# KELSI O. WEST, PHD, MPH

Translating complex bioinformatics and engineering insights into impactful scientific solutions.

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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

## EXPERTISE

**Technical**

- R/R Shiny
- Python
- Git
- Docker
- AWS
- Webflow
- Jekyll
- PowerBI

**Leadership**

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

## PROFILE

Research leader and experienced scientist with expertise in bioinformatics and molecular biology, and immunology, successfully managing large-scale research initiatives while fostering collaboration across diverse stakeholders. Skilled at bridging technology and scientific practice to drive data-driven discovery.

## RELEVANT EXPERIENCE

**Susan G. Komen Foundation** **Jan 2025 – Present**

***Data Science Programs Manager***

- Lead the design, implementation, and maintenance of the ShareForCures platform, ensuring robust data architecture, quality control, and compliance with research regulations
- Oversee data collection, curation, and processing of clinical and biospecimen data while supporting data analysis and visualization
- Manage researcher registration, data access requests, and engagement strategies to increase adoption, while coordinating vendor partnerships and collaborating with internal teams, external advisors, and stakeholders to drive research initiatives forward

**Catalytic Data Science** **2020 – June 2024**

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

- Led development of 30+ fault-tolerant NGS multi-omics analytics infrastructure using Docker and AWS, establishing organizational framework for large-scale genomics research implementation
- Spearheaded integration of diverse bioinformatics tools and approaches while mentoring team members in technical practices
- Presented strategic initiatives to 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** **Nov 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***

- Spearheaded complex research projects investigating host-pathogen interactions while building and implementing bioinformatics infrastructure in a lab with no prior framework
- Led and mentored research teams in developing technical capabilities, successfully communicating findings through conferences and publications while designing integrated molecular and bioinformatics methodologies

**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.