

Sergio I. Quispe Sanchez

425 E Washington St., Ann Arbor, MI 48104 • (734)-272-5272 • sergioq@umich.edu

Education

University of Michigan, Ann Arbor, MI

September 2020 – May 2024

Bachelors of Science in Biomedical Engineering

GPA: 4.0/4.0

- **Concentration:** Biotechnology and Pharmaceutical Engineering
- **Honors/Awards:** James B. Angell Scholar (4 consecutive A terms), 4 terms University Honors and Dean's Honor List (GPA>3.5), William J. Branstrom Freshman Prize (awarded to top 5% of freshman class/Fall 2020)
- **Relevant Coursework:** Quantitative Cell Biology, Introduction to Biomedical Engineering Design, Biophysical Chemistry and Thermodynamics, BioComputation, Introduction to Materials and Manufacturing

San Ignacio de Recalde School, Lima, Peru

Class standing: 1/112

March 2015 - December 2019

Research Experience

University of Michigan, College of Engineering, Ann Arbor, MI

May 2022 – Present

Systems Biology of Human Diseases Lab (Deepak Nagrath, PhD) | Research Assistant

- Collaborated with pre-doctoral fellow, Minal Nenwani, in examining the effects of combined radiotherapy and chemotherapy on the cGAS-STING pathway in cells within the tumor microenvironment
- Isolated and quantified protein from natural killer cells and cancer associated fibroblasts
- Developed Python algorithm to facilitate protein quantification based on absorbance measurements

University of Michigan, Life Sciences Institute, Ann Arbor, MI

May 2021 – April 2022

David H. Sherman Lab | Research Assistant

- Explored new methods to increase the efficiency of the fermentation/extraction/purification process for plecomacrolide natural products (Bafilomycin family)
- Aided Alanna R. Condren, Ph.D. on the study of potential targets of Concanamycin against HIV infected T-cells.
- Performed literature research, data analysis, and presented findings to immediate supervisors and PI

University of Michigan, College of Engineering, Ann Arbor, MI

September 2020 – April 2021

Angela Violi Lab | Research Assistant

- Extracted nanoparticle-bacteria interaction data from scientific literature to train machine learning algorithms capable of classifying nanoparticles as next-generation antibiotics
- Performed data mining (Python), elaborated progress reports, organized data base (Excel), and presented findings at the Undergraduate Research Opportunity Program Symposium

Leadership/Teaching Experience

University of Michigan, College of Engineering, Ann Arbor, MI

Instructional Aide (IA) for Biophysical Chemistry and Thermodynamics (BCT)

August 2022 – Present

Instructional Aide (IA) for Engineering Biological Solutions (EBS)

December 2021 – April 2022

- Supervised lab sections and guided students working on class projects and graded assignments (BCT, EBS)
- Coordinated office hours and review sessions to assist students with class material (BCT, EBS)
- Managed an online lab section page on Canvas system and posted weekly content (EBS)

University of Michigan, Science Learning Center, Ann Arbor, MI

April 2022 – August 2022

Math Peer Facilitator

- Led weekly drop-in tutoring sessions for the introductory calculus course sequence MATH 115-116-215, precalculus (MATH 105) and differential equations (MATH 216)
- Guided students through the process of abstraction in problem-solving, and strategic exam preparation

Skills

- **Lab techniques:** Western Blot Assay, protein estimation via BCA assay, cell culturing, gel electrophoresis, bright-field microscopy, spectrophotometry, bacteria seeding, high-pressure liquid chromatography (HPLC), basic knowledge of flow cytometry and mass spectrometry.
- **Programming:** Intermediate-level experience with Python, C++, and MATLAB programming languages
- **Additional skills:** Adaptability, strong work ethic and time-management