Connor Lawrence
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PROFESSIONAL EXPERIENCE

August 2022-Currently
Doctoral Candidate-Molecular Biology
Leibniz Institute for Baltic Sea Research-IOW

- Gene expression in complex microbial systems, including diatoms, fungi, and bacteria. I've always been fascinated by how organisms interact at the molecular level, especially during parasitism and symbiosis

June 2021-August 2022
Laboratory and Field Technician
The Swedish University of Agricultural Sciences (SLU-Alnarp)

- Analyzed and developed pheromones established with GCMS analyses as part of a dissertation project in the Chemical Ecology department
- Set traps for bark beetles (*Ips typographus*) and flies that serve as natural predators (*Medetera spp*) throughout central Sweden during the summer field season. Ecology of the *Medetera* genus and ecosystem services were determined based on raw counts and changes with location, pheromone subcategory, and timeframe
- Developed techniques and measured plant protein extraction methods on a High-performance Liquid Chromatography Mass Spectrometer (HPLC-MS) in a laboratory setting and as part of a pilot factory for more efficient use of agricultural waste

August 2019-June 2021
Master's Degree
The Swedish University of Agricultural Sciences (SLU-Alnarp)

- 127 credit hours (Sweden) toward a Masters of Horticultural Science
- Researched and developed a yearlong project testing the use of blue light as a microbial decontaminant for leafy greens with limited supervision and budget
- Completed a systematic review followed by data mining and analysis from multiple fields of study investigating the use of blue light to inhibit *Escherichia Coli*
- Submitted a meta-analysis for publication (1 February 2022 to *Frontiers in Microbiology*) as an additional project to my thesis work
- Advised another master's student for experiments on the effect of visible light on leafy greens during processing—a tangential study within the scope of the project I developed
- Provided laboratory assistance in preparation of microbial additives, inoculation, measurement, and analysis for projects attempting to understand the microbiome of plants and soil

April 2018-August 2019
Education contracting and Swedish Language Training
Malmö, Sweden

- Received full-time Swedish language training for 6 months to gain advanced proficiency
- Wrote general scientific scripts for videos geared toward upper high school level science education

September 2013-April 2018
Research Technician and Teaching Assistant
University of North Carolina, Chapel Hill

- Research Assistant with Drew Coleman for three years working on technical issues and preparation of contract samples in the isotope lab with two Thermal Ionizing Mass Spectrometers (TIMS)
- Managed a wet chemistry laboratory and helped prepare samples in a clean lab for Pb analysis
- Helped to teach Geology 101 part-time from 2015-2017

- Walter H. Wheeler Teaching Award for the best teaching assistant-2016
- Teaching Assistant for advanced undergraduate geology classes of Mineralogy and Petrology in 2017
- Prepared courses and took part in the field geology classes in 2014 and 2016-research trips to the Sierra Nevada Mountains, California
- Field assistant for trips to western North Carolina, Utah, Idaho, and Nevada aiding in sample collection for both professors and graduate students

May 2008-May 2013
Officer (Captain)
United States Army, Vilseck (Germany)

- Managed international teams consisting of American, Afghan, and German soldiers
- Received over 50 hours of human geography and cultural instruction from US State Department and Non-Governmental Organization Representatives
- Worked with USAID to emplace an initial power grid in the city of Hutal, Afghanistan
- Worked with US Department of Agriculture to educate civilians in Maywand, Afghanistan, about better irrigation practices to replace drilling and traditional practices of flood irrigation
- Collected data with UAVs to measure agricultural stress throughout southern Afghanistan using remote sensing

EDUCATION

Masters of Horticultural Sciences—Microbial Horticulture (Grades: 4/5 and 5/5)
The Swedish University of Agricultural Sciences (SLU), Alnarp

- Visible light as a monochromatic decontamination tool to minimize the risk of *Escherichia coli* in leafy green production: can blue light be added to processing facilities to make greens safer?

Bachelor of Science—Geography and Environmental Studies (GPA: 3.43)
United States Military Academy, West Point, New York (United States)

- Leadership, Management, Politics, Economics, Language studies

COMPETENCIES

Laboratory experience

- Experience with sample preparation and data collection using multiple mass spectrometers such as two thermally ionizing mass spectrometers (TIMS) and one inductively coupled mass spectrometer (ICPMS), Secondary Ion Mass Spectrometry (SIMS) and gas chromatography mass spectrometer (GCMS)
- Experience with multiple scanning electron microscopes (SEM) at both UNC and Lund University
- Helped to maintain/manage and conduct daily operations in a geochemistry wet lab (TIMS, Ion exchange chromatography; UNC), a clean lab (U/Pb dating; UNC), and a microbiology lab (DNA/RNA extraction and sequencing, PCR, ddPCR, counting experiments; SLU)

Languages

- Mother language; English. Other languages: German (intermediate), Spanish (intermediate), Swedish (advanced)

Computer skills

- Fluent in Microsoft Office, Adobe Platform, ArcGIS, R, Bash, and some statistical data platforms
- Experience with data preparation software such as iolite (ICPMS) and PB Mcdat (TIMS)

INTERESTS

- Trained across disciplines from geochemistry to microbial ecology, I now focus on genomics and transcriptomics in complex environmental systems. My research explores interactions between eukaryotes (diatoms and fungi) and prokaryotic communities, using multi-omics approaches to investigate ecological function and system-level responses.
- Geomicrobiology, Multiomics, Marine Microbiology, Systems Biology