

Jeremy Harding Bend, OR | jeremy.gene.harding@gmail.com

A Quality Assurance Microbiologist with a passion for leveraging data to ensure product safety and drive process improvement. My experience in GMP-regulated environments has provided me with a strong foundation in molecular diagnostics, environmental monitoring, and regulatory compliance. I specialize in bridging the gap between traditional microbiology and modern data analysis, using R to build predictive models and create interactive dashboards that transform complex data into actionable insights.

Key Skills & Expertise

- **Data Analysis & Visualization:** R (Tidyverse, flexdashboard), LIMS, Data-driven Root Cause Analysis, Predictive Modeling (Thermal Death Kinetics)
- **Microbiology & QA:** Environmental Monitoring Program Development, cGMP, SOP Authoring, Method Validation, Aseptic Technique, Bioburden Testing
- **Molecular Biology:** PCR, Assay Development, DNA Purification, Strain Engineering

Featured Projects

Thermal Death Kinetics of *A. tumefaciens*

An undergraduate research project investigating the cumulative lethal effect of diurnal temperature cycles on a soil pathogen. This project involved building a predictive model based on D and Z-values and analyzing the surprising resilience of the microbial population over time.

Professional Experience

Quality Assurance Analyst III / Microbiologist | Deschutes Brewery, Bend OR | *Oct. 2021 - Present*

- Developed and maintain the brewery's environmental monitoring program, using LIMS and R for data tracking, trend analysis, and product release decisions.
- Authored and revised SOPs for molecular biology workflows, ensuring cGMP compliance.
- Led root-cause analyses for contamination events, implementing data-driven corrective and preventive actions (CAPAs).
- Created and delivered training programs on microbiological control procedures for the QA team.

Senior Research Technician | Purdue University, West Lafayette, IN | *Jan. 2021 - Jul. 2021*

- Engineered microbial strains using homologous recombination.
- Contributed to *Agrobacterium*-mediated transformation experiments, managing reagent preparation and lab maintenance.

Microbiologist / Production Assistant | Top Hat Mushrooms, Scio OR | *Mar. 2020 - Dec. 2020*

- Designed and optimized microbial growth conditions for large-scale food production, improving yield and consistency.
- Conducted routine environmental monitoring and bioburden testing to ensure product safety.

Education & Research

B.S. in Microbiology, Minor in Chemistry | Oregon State University, Corvallis OR | *June 2020*

- **Undergraduate Research Assistant (Dec. 2018 - Jun. 2020):** Investigated pasteurization kinetics for microbial decontamination and developed nested PCR techniques for detecting pathogenic *A. tumefaciens* in soil.
- **Teaching Assistant (2018 - 2019):** Instructed undergraduate students in General and Introductory Microbiology labs on aseptic techniques and core methodologies.