



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) Natalie A. Chen	Project Number S1807
Project Title Leukemia Chemotherapy	
Abstract Objectives/Goals My objective was to determine which drug combination [Clofarabine and Busulfan vs. Clofarabine and Melphalan] is more synergistic in DNA damage on Acute Lymphoblastic Leukemia [ALL] cells. I hypothesize that Clofarabine in combinations with Busulfan will have better synergistic results. Methods/Materials Methods: Western Blotting, MTS assay, Calcosyn program and cell culturing. Materials: Reh [human leukemia cell line], general pre-clinical laboratory equipment. Results The Calcosyn program showed Clofarabine in combination with Busulfan to have better synergistic results. The Western Blotting tracing the γ H2AX protein expression also showed Clofarabine in combination with Busulfan to have better synergistic results. Conclusions/Discussion The hypothesis was correct, Clofarabine in combination with Busulfan does have better synergistic effect than Clofarabine in combination with Melphalan.	
Summary Statement Pre-Clinical study comparing Clofarabine in combination with Busulfan versus Melphalan on Reh.	
Help Received City of Hope Eugene and Ruth Roberts Summer Academy Program. Mentors: Dr. Shika and Dr. Gaur.	