

Andrea L. Saunders
WU 900 State St. B214 Salem, OR 97301
503-510-2537
saunandrea@gmail.com

EDUCATION

Willamette University, College of Liberal Arts, Salem, OR 97301
B.A., Major: Biology, Minor: Chemistry, December 2012

RELEVANT COURSES

Gene Structure and Function

Set up and ran electrophoresis gels and PCR in pursuit of identifying cryptic *B. edulis* subspecies.

Microbes and Their Environments

Developed a literature review, research proposal, and presentation concerning *R. palustris* nitrogenase regulation in response to environmental ammonia.

Microbiology

Utilized various techniques to identify an unknown bacterial species by growing the culture on selective and differential media, staining, and microscopy. Created recombinant *E. coli* strains. Determined growth curves with spectrophotometers.

Biochemistry

Cell Biology

Intro to Computer Programming (Java) *In progress.*

General Ecology

Organic Chemistry I&II

Performed column and thin layer chromatography. Analyzed NMR and IR spectroscopy, and mass spectrometry outputs to determine structures.

Physiological Dynamics of Plants and Animals

Developed and executed a group research project with a formal paper and presentation comparing the effects of simulated sulfuric and nitric acid rain on cation availability and uptake in *V. faba*.

Research in Microbial Genetics (Thesis)

Generated bacterial mutants and analyzed them with an enzyme linked lectin assay to determine the chemical composition of their EPS. *In progress.*

Inorganic Chemistry I

Molecular Ecology

Extracted genomic DNA and performed PCR on feathers from *O. tardis*. Then used the data collected from the sequenced gene to determine the amount of gene flow between the European and Asian subpopulations. *In progress.*

Multivariable Calculus

Physical Chemistry I

EXPERIENCE

Lab Teaching Assistant for Gene Structure and Function, Willamette University

August 2012-present

Developed my skills in molecular biological techniques while preparing materials, cells, and reagents for the weekly lab. Developed communication skills while assisting students with the lab material and problem sets.

Performance Testing Intern, Life Technologies, Eugene, OR

Gained technical skills

in immunocytochemistry through cell staining, bioconjugation and fluorescence microscopy while characterizing fluorescent secondary antibodies and optimizing their performance. Used HPLC, FPLC, TLC, PAGE, ICC, Tecan Microarray Scanner and, immunosorbant assays. Presented my findings weekly via powerpoint to other departments and project managers.	May 2012-August 2012
Technical Assistant, Willamette University Facilities Gained communication and multitasking skills while being responsible for working with musicians and lecturers to determine their sound and lighting needs, calling lights, exits, and managing sound levels for audiences of 500.	Nov. 2009-present
Farm and Restoration Volunteer, Zena Forest of Willamette University, Zena, OR Acquired organizational skills and a strong work ethic while planning and executing farm management including propagating sprouts, planting, tilling, eradicating exotic species, and selling to food services and the public.	Oct 2009-present
Wilderness Permits and Patrol Intern, Zion National Park, Springdale, UT Developed an attention to detail and sense of personal responsibility flexibility while independently performing wilderness patrols and projects, making visitor contacts, assisting with search and rescues, running the wilderness permits desk, educating visitors, issuing backcountry permits, collecting fees, and monitoring archeological sites.	May 2011-August 2011
Math and Science Tutor, Chemawa Indian School, Keizer, OR Worked with students on academic probation to develop study plans, skills and, confidence in their academic abilities. Facilitated college exploration while serving as a mentor.	August 2010-May 2011