# CALIFORNIA STATE SCIENCE FAIR
# 2011 PROJECT SUMMARY

**Name(s)**
Chloe F. Jot

**Project Number**
**J1715**

**Project Title**
## Swimming Sting Free

**Abstract**

**Objectives/Goals**
The objective is to determine whether the presence of white vinegar or sterile human urine prevents Moon Jelly nematocysts from discharging when they come in contact with E. coli.

**Methods/Materials**
Fresh jellyfish tentacle was placed on nine slides. E. coli was added to the first three slides. E. coli and sterile urine were added to the second three slides. E. coli and white vinegar were added to the last three slides. All slides were observed under a compound microscope and the reactions between the reactants were noted.

**Results**
In general, the E. coli and jellyfish slides had a few discharged nematocysts. The E. coli, jellyfish, and urine slides had almost no discharged nematocysts. The E. coli, jellyfish, and vinegar had many discharged nematocysts.

**Conclusions/Discussion**
My conclusion is that sterile human urine is a much better barrier against jellyfish stings than white vinegar.

**Summary Statement**
My project is about whether vinegar or human urine is a better barrier to protect human skin from being stung by jellyfish.

**Help Received**
I received help from Mr. Rod Atchley, Mr. Darrell Steely, and Ms. Jennifer Ostrowski, all science teachers from Pacific Collegiate Charter School, UCSC librarian, Helen Belardi, UCSC Seymore Center volunteer Caitlyn O Brien, my family; Rebecca, Jean-Marc, and Zackary Jot.