



# KELSI O. WEST, PHD, MPH

Translating complex bioinformatics and engineering insights into impactful scientific solutions.



Texas



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## 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 – 6/2024

#### 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**

**11/2024 –**

#### **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 nonsteroidal anti-inflammatory drugs (NSAIDs), Diclofenac and Celecoxib
- Analyzed gastrointestinal, urinary and pharmacokinetic 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.