellent efficiency for the Lemon Grass. Repellent efficiency was determined by taking the percentage of bites and subtracting it from 100% of the bited recorded in the control. The Deet compound was more than twice as effective as the Lemon Grass solution.</p> <p>Conclusions/Discussion The results of the experiment show that Lemon Grass may be used as a partial replacement for Deet based repellents. Lemon Grass was found not to be as effective an alternative compared to the 15% Deet compound, however, many people are too sensitive to the Deet chemical to use it as a repellent.</p>	
Summary Statement This study tested the effectiveness of Lemon Grass as a natural mosquito repellent compared to the chemical Diethylmetatoluamide.	
Help Received Mr. Chris Conlan from the County of San Diego Department of Environmental Health provided information about locations to harvest mosquitoes and type of mosquito traps to use.	