



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Thomas G. Kwong	Project Number S0410
Project Title "Selfish" DNA Alu Polymorphism	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment is to identify a family tree through the chromosome 16 Alu allele of each member and understand the mechanism that passes on the gene. I predicted that after finding the length of Alu of my parent#s and my chromosome 16 that half of each of my father#s allele will form my paternal allele and half of each of my mother#s allele will form my maternal allele.</p> <p>Methods/Materials To do this, deoxyribonucleic acid (DNA) is extracted from each person contributing to my experiment. The Alu in the DNA sample is then consolidated by using a microcentrifuge and amplified in a polymerase chain reaction (PCR) before finally being displayed using electrophoreses.</p> <p>Results After conducting the experiment the results did show a connection between the family members, indicating the project was a success. However, the connection was different from my original hypothesis.</p> <p>Conclusions/Discussion My original hypothesis was proved incorrect, so I revised it according to my new results. I concluded the passing of Alu must be similar to the passing of sex chromosomes from parents, where one of the options was chosen at random. This new hypothesis proved true for all my results.</p>	
Summary Statement The relationship between Alu in family members of different generations.	
Help Received Mother provided gel box and microcentrifuge	