KELAO CHARMAINE NEUMBO

Curriculum Vitae | kxn277@case.edu | 507-405-4070

PROFESSIONAL SUMMARY

Detail-oriented researcher with expertise in bioprocessing, biobanking, and research coordination. Skilled in protocol design, laboratory techniques, and data management, including managing biospecimen databases and applying statistical methods. Experienced in optimizing workflows and collaborating with research teams to support biomedical research.

EDUCATION

Master of Public Health, Population Health Research (Expected 2026): Case Western Reserve University, Cleveland, OH
Bachelor of Arts in Biology: Luther College, Decorah, IA

TECHNICAL AND RESEARCH SKILLS

- Research and Data Analysis: Proficient in research methodologies, data collection, and statistical analysis using SPSS, R, MassHunter Qualitative and Quantitative Software, and Microsoft Excel.
- Clinical Research and Compliance: Experienced with HIPAA and IRB standards, managing large healthcare databases, and handling clinical samples, including CSF and plasma.
- Protocol Development: Skilled in protocol drafting, optimization, and experimental design for advanced research techniques, including cell isolation, cryopreservation, and nucleic acid extraction.
- Instrumentation and Maintenance: Adept at operating, maintaining, and troubleshooting Liquid and Gas Chromatography Mass Spectrometry systems, hematology analyzers, flow cytometers, and controlled-rate freezers.
- Leadership and Training: Experienced in managing a core facility, mentoring students, and training lab users in laboratory practices, safety protocols, experimental techniques, and data analysis.
- Bioprocessing and Biobanking: Experienced in large-scale biobanking and biospecimen processing, ensuring sample integrity and quality control, and supporting translational cancer research projects.
- Project Management: Proficient in coordinating laboratory operations, inventory management, and workflow optimization under minimal supervision. Skilled in managing large-scale biospecimen databases and facilitating collaboration across research teams.

TECHNICAL AND RESEARCH EXPERIENCE

Research Assistant III, Hematopoietic Biorepository & Cellular Therapy Core
Case Comprehensive Cancer Center, Case Western Reserve University *(2025 – Present)*

- Lead bioprocessing and biobanking of hematopoietic and patient-derived biospecimens, ensuring compliance with HIPAA, IRB, and regulatory guidelines.
- Design and optimize protocols for cell isolation, cryopreservation, and nucleic acid extraction, troubleshooting cell culture, PCR, and cell isolation procedures to ensure high-quality biospecimens for cancer research projects.
- Manage a large-scale biospecimen database, overseeing the tracking, inventory, and utilization of samples for research and clinical applications.

- Collaborate with oncologists, pathologists, and research teams to facilitate sample requests and streamline workflows.
- Train and mentor lab personnel and researchers in biobanking methodologies, quality control, and regulatory compliance.
- Operate and maintain laboratory equipment (e.g., hematology analyzers, flow cytometers, controlled-rate freezers) for high-throughput biospecimen processing.
- Manage budget, track bioprocessing charges, coordinate iLab invoicing, and oversee inventory and supply purchases.

Research Assistant II, Pharmacology Department, Case Western Reserve University *(2022 - 2025)*

- Managed the Cancer Metabolism Shared Resource Core Facility, overseeing the use of instruments and ensuring operational continuity.
- Collaborated with interdisciplinary researchers to provide high-quality data and analyses, advancing the goals of multiple labs and expanding the core facility's capabilities.
- Served as a point of contact for facility-related matters, supporting users with sample processing and instrument access.
- Processed samples for analysis using derivatization techniques, isotopic labeling, western blotting, and protein quantification with high accuracy.
- Troubleshot and coordinated repairs for laboratory equipment to minimize downtime.
- Developed and optimized experimental protocols for ongoing projects, enhancing reproducibility and accessibility for core facility users.
- Trained students and other lab users in instrument usage, data processing, and protocols.
- Maintained detailed records of experimental procedures and results.

Research Intern: Undergraduate Research Employment Program, Mayo Clinic *(2021 - 2022)*

- Conducted research on COVID-19 vaccination disparities, focusing on crisis and emergency risk communication (CERC) in the Infectious Disease and Community Internal Medicine departments.
- Collaborated with Rochester Healthy Community Partnership COVID-19 Task Force and Mayo Clinic staff to plan and implement vaccine clinics for underserved populations.
- Collected and managed clinical data ensuring adherence to HIPAA regulations.
- Analyzed vaccine data to inform real-time, evidence-based decision making.
- Provided actionable insights leading to improved vaccine clinic outcomes

Clinical Microbiology Lab Assistant, Luther College *(2020 - 2022)*

- Supported faculty members in preparing for laboratory sessions with students. Duties included media preparation, sterilization, culturing and staining of bacteria.
- Ensured adherence to safety protocols and performed laboratory procedures with precision and reliability.
- Collaborated with faculty and team members to execute experiments to maintain a well-organized lab environment.

PUBLICATIONS

1. Wang, Y., Xiu, Y., Dong, Q., Zhao, J., Neumbo, K., Miyagi, M., Borcherding, N., Fu, L., De Celis, H. R., Pintozzi, N. G., Starczynowski, D. T., & Zhao, C. (2024). TIFAB modulates metabolic pathways in KMT2A::MLLT3-Induced AML through HNF4A. Blood Advances. https://doi.org/10.1182/bloodadvances.2024013446

2. Miyagi M, Kiesel E, Neumbo K, Nakazawa T. Deuterium labeling of isoaspartic and isoglutamic acids for mass spectrometry analysis. Analytical Chemistry, 96(7), 3077–3086. https://doi.org/10.1021/acs.analchem.3c05194

3. Lohr AM, Neumbo KC, et al. Addressing COVID-19 inequities using bidirectional crisis and emergency risk communication and vaccine clinic interventions: a descriptive study. BMC Public Health, 23(1). https://doi.org/10.1186/s12889-023-16410-3

CERTIFICATIONS

- CREC Certification: Certified in ethical research conduct for human subjects research, ensuring compliance with regulatory standards.
- HIPAA Training: Trained in data privacy regulations during Mayo Clinic internship, with experience managing sensitive clinical data.