# Annika Jorgensen

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# **EDUCATION**

Arizona State University

MS Biology: Computational Life Sciences, GPA: 4.0

Tempe, AZ
2023- Current

Arizona State University

Tempe, AZ

Honors BS Biophysics, GPA: 3.59 2019–2023

Riverton High School

High School Diploma, GPA: 3.97

Riverton, UT

2015–2019

## EXPERIENCE

#### Research Assistant-Dr. Melissa Wilson

Sex Chromosome Lab

- Analyzed sex differential expression of genes
- Applied inferential statistics to student outcomes
- Implemented biostatistical methods in R

#### Teaching Assistant-CURE

Arizona State University

- Educated students on R and RStudio
- Educated students on genomics
- Educated students on differential gene expression

#### Teaching Assistant-Research Computing

Arizona State University

- Educated students on writing bash scripts
- Educated students on SSH
- Educated students on sequence alignments

#### Community Assistant

Arizona State University

- Created a community amongst residents
- Helped students in crisis
- Moved students in and out of the college dormitories

November 2021- Present

- Tempe, AZ
- Constructed multivariate RNA-seq models
- Performed biochemical pathway analyses
- Searched and reviewed bioinformatics literature

Fall 2023-Present

Tempe, AZ

- Educated students on how to write a manuscript
- Educated students on cancer cell lines
- Educated students on data visualization

Fall 2022, Fall 2023

Tempe, AZ

- Educated students on variant calling
- Educated students on SAM and BAM files
- Educated students on RNA-seq visualization

Winter 2021 - May 2023

Tempe, AZ

- Connected students to services within the university
- Maintained safety within the residence hall
- Mediated conflicts between residents

#### Compliance Editor

American Preparatory Academy

Fall 2021-May 2023

Draper, UT

- Edited IEPs for special education students

Managed projects special education services

- Took notes for IEP quality assurance

- Converted special education files to digital format

Eco Rep Fall 2022

Eco Reps ASU

Tempe, AZ

Tempe, AZ

- Educated students about sustainability

- Created engaging events focused on the environment

Research Aide Summer 2020-Fall 2021

SciHub ASU

Learned how to operate spectroscopy equipment

- Led the Fluorescence Spectroscopy Project

- Constructed electric circuits using reflow soldering - Drafted market studies for products

Commercial Intern Summer 2020-Spring 2021 Civica Rx Lehi, UT

- Developed drug sales datasheet - Created government official datasheet

- Scrubbed large databases - Drafted sales agreements for hospital partners

### Publications

- Annika Jorgensen, "Sex-biased gene expression and pathway activation in hepatitis-associated HCC.", Barret, The Honors College Thesis/Creative Project Collection, May 2023
- Annika Jorgensen, Elizabeth S. Borden, Musa Gabere, Karen Taraszka Hastings, Melissa A. Wilson, Kenneth H. Buetow, "Sex-Differential Expression Analysis in Viral-Mediated Hepatocellular Carcinoma.", In Preparation

#### Conferences

- 1. Annika Jorgensen, Elizabeth S. Borden, Musa Gabere, Karen Taraszka Hastings, Melissa A. Wilson, Kenneth H. Buetow, "Sex-Differential Expression Analysis in Viral-Mediated Hepatocellular Carcinoma.", UACC Cancer Research: Present and Future, September 2022
- Annika Jorgensen, Mary Carlson "TWIST 1 Expression Induced by TNF α & TGF β.", SLCC SME Symposium, May 2019

#### SKILLS

- R: Skilled in use of Differential Expression and Statistical analysis in R
- Python: Skilled in use of IDE and writing code
- MATLAB: Skilled in use of IDE and writing code
- **Arduino:** Skilled in operation of IDE and making circuits
- Mathematica: Skilled in accessing biological databases and operating symbolic math library
- Bash: Skilled in writing scripts for working with SAM & BAM files
- Git: Familiar with software developement workflows and version control
- Sequence alignments: Can conduct sequence alignments and call variants
- Quality assessments: Can run quality checks on raw sequencing data

# PROJECTS

# Differential Expression Analysis Working on Sex Differential Expression Analysis to discover genes sex deferentially expressed in Liver Cancer Fluorescence Spectrometer Project The development of a portable fluorescence spectrometer used to detect skin cancer TWIST 1 in HEK 293 cells TWIST 1 Expression Induced by TNF $\alpha$ & TGF $\beta$ . The study of TWIST 1 expression in HEK 293 cells PcO6 and Production of Biofilm 2018 The study of how PcO6 produces biofilm on root plating and in liquid medium.

# EXTRACURRICULAR ACTIVITIES

•	ASU Herstory Committee	Spring 2022
	Tempe Vice-Chair. I worked on creating events centered around the women experience for the	ASU Tempe Campus.
•	SWE ASU	2019-2022
	Outreach Director 2020 and K-12 Outreach Director 2021. I coordinate all volunteer and service	e events for SWE ASU
•	LDS Hospital	Summer 2019
	Volunteered in ICU helping patients take walks, stocking medical supplies, and taking calls	