

# Annika Jorgensen

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## EDUCATION

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<b>Arizona State University</b> MS Biology: Computational Life Sciences, GPA: 4.0	Tempe, AZ 2023- Current
<b>Arizona State University</b> Honors BS Biophysics, GPA: 3.59	Tempe, AZ 2019–2023
<b>Riverton High School</b> High School Diploma, GPA: 3.97	Riverton, UT 2015–2019

## EXPERIENCE

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<b>Research Assistant–Dr. Melissa Wilson</b> Sex Chromosome Lab	November 2021- Present Tempe, AZ
<ul style="list-style-type: none"><li>– Analyzed sex differential expression of genes</li><li>– Applied inferential statistics to student outcomes</li><li>– Implemented biostatistical methods in R</li></ul>	<ul style="list-style-type: none"><li>– Constructed multivariate RNA-seq models</li><li>– Performed biochemical pathway analyses</li><li>– Searched and reviewed bioinformatics literature</li></ul>
<b>Teaching Assistant-CURE</b> Arizona State University	Fall 2023-Present Tempe, AZ
<ul style="list-style-type: none"><li>– Educated students on R and RStudio</li><li>– Educated students on genomics</li><li>– Educated students on differential gene expression</li></ul>	<ul style="list-style-type: none"><li>– Educated students on how to write a manuscript</li><li>– Educated students on cancer cell lines</li><li>– Educated students on data visualization</li></ul>
<b>Teaching Assistant-Research Computing</b> Arizona State University	Fall 2022, Fall 2023 Tempe, AZ
<ul style="list-style-type: none"><li>– Educated students on writing bash scripts</li><li>– Educated students on SSH</li><li>– Educated students on sequence alignments</li></ul>	<ul style="list-style-type: none"><li>– Educated students on variant calling</li><li>– Educated students on SAM and BAM files</li><li>– Educated students on RNA-seq visualization</li></ul>
<b>Compliance Editor</b> American Preparatory Academy	Fall 2021-May 2023 Draper, UT
<ul style="list-style-type: none"><li>– Edited IEPs for special education students</li><li>– Managed projects special education services</li></ul>	<ul style="list-style-type: none"><li>– Took notes for IEP quality assurance</li><li>– Converted special education files to digital format</li></ul>
<b>Eco Rep</b> Eco Reps ASU	Fall 2022 Tempe, AZ
<ul style="list-style-type: none"><li>– Educated students about sustainability</li></ul>	<ul style="list-style-type: none"><li>– Created engaging events focused on the environment</li></ul>

## Research Aide

SciHub ASU

Summer 2020-Fall 2021

Tempe, AZ

- Led the Fluorescence Spectroscopy Project
- Learned how to operate spectroscopy equipment
- Constructed electric circuits using reflow soldering
- Drafted market studies for products

## Commercial Intern

Civica Rx

Summer 2020-Spring 2021

Lehi, UT

- Developed drug sales datasheet
- Created government official datasheet
- Scrubbed large databases
- Drafted sales agreements for hospital partners

## PUBLICATIONS

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- **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

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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
2. **Annika Jorgensen**, Mary Carlson “TWIST 1 Expression Induced by TNF  $\alpha$  & TGF  $\beta$ .”, *SLCC SME Symposium*, May 2019

## SKILLS

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- **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 development workflows and version control
- **Sequence alignments:** Can conduct sequence alignments and call variants
- **Quality assessments:** Can run quality checks on raw sequencing data

## PROJECTS

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### Differential Expression Analysis

2021–Present

Working on Sex Differential Expression Analysis to discover genes sex differentially expressed in Liver Cancer

### Fluorescence Spectrometer Project

2021

The development of a portable fluorescence spectrometer used to detect skin cancer

### TWIST 1 in HEK 293 cells

2019

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

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- **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 events for SWE ASU*
- **LDS Hospital** Summer 2019  
*Volunteered in ICU helping patients take walks, stocking medical supplies, and taking calls*