

Alexander Williams

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EDUCATION

Whitman College, Walla Walla, WA

Expected Graduation: May 2021

Bachelor of Arts | Major: BBMB (Biochemistry, Biophysics, & Molecular Biology) | GPA: 3.778

Relevant Coursework:

Calculus I - III, Inorganic Chemistry I & II, Organic Chemistry I&II, Intro. Biology, Genetics, Infectious Disease, Biochemistry, Physics I & II, Intro. Psychology, Psychological Statistics, Philosophy of Feminism, Philosophy of Reproduction, Medical Ethics

SKILLS

Laboratory:

Gel electrophoresis, chromatography, spectroscopy, plasmid transformation, PCR, ELISA, gene silencing, protein expression and purification, whole blood assay

Language and Healthcare:

Bilingual (Spanish), certified CA Healthcare Interpreter, knowledge of IMIA, NCIHC, and CHIA standards

RESEARCH EXPERIENCE

Research Intern, Infectious Disease Research Institute, Seattle, WA

Summer 2019

- Characterized toll-like receptor (TLR) agonist R848, alhydrogel and liposome adjuvants; optimized the encapsulation and efficacy of liposomal R848 by altering pH, concentration, temperature, and formulations.
- Recombinant DNA technology, protein expression, purification and characterization of candidate Mycobacterium tuberculosis vaccine antigens by Ni-NTA affinity chromatography, gel electrophoresis, western blot, absorbance at 280 nm and endotoxin measurement (LAL assay).
- Isolated peripheral blood mononuclear cells (PBMCs) from whole blood; characterized R848 and alhydrogel adjuvants by whole blood stimulation assays and measurement of TH1 or TH2 cytokines by ELISA.

Research Intern, PAI Life Sciences, Seattle, WA

Summer 2018

- Analyzed Zika virus proteins by gel electrophoresis and recorded data to document the research process and ensure reproducibility and reliability of the data.
- Shadowed researchers performing real-time PCR (qPCR) and provided assistance to increase the number of test trials.

Research Assistant, Fred Hutchinson Cancer Research Center, Seattle, WA

Summer 2017

- Observed researchers performing protein analysis and bioinformatics and documented processes for future experiments.

LEADERSHIP & COMMUNITY ENGAGEMENT

Medical Interpreter, SOS Health Services Clinic, College Place, WA

May 2019 - Present

- Provided fluent Spanish and English interpretations between patient and provider in 20-30 medical appointments per week.
- Abided by HIPAA for patient confidentiality and safety and the IMIA Interpreter Code of Ethics and NCIHA National Code of Ethics for Interpreters to provide and facilitate just and beneficial interactions between patient, interpreter, and provider.

Writing Fellow, Biology Department, Whitman College, Walla Walla, WA

Spring 2018

- Assisted students in the preparation of their lab reports, specifically figure analysis and caption writing.

Lab Teaching Assistant, Biology Department, Whitman College, Walla Walla, WA

Spring 2017

- Prepared lab materials, provided occasional supplemental instruction and taught laboratory techniques to more than 20 students ensuring content comprehension and proper use of lab equipment.