



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

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 experienced scientist with expertise in bioinformatics, molecular biology, immunology, clinical research and successfully managing large-scale 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
- Build and maintain automated workflows for PHI, qualitative, and genomics data collection, curation, and processing to streamline data delivery to enable efficient, reproducible analysis
- Manage researcher registration, data access requests, and engagement strategies to increase adoption
- Oversee vendor partnerships and collaborate 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 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.