### Abstract
The objective of my experiment was to determine which method is more reliable: forensic DNA analysis or microscopic hair analysis. I wanted to learn whether or not both these methods should be admissible in court and if they are reliable enough to convict a criminal suspect.

### Methods/Materials
- I used a Buccal Swab kit to do a PCR reaction, and a microscope for the hair analysis. During the DNA analysis, I took cheek swab samples, ran them in a thermal cycler to multiply them, and then ran a gel to find their length. Finally, I placed the gel under UV light to measure the number of base pairs. During the hair analysis, I took hair samples from 15 individuals and examined under the microscope such as reflectivity, medulla, cortex, and many others.

### Results
I was able to identify 9 out of 15 individuals using hair analysis. With DNA analysis, I could correctly identify all of the "suspects." I determined that people within a certain ethnicity and hair color tend to have similar characteristics which make them hard to discriminate from each other.

### Conclusions/Discussion
When my tests were complete, I concluded that my hypothesis was correct. I could correctly identify 100% of my subjects using DNA, compared to 54% of my subjects during hair analysis. Therefore, hair analysis should not be admissible in court when used as evidence to convict a criminal, but DNA analysis can be relied on as an accurate method of identification.

### Summary Statement
My project tested the forensic methods of microscopic hair and DNA analysis to determine if they should be admissible in court.

### Help Received
- Used lab equipment at UCSB with help from and under supervision of Christine Henzler, post-doc.