CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
Tia A. Tang

Project Number
J1321

Project Title
The Effectiveness of Brewer's Yeast as a Mosquito Repellent

Abstract

Objectives/Goals
Can Brewer's Yeast be an effective mosquito repellent? The objective is to determine if the consumption of Brewer's Yeast for five days will reduce the number of mosquito landings in human subjects.

Methods/Materials
Materials: seventy five male and female mosquitoes, a mosquito cage, eleven human participants, fifty five (486 mg) Brewer's Yeast tablets, and a stopwatch. The disease-free mosquitoes (laboratory maintained) were put into a caged container. Participants were asked to put their hand in the cage for one minute and shook off mosquitoes that landed on their hand to avoid getting bit. The number of mosquito landings was counted, and each participant did three trials. Starting the next day, the eleven participants took one Brewer's Yeast pill a day for five days. The procedure was repeated, and a comparison of the number of landings prior to and after consuming Brewer's Yeast was made.

Results
Seven out of eleven subjects, or 64%, had a decreased number of mosquito landings after taking Brewer#s Yeast. The average subject had 2.1 landings per person before consuming Brewer#s Yeast. After ingesting Brewer's Yeast for five days, participants had a much lower average of 0.7. The overall trend showed that there was a significant decrease in mosquito landings after taking the Brewer#s Yeast.

Conclusions/Discussion
There appears to be a decrease in mosquito attraction to humans after taking Brewer#s Yeast. My hypothesis was supported because the majority of the subjects had less mosquito landings after taking Brewer#s Yeast. The proposed reason for this effectiveness is that consuming Brewer#s Yeast alters a person#s scent into something that is repulsive to mosquitoes. Brewer#s Yeast could potentially be an inexpensive and healthy way to help protect people all over the world. Millions of people could be protected from the West Nile virus, malaria, and locally, valley fever. In our search for #green# technologies, Brewer#s Yeast is a natural way to prevent mosquito bites. DEET, an active chemical ingredient in many repellents, has been found to cause skin cancer, brain cell death, and behavioral changes. Brewer#s Yeast is much more cost-efficient than DEET. By changing from using a potent chemical to a natural substance, we could really help our planet.

Summary Statement
This project determines whether Brewer's Yeast, a natural product, can be an effective mosquito repellent after being consumed by humans.

Help Received
Charles Smith, an entomologist, provided me with the mosquitoes and the mosquito cage. My mother drove and picked them up.