KELSI O. WEST, PHD, MPH

Translating complex bioinformatics and engineering insights into impactful scientific solutions.

Texas | kelsi.west979@gmail.com | 423-631-1053 | kelsiwest.com

EDUCATION

PhD, Genetics
Texas A&M University
RNA Biology, Immunology
2016 - 2020

MPH, Epidemiology
East Tennessee State
2014 - 2016

BS, Health Education
Salisbury University
Minors: Biology, Chemistry
2010 - 2013

CERTIFICATIONS

- NASA Open Science
- Asana

EXPERTISE

Technical

- R/R Shiny
- Python
- Git
- Docker
- SQL
- WDL
- AWS
- Webflow
- PowerBI

Leadership

- Team Management
- Mentoring
- Strategic Planning
- Problem-Solving
- Decision Making
- Quality Assurance
- Scientific Communication

PROFILE

Research leader and accomplished scientist with expertise in bioinformatics, molecular biology, immunology, and clinical research. Proven track record of executing large-scale initiatives and building collaborative partnerships across diverse stakeholder groups.

RELEVANT EXPERIENCE

Susan G. Komen
Breast Cancer Foundation — **1/2025 – Present**

Data Science Programs Manager

- Manage the design, implementation, and maintenance of the ShareForCures platform, ensuring robust data architecture, quality control, and compliance with research regulations
- Build and maintain automated pipelines for PHI, qualitative, and genomics data encompassing collection, curation, and processing to accelerate data delivery and enable scalable, reproducible analysis
- Facilitate researcher registration, data access requests, and engagement strategies to increase platform adoption
- Oversee vendor partnerships and collaborate with internal teams, external advisors, and stakeholders to drive research initiatives forward

Catalytic Data Science — **2020 – 2024**

Bioinformatics Scientist II (2022 - 2024)
Bioinformatics Scientist (2020 - 2022)

- Launched 30+ fault-tolerant, multi-omics analytics infrastructure using Docker and AWS, establishing organizational framework for large-scale genomics research implementation and increasing application offering by 60%
- Spearheaded integration of diverse bioinformatics tools and approaches while mentoring team members in technical practices
- Developed strategic initiatives for executive leadership and established documentation standards, ensuring reproducible research practices and transparent stakeholder communication

EXPERTISE

Analysis

- RNA-Seq
- scRNA-Seq
- WGS
- Quality Control
- Differential Isoforms
- Variant Detection
- Gene Fusions
- Annotation
- Gene-editing
- Cell Deconvolution
- Viral Integration
- Genome Assembly
- Metagenomics
- Gene Ontology
- Mass-Spectrometry
- Flow Cytometry
- ChIP-Seq
- ATAC-Seq
- File Conversion
- CLC and IPA

Laboratory

- Tissue culture
- Infection models
- BSL3 trained
- Lentiviral production
- Protein constructs
- Site-directed mutagenesis
- shRNA knockdown
- RT-qPCR
- Western blots
- ChIP
- CRISPR/Cas9
- Immunofluorescence
- Cellular fractionation
- Confocal microscopy
- BioID

ADDITIONAL EXPERIENCE

Don't Use This Code–NASA TOPS **2024 – Present**

Educator

- Deliver curriculum for NASA's Transform to Open Science Initiative, training researchers in reproducible research practices, data management, and version control while fostering a culture of open collaboration
- Create educational resources and documentation to support long-term community engagement

Texas A&M University **2016 - 2020**

PhD Researcher; Microbial Pathogenesis and Immunology

- Orchestrated complex research projects investigating host-pathogen interactions while building and implementing bioinformatics infrastructure in a lab with no prior framework
- Managed undergraduate and graduate research teams in developing technical capabilities while designing integrated molecular and bioinformatics methodologies
- Successfully communicated findings through conferences and publications

East Tennessee State University **2015 - 2016**

Research Assistant; Bill Gatton College of Pharmacy

- Characterized side effects of nanoparticle drug formulation in commonly used in nonsteroidal anti-inflammatory drugs (NSAIDs), Diclofenac and Celecoxib
- Analyzed gastrointestinal, urinary and pharmokinetic parameters utilizing different statistical programs such as SAS, SPSS, and R

Research Assistant; Department of Epidemiology

- Analyzed data using SAS and SPSS to conduct analysis about risk factors associated with many public health priorities around the world including type II diabetes, biosand water filters, HIV/AIDS, and pap smear utilization

SELECTED PUBLICATIONS

Global transcriptomics uncovers distinct contributions from splicing regulatory proteins to the macrophage innate immune responses. Front. Immunol. 2021.

LRRK2 regulates innate immune responses and neuroinflammation during Mycobacterium tuberculosis infection. eLife. 2020.

The splicing factor hnRNP M is a critical regulator of innate immune gene expression in macrophages. Cell Reports. 2019.