

ROSA CHAN

SAGE Scholar

EDUCATION

University of California, Berkeley GPA: 3.96

B.S. Molecular Toxicology, May 2011

City College of San Francisco GPA: 3.82

Stem Cell Certificate, Spring 2008

Relevant Coursework: Biology, Chemistry, Organic Chemistry, Human Physiology, Mammalian Cell Culture, Fluorescent Technology, Stem Cell Technology, Biochemistry, Toxicology, Molecular Toxicology, Genetics, Microbiology, Biostatistics

LABORATORY SKILLS

UV spectroscopy, preparing dilutions and buffers, titration, SDS page, troubleshooting on AKTA unit, Agilent BioAnalyzer, autoclaving, packing columns, chromatography on AKTA unit, homogenization, centrifugation, filtration, microbiology techniques, culturing cells and bacteria

EXPERIENCE

Lawrence Berkeley National Lab Undergraduate Researcher-Joint BioEnergy Institute Aug09-Present

Project: This project entails overexpression of a glucomannanase in *E. coli* for engineering specific activities.

The overall goal is to achieve more efficient deconstruction of hemicellulosic material by enzymes that can be transferred to hosts such as *S. cerevisiae* or used directly in plant feedstock deconstruction.

- Perform cloning, transformation of *E. coli*, and overproduction of the enzymes.
- Purify using column chromatographic methods, analysis of the fractions
- Characterize the physical and biochemical properties of the purified proteins

Minority Health and Health Disparities International Research Training (MHIRT) Trujillo, Peru Jun09-Aug 09

Project: Perform toxicological assays with Brine Shrimp to screen antimicrobial properties of medicinal plants from the Andes

- Performed bioassays, minimal inhibition concentration assays in *E. coli* and *S. aureus* for over 400 plants to determine their antimicrobial activity
- Managed Brine Shrimp toxicity assays for a period of 24hr
- Explored ways to do simple plant extractions in field setting
- Trained Peruvian college students how to prepare solutions, and how to analyze the results.

Undergraduate Researcher at the University of California Berkeley, Jan09-May09

Department of Environmental Sciences Policy and Management

Project: Investigate factors that control the formation of the various reduced Se phases with a pure Se-reducing bacterial strain

- Obtained growth curves to determine how fast the bacterium is reaching log-phase.
- Performed numerous batch experiments with *Enterobacter cloacae*
- Studied the bacteria strain under biotic and abiotic growth conditions

Genentech Intern, Department of Late Stage Purification Process Research and Development 05/08-08/08

Project: Perform studies to evaluate antibody degradation

- Evaluated different stabilizers to prevent antibody degradation in cell culture fluid
- Followed protocol to test stabilizer using lab scale to test centrifugation, and filtration methods
- Managed numerous studies simultaneously by processing samples within a given timeframe
- Purified harvested cell culture fluid over Protein A resin on G. Healthcare AKTA
- Performed protein analysis using Agilent BioAnalyzer
- Presented the experiment results to 20 colleagues and discussing possible areas for future research

Math and Chemistry Tutor, City College of San Francisco 08/06-05/08

- Explained mathematical and scientific concepts to students in order to enhance their understanding of class material

- Assessed student academic performance to determine areas in need of improvement
- Organized study groups that encompasses activities focused on foundation concepts of chemistry and math
- Tutored individually and on group level

ACCOLADES/ACHIEVEMENTS

National Science Foundation Scholarship Recipient in Spring 2007-Spring 2008, SAGE Scholar UC Berkeley, Genentech Scholar 2008

ADDITIONAL SKILLS

Language: Portuguese, Spanish, English (fluent) and Chinese dialect similar to Cantonese

Interests: soccer, volleyball, yoga, and salsa