



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Lan H. Li	Project Number S1910
Project Title Ant Supercolony Aggression	
Objectives/Goals Abstract Problem Statement: Ants of the #SuperColony# are spread all over California. Is one colony of ants mainly aggressors? Do aggressors always win, if so how do they win their battles? Hypothesis: Ants from the Supercolony will be more aggressive than ants of another colony.	
Methods/Materials Old Procedure: 1. Place 10 ants from one colony into one of the large Petri dishes and set on ice until ant activity slows down; 2. Mark the ants from that colony with small amount of acrylic white paint; 3. Remove the ants from ice and let sit at room temperature until ants are fully active; 4. Place one of the painted ants with an ants from the other colony in one of the small petri dishes; 5. Record which ant attacks first; 6. Observe for about 5 mins and record what the highest level of aggression; 7. Repeat steps 4#6 15 times; 8. Repeat steps 1-7 using the other colony of ants for a total of 30 experiments. New Procedure: 1. Place about 10 ants from each colony into 2 of the large Petri dishes and place BOTH on ice until ant activity slows down (approximately 3 mins); 2. Mark both ant colonies with paint (White=Lake Skinner; Yellow=Mason Park); 3. Remove both ants from ice and let sit at room temperature until ants are fully active again (approximately 6-10 mins); 4. Place 1 ant from both colonies into one of the small petri dishes; 5. Record which attacks first 6. observe for about 5 mins and record what the highest level of aggression was; 7. Repeat steps 1-6 a total of 15 times. Materials: 2 different colonies of ants (Lake Skinner and Mason Park); Fluon-lined Petri dish; Paintbrushes(2); Paint (acrylic white and yellow); Ice.	
Results Results: After the ants were warmed, they did not seem to return to their normal activity as did before the ice. When the first procedure was used, where only one colony was iced and painted, the aggressor altered. The non-painted ant would attack first whether it was Mason Park or Lake Skinner. However when the procedure was changed where both ants were iced and painted only the Mason Park ants attacked first and had the highest level of aggression, a 4.	
Conclusions/Discussion Conclusion: Mason Park is the part of the Supercolony and was the aggressor in all 15 of the experiments where both of the ants were painted and iced. Therefore, ants of the Supercolony are more aggressive than ants of other colonies proving my hypothesis.	
Summary Statement To determine if ants of the "supercolony" will demonstrate more aggressions than ants of other colonies.	
Help Received Used lab equipment at university california irvine under supervision of Dr. Debra Mauzy-Melitz	